

COGS 102A: Distributed Cognition

Fall 2014; Tu Th, 12:30-1:50pm; Ledden Auditorium

*The schedule and syllabus are subject to change.
Updates will be posted to the course website: thiscourse.com/ucsd/cogs102a/fa14*

1 Personnel

Instructor

Tyler Marghetis
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Teaching Assistants

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2 Course Description

“Cognitive processes extend beyond the boundaries of the person to include the environment, artifacts, social interactions, and culture. Major themes include the philosophy and history of cognitive science, the role of artifacts in human cognition, and theories of socially-distributed, embodied, and extended cognition.”

We'll ask whether your iPhone is part of your mind, whether computers make us smarter, and who, exactly, is responsible for scientific discoveries.

By the end of the course, you'll have new theoretical tools for thinking about *what* cognition is and *where* cognition occurs; you'll have exposure to some of the cutting-edge empirical research on embodied, embedded, extended, and distributed cognition; and you'll be able to apply these skills and this knowledge to analyze reflexively the cognitive systems in which we're embedded, including the American political system, the college classroom, and cognitive science laboratories.

3 Learning Objectives and Outcomes

I have three main learning objectives for this course.

The first objective is for you to **acquire tools for thinking** about *what* kind of phenomenon cognition might be, *where* it might take place, and *how* best to study it. We will thus read theoretical papers from philosophers and cognitive scientists, and you will write a series of short argumentative essays.

The second is for you to understand the **latest empirical research** that argues for an embedded, embodied, distributed approach to cognition, from simple computer simulations, to experiments with octopodes (the plural of “octopus”, I assure you). By the end of this course, you should be able to cite a broad range of empirical work from the cognitive sciences that supports (and undermines) distributed approaches to cognition and feel comfortable reading new research.

The third objective is to **rethink, reflexively, the cognitive systems in which we are embedded**. By the end of the course, you should be able to think critically about the socio-technical organization of the classroom and the university, about how the intelligence of IBM’s Watson is and is not like our won, and why it’s wonderful (horrible?) to keep your iPhone on the table while you dine with friends.

4 Prerequisites

COGS 1 and COGS 14A. Otherwise, seek permission from the instructor.

5 Discussion Sections

Discussion Sections are a critical part of this course. *You must be able to attend discussion section.* Most of the ten weeks have mandatory activities during discussion section; if you do not attend, you will not receive credit for the assignment, and you will lose points for participation. The remaining weeks will consist of optional group discussions or exam review.

6 Requirements and Evaluation

This course requires regular in-class participation, one short response paper per week, two midterms, a final exam, and three peer-evaluated writing assignments. It’s not a lot of work, necessarily, but it’s a lot of different *kinds* of work, and it’s spread throughout the quarter. This is on purpose. It helps you learn. Trust me.

6.1 Breakdown of Final Grade

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|--|-----|
| • Engagement and Participation | 15% |
| • Reading Response Papers (10 x 1 page) | 10% |
| • Peer-supported writing assignments (4) | 20% |
| • Midterm exams (2) | 30% |
| • Final exam (cumulative) | 25% |
| • Bonus: Experiment Participation | +3% |

Additional details on assignments and exams will be provided in class.

6.2 Engagement and Participation (15%)

Objective: Critical reflection is crucial to understanding and mastery. To encourage genuine engagement, nearly a sixth of your grade will come from:

- peer-discussion during lecture (10 points)
- attendance at mandatory Discussion Sections (2 points)
- reading quizzes, designed to encourage timely reading (3 points)

Here's the deal: I want you to put in the effort to read, reflect, and participate during lecture. In return, you can earn these easy points toward your final grade.

Discussion Questions: We will be using Peer Instruction, a pedagogical technique in which students periodically break into small groups for discussion. Discussion prompts will assume that you have read and reflected on the day's required reading[s], so all readings *must* be completed before lecture. These discussions with your peers will be challenging and fun. (I hope!) The prompts are designed to encourage deep, critical engagement with the course material, *not to test your knowledge or to "catch" students who have not done the reading.*

We will use the iClicker system to record the outcomes of these discussions, so you must buy an iClicker (available, new and used, at the campus bookstore, on Amazon, at the UCDS General Store, and elsewhere). You must click in at least 80% of the time during the quarter to receive full "clicker" points (thus allowing for funerals, births, illness, alien abductions, etc.). If you click in less than 80% of the time, you will only receive partial marks. You will not be graded on whether you indicate the "correct" answer—only for participating.

Quizzes: In order for peer discussions to be fruitful, you need to complete the day's required reading *before* lecture. I appreciate that it is difficult to keep up with the reading. To reward your effort, some lectures will start with a brief, simple quiz. The answers will be obvious if you did the reading. I'll drop your worst quiz grade.

6.3 Reading Response Papers (10%)

Objective: Practice *critical* and *constructive* engagement.

Instructions: Pick one of the reading's claims. Spend 2-3 sentences summarizing this claim. **The rest of your response should evaluate and respond, critically but generously.** Take risks! Disagree! But make sure to defend your criticism. These aren't opinion papers but an opportunity for you to practice scholarly engagement.

Format: Between $\frac{3}{4}$ (min) and 1 page (max), single-spaced, 12pt, Times New Roman. At the top, indicate the paper's author[s] and title and your PID (no name).

