

Cognitive Science, Psychology 430/530
Mon, Wed 2:00-3:20 p.m., 110 Willamette
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Office hours: Tue 1:00-2:00 p.m. and by appointment
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Blackboard Course ID: [242607](#)
WWW Course Page: <http://darkwing.uoregon.edu/~bfmalle/CogSci/>

Cognitive Science Psychology 430/530

Syllabus

- How do we think?
- Are there brain systems dedicated to social interaction?
- How did the mind evolve?
- What is consciousness?
- Is there freedom of the will?

In this course you will learn about research and theories in the interdisciplinary field of cognitive science, which draws on psychology, philosophy, linguistics, evolution, neuroscience, and computer science to help us understand how the human mind works—and how it differs from the minds of animals and from machines.

Expect to work hard in this course. You will read literature from a variety of disciplines, think about and discuss some difficult problems, and write a considerable number of short papers. In return for your work you will gain access to an exciting field of science and better understand how humans think and make sense of the world.

Topics

What is cognitive science?
How do we think?
Rationality and emotion
Cognition of other minds
Perception and action
Is there freedom of the will?
What is language?
Learning and comprehending language
Evolution of cognition

Is there artificial intelligence?
Mind-machine relations
How are mind and brain related?
Folk psychology
What is consciousness?
Dreaming, hallucinations, psychosis
Cognitive science of art and music
Cognitive science of morality

Course Components

Lecture: I strive to make class sessions informative, engaging, and thought-provoking. Because we have no textbook, there is no substitute for class sessions and they represent the foundation for the course material. I take role at random intervals. For review or if you do have to miss a class, you can listen to an mp3 file of the lecture on the Blackboard (Bb) course page.

Handouts: Prior to each lecture, a handout will be available on Bb to prepare for the material. However, actual lectures often deviate a bit from these handouts, because I update them the night before the session. Updated handouts that incorporate the additional material covered in class will be available within a few days of the corresponding class session. These handouts provide the second foundation for the course material

Readings: Absent a textbook, the original readings provide the third foundation for the material in this course. To prepare for each topic you need to work through the readings before class. At least skim them so you have a sense of the material and arguments. There are occasional challenge questions in class (which are part of your participation) that require you to have worked through the readings. Reviewing the articles in detail after the corresponding class will allow you to integrate lecture material with the readings and prepare you for exams.

All readings are available electronically on Bb and *only* electronically. Try to download the readings when on campus, or anywhere else with a fast internet connection (some files are several megabytes large). Let me know immediately if you have problems downloading the files.

After each set of *Required Readings*, the Bb E-reader has a substantial number of *Further Readings*. These allow you to go deeper into topics of particular interest to you or reach more clarity about a certain issue. They are also the basis of your reaction papers (see below).

Electronic Resources: The course encourages active use of electronic resources. A variety of material is available on the Blackboard page, including this syllabus, lecture handouts, required and further readings, and links to web resources. I also encourage the use of Email throughout the term to complement in-person communication during office hours.

Exams (2/11, 3/19) cover material from the lectures, discussions, web resources, and readings up to (but excluding) the exam date. The questions will be in multiple-choice and short-answer format.

If you know you are not able to complete a Exam at a scheduled time (e.g., collegiate athletes' away games), you must talk to me **before** the exam date. In case of unforeseen events such as illness or death of a close relative, special arrangements can be made if documentation is provided. No other exceptions will be made.

I do not tolerate any form of cheating. Students who cheat fail the class.

I will provide study questions before each exam, and TA Andrew Monroe will hold a review session.

Participation includes (but is not limited to): verbal questions and discussion contributions in class; short written responses to in-class challenge questions; emailed questions or comments; discussion during office hours. If you prefer a different, more private method, you can write a *term diary* (an electronic notebook with ideas, questions, musing about our course topics).

Office hours: I will have office hours on Tuesday 1-2 pm and by appointment. I am also happy to address questions by email. If I don't respond to my email within 3 days please send it again (With several dozen messages each day, I am grateful for reminders.)

Course Performance

Course performance is based on numerous components, allowing each student multiple opportunities to show his or her strengths and effort. Your final grade is based on the summed points you receive from all assignments:

Midterm Exam	150 points
Final Exam	200 points
5 reaction papers	5 × 100 points
Study group participation	100 points
Individual participation	50 points

The cut-off point for As is around 900, for Bs around 800, for Cs around 700, for Ds around 600. In determining the exact cut-off I always look for gaps in the point distribution that most justify a categorical letter grade distinction.

