

Cognition: Basic Processes
UN2210
3 points
Nora M. Isacoff, PhD
Fall 2026: Tuesday & Thursday 1:10 – 2:25
Uris 142

Office Hours (To be Updated)

Nora M. Isacoff	ni2237	Uris 704	Thurs 2:45 – 3:45
Celia Law D’Amato	cld2187		
Gabriella Jacobs	grj2114		Tues & Thurs 2:30 - 3:30
Shivane Pratap	sp4168		Tues 3:30 - 5:30
Maya Velasco	mbv2117		

Bulletin Description

An introduction to basic concepts in cognitive psychology. Topics include theories and phenomena in areas such as attention, memory, concepts and categories, language, reasoning, decision making, and consciousness.

Prerequisites

PSYC UN1001 The Science of Psychology, or an equivalent introductory course in psychology.

Note: This class overlaps substantially with PSYC 2821 – Cognition in Context. Therefore, students cannot receive major credit for both classes.

Aims of this class

The topic of this class is the human mind. In addition to exploring some of the most current theories about how we perceive, remember, speak, and reason (among other abilities), we’ll learn about how psychologists investigate these elusive processes. Students will develop an understanding of how psychologists translate a grand theoretical question like “how does our memory work?” into empirical questions that can actually be tested and measured. As we proceed through our survey of the mind, we will look carefully at the data supporting our claims and also consider alternative explanations for results in the literature. These will be invaluable tools in other psychology classes, classes in other disciplines, and throughout life. A final aim is for you to develop a fascination with the peculiarities of the human mind. As I’ll explain the first class, by “pulling back the curtain,” I believe we can get a little closer to the magic.

Recommended Textbook: Cognition: Exploring the Science of the Mind, by Daniel Reisberg, 8th Edition. Alternative versions of the text, or other similar textbooks, are okay. Reviewing a textbook is highly recommended so you can clarify and deepen concepts covered in class. Additional recommended readings are available on Canvas.

Communication policies:

Have a question about things like deadlines or class policies?

Step 1. Check the syllabus. The answer is probably in there. (Then check the syllabus again, and the slides, your notes, anywhere the information was that you think you might have seen somewhere.)

Step 2. Ask the classmate whose info you got in the first class

Step 3. Ask a TA.

Have a question about class concepts?

Step 1. If it's quick, ask during class

Step 2. Come to my office hours and/or TA office hours

Want to go over your in-class questions/quiz/paper?

Come to my office hours and/or TA office hours

Have a personal circumstance you need to discuss?

Email me and/or a TA, or come to my/their office hours

Grading

Your course grade will be calculated from the following:

1. Quiz 1 (non-cumulative)
2. Quiz 2 (non-cumulative)
3. Quiz 3 (non-cumulative)
4. Paper
5. In-class problem sets (17 of 21 for full-credit)
6. Optional Final Exam (cumulative)

If the final exam is not taken, the first five components will each account for 1/5 of the course grade. If the final exam is taken, the course grade will be calculated in two ways: 1. with the first five components accounting for 1/5 each, and 2. with each component accounting for 1/6 each. Whichever calculation results in the higher course grade will be used (i.e., taking the final cannot hurt your final grade.)

Quizzes

- All quizzes are multiple-choice questions
- All quizzes are open notes (on paper), but you cannot use any devices or textbooks. There is no page limit, but it is highly recommended that you review and condense your notes ahead of time.
- You may bring a dictionary to translate between English and another language if that will reduce language barriers.
- Quizzes are fully based on the concepts we cover in class. They will require applying concepts in new ways rather than simply memorizing facts or vocabulary. The readings will help to reinforce that material, but there will not be any information tested that we have not covered in class.
- Quizzes cannot be made up except in the case of a true emergency. Please let me know as soon

as possible if you cannot attend a quiz, and we can discuss whether a makeup is possible.

