

CS-0104: Cognitive Science Fiction

COURSE INFORMATION

Instructor(s):

Lee Spector

lasCCS@hampshire.edu

Office Extension: x5352

Office Hours:

Regular office hours: Tuesdays and Thursdays, 2:00-3:15, and Wednesdays 1:00-2:30. I am available at many other times as well; feel free to contact me in person or via [email](#) to arrange other meeting times. Sign up for regular office hours and advising day meetings [here](#).

TA(s):

Isaac Allison

isja17@hampshire.edu

Office Hours:

2:00 pm - 5:00 pm Fridays in the APL

Wynn MacKenzie

itm16@hampshire.edu

Office Hours:

Tuesdays and Thursdays 6.30 - 8 PM in the ASH Drome

Theresa Juliani

tj15@hampshire.edu

Office Hours:

Sunday: 2PM - 6PM in the APL

Term:

2018F

Meeting Info:

Tuesday 12:30 PM - 01:50 PM Adele Simmons Hall (ASH) 222

Thursday 12:30 PM - 01:50 PM Adele Simmons Hall (ASH) 222

Wednesday 06:00 PM - 09:00 PM Adele Simmons Hall (ASH) 112

Description:

Can androids fall in love? Could a planet have a mind of its own? How might we communicate with alien life forms? Will it ever be possible for two people to "swap minds"? How about a person and a robot? Might we someday be able to buy memories, record dreams, or "read" books by eating pills? Cognitive science research can shed light on many of these questions, with answers that are often as strange and as wonderful as the inventions of science fiction authors. In this course we will read and view science fiction while simultaneously reading current scientific literature about the mind, the brain, and intelligent machines. The science fiction will provide a framework for our discussions, but the real goal of the course is to provide a tour of issues in cognitive science that will prepare students for more advanced cognitive science courses.

Course Objectives:

- To gain familiarity with a range of current topics, issues, and approaches in cognitive science
- To learn to ask scientific questions about the nature of the mind
- To develop skill in reading primary scientific research literature
- To develop skill in connecting scientific issues to life experience, literature, and film
- To develop improved writing skills

Evaluation Criteria:

- Attendance
- Participation in class discussions and activities, reflecting completion of all reading/listening/viewing requirements
- Three 5-8-page papers
- A 10-12 page paper, which may be a revision/expansion of an earlier paper, due at the end of the semester
- Additional small assignments that will be announced in class, including short descriptions of plans for upcoming papers

Additional Info:

MATERIALS

- **Stories of Your Life and Others**, by Ted Chiang, available from Amherst Books
- Additional text, audio, and video available from the course web site or presented in evening screenings

DISCUSSIONS

There will be no lectures in this class. All class time, aside from screening time, will be devoted to discussion. You must come prepared to discuss the readings/screenings to every discussion session.

How to prepare for a discussion session:

1. Do all of the reading and attend the screenings.
2. Take notes while reading/viewing, including science-related issues to raise in discussion.

I will expect you to have several items to discuss, on paper (though you don't have to turn it in), each day.

PAPERS

Each paper should make and defend a significant scientific/philosophical point with respect to an issue discussed in class. It may do so explicitly, in expository form, or it may do so implicitly, through a work of science fiction, or it may even do it in some other way --- such as describing a plot for a work of science fiction -- but in any event the paper must clearly make and defend a significant scientific/philosophical point. It should also demonstrate engagement with the issues and materials covered in class.

Expository papers should generally have the following general structure:

1. Introduce the issue and clearly state the point that you are making in the first paragraph.
2. Elaborate the issue and defend your position, possibly drawing on examples from the fiction read/viewed for class to provide illustrations.
3. Summarize your evidence and conclusions.

WORK TIME EXPECTATIONS

In this course, students are expected to spend six to eight hours per week in preparation and work outside of class time. This time includes reading, viewing, and listening to course materials along with preparing for class discussions and writing papers.

HOW TO GET AN EVALUATION FOR THIS COURSE

1. Do all of the reading, always before the day for which the reading is assigned.
2. Attend every class and screening and participate in most discussions.
3. Turn in all of the required work on time.