Grading: "check" (good), "check plus" (exceptional insight), or "check minus" (unacceptable: too short, too long, too superficial, etc.). Most papers will receive a "check" and a single point. You may receive at most one "check minus" and still

receive full points for that response; future “check minuses” will receive a half point. Each “check plus” is worth a point and a half, up to the maximum of 10 points.

Due date: At the start of class for which the reading is assigned, in hard copy to the TA. No response papers will be accepted after the start of lecture. You may submit only one response paper per week; said otherwise, you should submit a response paper *weekly* in order to receive full marks.

6.4 Peer-supported writing assignments (20%)

Objective: Synthesize and learn to apply the course’s theoretical tools.

Instructions: More details to follow. Each writing assignment will involve writing an argumentative essay. You will then share with peers for guided peer-feedback. After giving and receiving feedback, you will revise and resubmit your paper, which will then be graded anonymously by your peers.

Format: 3-4 pages

Grading: Rough draft (1%), Peer feedback (1%), Anonymous peer-evaluation (3%)

Due dates: More details to follow.

6.5 Exams (15% for each midterm; 25% for the cumulative final)

Exams cover material from both lectures and readings. For the assigned readings and lectures, you should be able to articulate: the general topic, the hypotheses or research questions, the methodology (or methodologies) employed, the main claims or results, and a critical assessment of any of these parts. All exams will include a combination of multiple choice, true-or-false, and possibly short answer. The final exam is cumulative.

6.6 Experiment Participation

You can earn bonus points by participating in psychology experiments, using the SONA system (<http://ucsd.sona-systems.com>). Each hour of SONA participation is worth one percentage point, up to a maximum of three. In place of SONA participation, you can attend an academic talk related to Cognitive Science and write a one-page summary of the talk. Also include the talk’s abstract and a link to the talk’s announcement. Any talk listed on the Cognitive Science Department’s website calendar is acceptable; if a talk isn’t listed, check with the professor or TA.

6.7 Grading Rubric

Course grades will be assigned according to the following scale:

≥ 97%: A+ ≥ 93%: A ≥ 90%: A- ≥ 87%: B+ etc.

If this produces a distribution of grades with a median or mean lower than 80%, a curve will be applied to bring grades up.

7 Course Policies

7.1 Electronic Devices

In order to maintain an engaging learning environment, all electronic devices must be turned off or silenced before the start of class. ***This includes tablets and laptop computers.*** If you have an outstanding reason for using your tablet or laptop (e.g. you are incapable of using paper and pen for note-taking), then please discuss this with me before class. You should then sit in the front row. The only time when it is appropriate for anybody (and everybody) to open their laptop is if a classroom discussion hinges on a detail from one of the readings; in that case, you may quietly open your laptop to find the relevant detail.

You may have a pressing reason for checking text messages or accepting phone calls during class (e.g. you or your partner is pregnant and the due date is approaching; you have children at home for whom you are responsible). In that case, please let me know at the start of class and, if necessary, step outside the classroom.

7.2 Email

This policy is adapted with permission, sometimes verbatim, from Prof. Spring Duvall.

Please use email to share fun course-related content (e.g. articles that touch on course themes, relevant quotes from literature, etc.) or to set up a face-to-face meeting. For more in-depth discussions (such as guidance on assignments) please plan to meet in person, either in my office hours or before or after lecture.

If you have questions about course mechanics, please do the following, in order: check the syllabus, ask your friends in the class, and only then email your TA.

If you cannot attend my office hours, please email me to set up an individual face-to-face meeting! Your message should include at least two timeslots when you would like to meet and a brief (1-2 sentences) description of the reason for the meeting. I am also available by Skype or by phone during office hours, in case you are able to talk but unable to come to campus.

In general, our conversations should take place in person or over the phone rather than via email, thus allowing us to get to know each other better and fostering a more productive, interactive learning atmosphere.

7.3 Accommodations for Disabilities

Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD), which is located in University Center 202 behind Center Hall. Students are required to present their AFA letters to Faculty (please make arrangements to contact me privately) and to the OSD Liaison in the

department in advance so that accommodations may be arranged. Contact the OSD for further information: 858.534.4382, osd@ucsd.edu, disabilities.ucsd.edu

7.4 Academic Misconduct

I check assignments for plagiarism and report all suspected cases of academic misconduct to the Academic Integrity Office. **I really do.**

Here's a brief blurb from the Academic Integrity Office: "Integrity of scholarship is essential for an academic community. The University expects that both faculty and students will honor this principle and in so doing protect the validity of University intellectual work. For students, this means that all academic work will be done by the individual to whom it is assigned, without unauthorized aid of any kind."

In this class, you are encouraged to discuss assignments and readings with your peers. All assignments, however, must be written by you, must contain your own ideas and words, and must clearly indicate where the ideas or words of others have been incorporated into your assignment (e.g. include an appropriate citation). **This applies to *all* submitted work, including rough drafts.**

The general sentiment is this: We want you to acquire new knowledge and new skills. We also need to evaluate your mastery of that knowledge and those skills. Both these objectives demand that you do your own thinking and writing. If you're ever unsure about whether something qualifies as academic misconduct, *please ask!* Asking if something counts as "cheating" is *encouraged*. We are very happy to have a friendly discussion about what counts as academic dishonesty.