Reaction Papers

Over the next 10 weeks you will make many new observations and have many new ideas about the science of the mind. I want you to develop these ideas and communicate them. Therefore you will write 5 short reaction papers in response to required *and further readings* available in the E-reader. You need to respond to a minimum of *three* Further Readings. This way, you continuously monitor and document your thinking and learn to communicate it. We will give you detailed feedback on the first few papers to help you improve as you go along.

Submission. Papers must be submitted by the respective deadline (1/23, 2/6, 2/20, 3/5, 3/19), either as paper copies or electronic files sent by E-mail. Turning in a paper late leads to point deductions. Within 24 hours of the due date, the on-time points from the points scheme are forfeited; for each day beyond that, an additional 5 points will be deducted. There is one exception: You have a 1-day grace period for **one** of your papers (because perhaps sometimes dogs really do eat papers). If you face serious personal challenges (health, death of close one) or are traveling for intercollegiate athletic events, you need to talk with us *before* the due date to arrange for an adjusted due date. If you have a documented disability and anticipate needing accommodations for the response paper assignment, please contact me soon and bring your verification letter from Disability Services.

E-mail submission. If you choose to submit one or more of your papers by E-mail, acceptable file formats are **.doc** (not .docx) or **.rtf**. The **Subject header** of your E-mail must say “Reaction paper #” (where # stands for the paper number, from 1 to 5). The **file name** itself must have the last four digits of your student ID, underline, and the paper number—e.g., 1234_4 (fourth paper).

Format. Each reaction paper must have a **cover page** that shows your student ID (no names, please) and an APA-style **reference** for the article you are responding to. The actual reaction fits on *one* page (which is the second page after the cover), between **400 and 600** words. You can adjust line spacing to fit the writing on one page.

Contents. Each reaction paper has the following parts:

- (1) No more than half of the paper (ideally less) is used to **summarize** the point of the article or, if it is a complex article, the main point that you are responding to.
- (2) The other half (ideally more) develops your **response**. Describe at least one **constructive** thought that the article stimulated in you. For example, use the article’s concepts or

findings to analyze an everyday situation; develop a possible application in education, business, clinical, law, etc.; or propose an additional experiment or direction of research. Describe at least one **critical** thought the article provoked in you. For example, critique the clarity of the theory, the logic of the argument; the adequateness of the methods (if the article is empirical); or the support for the interpretation or conclusion. Do not remain superficial (a separate document describes examples of inadequate critiques.) Think through the authors' points, develop a careful critique, perhaps give the author a voice to response, perhaps reply again.

You need to think deeply about your response topics. Inspirations and ideas that are not your own must be acknowledged by source, and all quotes must be referenced (but minimize quotes). All writing assignments will be checked with **anti-plagiarism software**.

Writing quality. You will need to write clearly and concisely. Every sentence must be understandable grammatically and in content, and sentences must be logically connected to each other. Begin each paragraph with a one-sentence précis of what you will say in more detail in the paragraph. Whenever you make a **claim** (e.g., that the article can be applied to a certain domain or has a certain problem), you must **back up** your claim—with evidence in the paper, with research or literature, with logic, or with a compelling example. Don't be vague but precise. Re-read and edit your paper multiple times. And don't forget to spell-check.

Reaction paper grading. Each paper earns up to 100 points. Points are awarded as follows:

Turned in on time	+5
Correct cover page format	+5
One page reaction and within length requirement	+5
No major spelling errors	+5
No major or numerous grammatical errors*	+10
Understandable sentences and sentence transitions	+10
Clarity, accuracy, and relevance in Summary part	+30
Clarity, relevance, backing of claims, and creativity in Response part; at least half of the paper's length.	+30

* Second-language English speakers are graded more leniently on grammar. Please alert us by sending an E-mail.

Challenges (and how to overcome them). If you have little practice in writing (especially writing short papers), you will find this assignment difficult at first. Make use of the Academic Learning Center and heed the feedback from your study group members (see below). Also look at the writing resources on our Blackboard page and on www.uoregon.edu/~bfmalle/456.html. Read and edit your papers repeatedly. Put yourself in a reader's perspective and keep asking yourself: Is this clear? Would they know what I mean? And heed our feedback on early papers.

The last of the three parts, the critique, is the hardest. Keep these guidelines in mind: Never attack the authors; instead, critique the theory, argument, data, or interpretation that the article presents. Do not say that the article was unclear to you; if it was, choose a different one. Do not merely suggest that more data should be collected; say what kind of studies would address your criticism. Do not critique the size of the study sample (in empirical papers) unless it created real problems for the statistical analysis. Do not critique the composition of the sample (e.g., only college students) unless it seriously undermines the paper's main conclusion. Do not vaguely refer to possible factors that could have influenced the results (e.g., personality differences); describe how such differences provide an **alternative explanation** of the findings. Do not simply say: This finding or claim is not true of me (every finding in psychology is true of many

but not all people); if you think that the finding is not true of *most* people, describe your evidence or how one could collect such evidence.