You should not expect to receive an evaluation unless you have met these expectations, or unless the ways in which you fall short are: 1) minor and/or unavoidable (e.g. because of illness), AND 2) well-explained both when the lapses occur and in your final self evaluation. If you are ever in doubt about your status in the class vis-a-vis evaluation then come talk to me.

INCOMPLETES

Course incompletes are restricted and governed by College policy, and will be negotiated on an individual basis.

DIVISION I DISTRIBUTION CREDIT

Successful completion of this course satisfies the Division I distribution requirement in Mind, Brain, and Information. This course provides opportunities for satisfaction of Division I cumulative skills requirements in Quantitative Skills, Independent Work, and Writing and Research.

ILLNESS

If you have a fever, please stay home, take good care of yourself, and contact me by email or phone. If your illness makes it impossible for you to meet the course deadlines then contact me and we will negotiate an accommodation.

A "RESPONSIBLE EMPLOYEE"

Text from the Dean of Faculty

A "Responsible Employee" is any Employee who is not a Confidential or Private Employee. Responsible Employees include Faculty, Staff and Resident Advisors, Teaching Assistants, EMTs and all other student employees when disclosures are made to any of them in their capacities as employees. As a faculty member, I am required to immediately report to the College's Title IX Coordinator all relevant details (obtained directly or indirectly) about Sexual Misconduct Violations or potential violations that involve a College Student or Employee as a Complainant or Respondent, including dates, times, locations, and names of parties and witnesses. If a Complainant requests (a) that personally-identifying information not be shared with the Respondent, (b) that no investigation be pursued, and/or (c) that no disciplinary action be taken, the College will seek to honor this request unless there is a health or safety risk to the Complainant or to any member of the College community. Section VI IA. of the Policy provides additional information about remedial and protective measures.

Responsible Employees are not required to report information disclosed (1) at public awareness events (e.g., "survivor speak-outs", candlelight vigils, protests, or other public forums in which students may disclose Sexual Misconduct Violations; collectively "Public Awareness Events"; or (2) during an individual's participation as a subject in an Institutional Review Board-approved human subjects research protocol ("IRB Research"). The College may provide information about Title IX rights and about available College and community resources and support at Public Awareness Events, however, and Institutional Review Boards may, in appropriate cases, require researchers to provide such information to all subjects of IRB research.

ACADEMIC DISHONESTY: PROCEDURES FOR DEALING WITH VIOLATIONS

Text from the Dean of Faculty

Academic dishonesty (plagiarism (presentation of another's work as one's own), fabrication, or falsification of data) is a breach of the ethics of scholarship and a violation of one of the central norms of an academic community. Because reports of academic dishonesty are most likely to arise from work done in a course or for

a divisional project, a member of the college faculty usually brings forward the report. When such a report is brought forward, the procedure is as follows:

The faculty member will inform the student and the School dean that a violation of academic honesty may have occurred. The School dean will inform the dean of advising of the violation. The faculty member will provide all documentation to the dean of advising, who will meet with both the student and faculty member, and recommend a course of action. If the dean of advising determines that it is more likely than not that academic dishonesty has occurred and determines that it is a first offense, the dean of advising will:

- Write a letter of warning to the student, to remain in the student's academic file;
- In consultation with the faculty member and the School dean, determine academic consequences that may include but are not limited to submitting a revised or new assignment; no evaluation given for the course regardless of add/drop/withdrawal deadlines or, in the case of Division III work, a decision to set aside the project in question and require the student to do an alternative project on a different topic with a different committee (unless the committee concerned agrees to continue working with the student).

OFFICE OF ACCESSIBILITY RESOURCES AND SERVICES (OARS)

Text from the Dean of Faculty

Hampshire College offers services on an individual basis to students with documented disabilities. The College recognizes its obligation under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 to provide reasonable accommodations for individuals with disabilities so they may participate as fully as possible in the College's academic programs. Disabilities may include, but are not limited to, sensory impairments, mobility impairments, chronic illnesses and medical disabilities, learning disabilities, developmental disabilities and psychological disabilities. The director of OARS is responsible for the coordination of services and accommodations for students with disabilities. Accommodations may be provided by OARS directly, but often accommodations are implemented in collaboration with faculty or other relevant campus offices and services. OARS may be reached at 413.559.5498 or via email: accessibility@hampshire.edu.



Announcements

Wednesday, 5 September (06:00PM - 09:00PM)

- Pre-introduction
 - **Watch** in class: **The Twilight Zone: The Lonely** [YouTube]
 - Discussion
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Thursday, 6 September (12:30PM - 01:50PM)

- **Read** before class: Prince, "Hampshire College Principles of Discourse"
 - Introduction, syllabus, discussion
-

Tuesday, 11 September (12:30PM - 01:50PM)

- **Read** before class: McKitterick, "Defining Science Fiction"
 - **Read** before class: Turing, "Computing Machinery and Intelligence"
-

Wednesday, 12 September (06:00PM - 09:00PM)

- **Watch** in class: **Ex Machina** [DVD]
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Thursday, 13 September (12:30PM - 01:50PM)

- **Listen** before class: RadioLab: "More or Less Human (2018)"
 - **Read** before class: Horstmann et al., "Do a robot's social skills and its objection discourage interactants from switching the robot off?"
-

Tuesday, 18 September (12:30PM - 01:50PM)

- **Read** before class: Chiang, "Seventy-Two Letters" [book]
-

Wednesday, 19 September (06:00PM - 09:00PM)

- **YOM KIPPUR (NO CLASS)**
-

Thursday, 20 September (12:30PM - 01:50PM)

- **Read** before class: Searle, "Minds, Brains, and Programs"

- **Read** before class: McEwan, "Düssel..."
-

Tuesday, 25 September (12:30PM - 01:50PM)

- **DUE:** One-paragraph description of plan for Paper #1
- **Read** before class: Spector, "Evolution of Artificial Intelligence"
- **Read** before class: Spector, "Comments on Blade Runner"
- **Optional: Read:** Lem, "The First Sally (A) OR Trurl's Electronic Bard" [Moodle]



The First Sally (A) OR Trurl's Electronic Bard



Submit here: One-paragraph description of plan for Paper #1

Wednesday, 26 September (06:00PM - 09:00PM)

- **Watch** in class: **Blade Runner** [DVD]
-

Thursday, 27 September (12:30PM - 01:50PM)

- **ADVISING DAY (NO CLASS)**
-

Tuesday, 2 October (12:30PM - 01:50PM)

- **DUE:** Paper #1
- **Listen** before class: Radiolab: "Memory and Forgetting"
- **Read** before class: Medved and Hirst, "Islands of memory: Autobiographical remembering in amnestics" [Moodle]



Islands of memory: Autobiographical remembering in amnestics



Submit here: Paper #1

Wednesday, 3 October (06:00PM - 09:00PM)

- **Watch** in class: **Memento** [DVD]
-

Thursday, 4 October (12:30PM - 01:50PM)

- **Listen** before class: IT Conversations: "Dan Simons - The Invisible Gorilla" [Moodle]



IT Conversations: Dan Simons - The Invisible Gorilla

Tuesday, 9 October (12:30PM - 01:50PM)

- **OCTOBER BREAK (NO CLASS)**
-

Wednesday, 10 October (06:00PM - 09:00PM)

- **Watch** in class: **Dark City** [DVD]
-

Thursday, 11 October (12:30PM - 01:50PM)

- **Listen** before class: The Big Idea: "Memory Wars" [Moodle]
- **Read** before class: Laney et al., "The persistence of false beliefs" [Moodle]



Memory Wars



The persistence of false beliefs

Tuesday, 16 October (12:30PM - 01:50PM)

- **Listen** before class: Radiolab: "Deception"
-

Wednesday, 17 October (06:00PM - 09:00PM)

- **Watch** in class: **The Manchurian Candidate** (1962) [DVD]
-

Thursday, 18 October (12:30PM - 01:50PM)

- **DUE:** One-paragraph description of plan for Paper #2



Submit here: One-paragraph description of plan for Paper #2

Tuesday, 23 October (12:30PM - 01:50PM)

- **COMMUNITY EDUCATION DAY (NO CLASS)**
-

Wednesday, 24 October (06:00PM - 09:00PM)

- **Watch** in class: **Gattaca** [DVD]
-

Thursday, 25 October (12:30PM - 01:50PM)

- **DUE:** Paper #2
- **Listen** before class: The Big Idea: "Are We All Racist?" [Moodle]
- **Read** before class: Stanford Encyclopedia of Philosophy: "Implicit Bias"



Are We All Racist?