Developing one's own ideas and communicating them clearly is one of the achievements of a good college education. I value this achievement very highly and therefore put great emphasis on thinking and writing. You can expect three things: you will need to put a lot of effort into these papers to earn your points; you will receive careful and critical feedback from us; and you will improve your thinking and writing over the course of the term.

Study Groups

During the first week we will form Study Groups that serve two functions: (1) You meet to discuss the required readings; (2) you exchange reaction papers and give each other critical feedback before turning them in.

To monitor group activities, a group leader is chosen by each group (the leader role can rotate across members). The group leader **reports on Bb** about (a) group meetings that took place and especially about interesting questions or difficulties that emerged from the discussion of the readings and (b) about the paper exchange and editing process. Any problems that arise in the group should be E-mailed **privately** to Andrew. Even though the leader writes the reports, the group as a whole is responsible for being active and for documenting its progress.

The initial group formation are arbitrary, but once each group has settled on a meeting time and **posted that meeting time on Blackboard**, students can switch groups to accommodate their schedule. Trouble with schedules is not an acceptable reason for lack of progress either of an individual group member or the group as a whole.

The first report is due Monday, **January 14**. Thus, you have to meet at least briefly with your group this week to exchange schedules, find a meeting time, and select your leader, who then reports about this first meeting and the group's meeting time on Bb.

At the end of the term each member of a group evaluates each other member of that group so we get consensual evidence for who contributed to the group and who didn't.

Graduate Course

Students enrolled in 530 complete all course components outlined above and also write a scholarly book review. A list of possible books will be available on Blackboard.

Broadcast Component

The UO has a psychology program in Bend that allows students to receive a UO degree while residing in Bend. As part of that program, some courses in Eugene are broadcast to Bend, and this is one of them.

In order to make this a successful experience for everybody, a few things should be kept in mind.

- There is a slight audio delay, so communication works best when one speaker lets the other finish, then responds. (Simultaneous speaking is inaudible.) Non-verbal signals that invite the other speaker to respond are helpful.
- Students in Bend should sit close to the camera and in the same seat each session to allow us to recognize each person individually.
- Students in Bend should inform me promptly when data transmission degrades in quality or partially disappears.

- I try to be alert to students raising their hands, in both Eugene and Bend, but the broadcast screen isn't big or clear enough to guarantee it. For students in Bend, please make yourself heard by voice to make it easier for us to call on you.
- Eugene students must speak clearly and loudly when asking a question or contributing to discussion in class. If the contributions are difficult to hear in Bend, I am happy to repeat the question; just let me know.
- Please refrain from side conversations during lecture, especially in Eugene, because they are likely to be captured by the sensitive microphones.
- If Bend students have a question at the end of class please let me know immediately so the technicians don't sever the connection before we get to talk.

I will visit Bend at least once during the term and broadcast a lecture back to Eugene. In addition, I will be reachable outside of class via a broadcast link or desktop video connection by appointment.

Communication

Because this course is work-intensive from the first week on, it is important that we communicate effectively with each other inside and outside the classroom. Come to class and contribute; see me in my office; make sure that you check your Email and Bb several times a week. If any problems or issues arise, approach me or Andrew. In my experience, there are few problems that cannot be solved by open and effective communication.

Students with Disabilities

If you have a documented disability and anticipate needing accommodations in this course, please meet with me soon and bring along your verification letter from Disability Services.

Schedule at a Glance

Week 1: What is Cognitive Science? January 7 and 9	Week 2: How Do We Think? January 14 and 16
Week 3: Other Minds January 21-23 [Paper1 due]	Week 4: Other Minds January 28 and 30
Week 5: Perception, Action, Will February 4 and 6 [Paper2 due]	Week 6: Language and Mind February 11 [Midterm Exam] and 13
Week 7: Evolution of Cognition, Artificial Intelligence February 18 and 20 [Paper3 due]	Week 8: All Brain? February 25 and 27
Week 9: Consciousness March 3 and 5 [Paper4 due]	Week 10: Expanding Cognitive Science March 10 and 12
Finals Week Wed, Mar 19, 3:15 p.m. [Final Exam] [Paper5 due]	Week 10: Expanding Cognitive Science March 10 and 12