Submit here: Paper #2

Tuesday, 30 October (12:30PM - 01:50PM)

- **Read** before class: Courtland, "Bias detectives: the researchers striving to make algorithms fair"
- **Read** before class: Hill, "The Venus Effect" [Moodle]



The Venus Effect

Wednesday, 31 October (06:00PM - 09:00PM)

- **ADVISING DAY (NO CLASS)**
-

Thursday, 1 November (12:30PM - 01:50PM)

- **Read** before class: Chiang, "Liking What You See: A Documentary" [book]
-

Tuesday, 6 November (12:30PM - 01:50PM)

- **Read** before class: Dennett, "Animal Consciousness: What Matters and Why" [Moodle]



Animal Consciousness: What Matters and Why

Wednesday, 7 November (06:00PM - 09:00PM)

- **Watch** in class: **Fast, Cheap, and Out Of Control** [DVD]
-

Thursday, 8 November (12:30PM - 01:50PM)

- **Read** before class: Muro et al., "Wolf-pack (Canis lupus) hunting strategies emerge from simple rules in computational simulations" [Moodle]



Wolf-pack (Canis lupus) hunting strategies emerge from simple rules in computational simulations

Tuesday, 13 November (12:30PM - 01:50PM)

- **DUE:** One-paragraph description of plan for Paper #3
- **OPTIONAL:** At 7:00 PM, attend "All Organizing is Science Fiction," a presentation in [this series](#) by Walidah Imarisha at the Ballroom in the UMass Student Union



Submit here: One-paragraph description of plan for Paper #3

Wednesday, 14 November (06:00PM - 09:00PM)

- **Watch** in class: **Arrival** [DVD]
-

Thursday, 15 November (12:30PM - 01:50PM)

- **Read** before class: Chiang, "Story of Your Life" [book]
-

Tuesday, 20 November (12:30PM - 01:50PM)

- **DUE:** Paper #3
- **Listen** before class: The Big Idea: "Super-Intelligence" [Moodle]
- **Read** before class: Chiang, "The Evolution of Human Science" [book]



Super-Intelligence



Submit here: Paper #3

Wednesday, 21 November (06:00PM - 09:00PM)

- **THANKSGIVING BREAK (NO CLASS)**
-

Thursday, 22 November (12:30PM - 01:50PM)

- **THANKSGIVING BREAK (NO CLASS)**
-

Tuesday, 27 November (12:30PM - 01:50PM)

- **Listen** before class: Philosophy Bites: "[David Chalmers on the Singularity](#)"



David Chalmers on the Singularity

Wednesday, 28 November (06:00PM - 09:00PM)

- **Watch** in class: **Limitless** [DVD]
-

Thursday, 29 November (12:30PM - 01:50PM)

- **Read** before class: Chiang, "Understand" [book]
-

Tuesday, 4 December (12:30PM - 01:50PM)

- **Read** before class: Richards et al., "Non-binary or genderqueer genders" [Moodle]
- **Listen** before class: Radiolab: "[Gonads: X & Y](#)"



Non-binary or genderqueer genders

Wednesday, 5 December (06:00PM - 09:00PM)

- **Watch** in class: **Predestination** [DVD]
-

Thursday, 6 December (12:30PM - 01:50PM)

- **Read** before class: Le Guin, "Coming of Age in Karhide" [Moodle]



Coming of Age in Karhide

Tuesday, 11 December (12:30PM - 01:50PM)

- General discussion
-

Wednesday, 12 December (06:00PM - 09:00PM)

- **Watch** in Class: **Galaxy Quest** [DVD]
-

Thursday, 13 December (12:30PM - 01:50PM)

- General discussion
- **DUE:** Final paper



Submit here: Final paper