Paper

For this paper, you will choose any peer-reviewed, empirical journal article relating to cognition that you find on your own. You should *not* choose an article describing an experiment that we have analyzed together in class and should *not* choose an article posted on Canvas. The goal of the assignment is to analyze the relationships between the paper's theoretical and empirical questions and between its results and inferences, which is a skill we'll practice throughout the semester. The paper should be approximately 1000 - 1500 words. More details will be available in the *Paper Guidelines* that will be posted on Canvas.

In-class problem sets

At some point during each class, I will put up a problem set for you to practice the concepts we are discussing that day. I will give you time to work in small groups (2-4 people per group) to discuss the problems and write up a short answer to them.

Rationale: In-class problems will help you 1. Practice for the quizzes 2. Practice for the paper 3. Get to know your classmates and learn about the information in a deeper way through discussion 4. Produce information each class, rather than only listening, which is much more impactful for learning/memory. (We might as well use cognition principles in a class about cognition.)

What to do: Each group should list the names and UNIs of all group members at the top of the page and submit their answers once. You absolutely **may not** include the name of anyone who was not present in class that day working with your group, as this would count as a violation of academic integrity. If someone asks you to list their name even though they are not present (or if they came in very late), please remind them that you absolutely may not do this.

In-class problems are graded for completion, not for accuracy. We will go over each problem in class, and it is your responsibility to check whether your answer was correct and to understand why, if your answer was incorrect. To get full credit for in-class problems, you must turn in 17 in-class problems (out of 21 problem sets). I recommend submitting all 21 of them if you can, for the practice, but 17 is the maximum you can get credit for. **You may not turn in the problem(s) for the day if you are not in class, with absolutely no exceptions.** Therefore, I recommend making sure you submit 17 early in the semester, to make sure you get full credit. 1 point will be deducted for each in-class problem under 17 (e.g., if you submit 16, your classwork grade will be 16/17).

I strongly recommend you try to answer the in-class problems as you would under quiz conditions (i.e., you use your notes but not the internet). This will give you the best chance of seeing how well you are understanding the material, so you are not surprised on the first quiz.

Extra Credit Policy

Please note that there is no extra credit in this class.

Late Policy

The paper will lose 10% for every day late (e.g., if you got a 95% and handed it in a day late, your grade will be an 85%). Please complete the paper ahead of time in case of any emergencies.

Academic integrity

Any use of AI in any assignment you are submitting must be disclosed, with a detailed description including the prompt(s) you entered, the output, and how you used the information. Use of AI without a disclosure can result in failure of the class in addition to penalties at the University level. You absolutely may not use AI during quizzes.

Violations of academic integrity, including plagiarism, using AI when not permitted or without disclosure, putting other students' names on your in-class problems, and any other violations of academic integrity, will be reported to the university and can potentially result in failing this class as well as other sanctions determined by the university.

Students with disabilities. If you are a student with special needs and require accommodation, you must contact Disability Services to register for specific accommodations (<https://health.columbia.edu/disability-services>).

Technology policy. Our devices are distracting (to ourselves and others). They just are! If you have websites/games/messenger/email/social media/etc. open, of course you are going to look at them. Trying to half-listen to the lecture and half-do work for another class is not going to result in you absorbing any of the material we are covering in class and will make it so much harder for yourself down the line. I strongly recommend trying out leaving your device closed and taking notes in a notebook. Try it for a class or two and see how it feels. If you choose to use a device, I recommend closing all tabs other than the slides/your notes. Whatever you choose, please do what you can to minimize distraction to others/maximize your contribution to a positive learning environment.

Attendance. Attendance will not be taken, other than submission of class problems and quizzes. You do not need to notify me if you will be absent. If you are sick, you should stay home. If you are able to come to class, you should come. There is no Zoom option. Recordings of each class, as well as the slides for the day, will be posted for your review, but generally, students who come to class learn much more, have a much more positive experience, and perform much better on assignments.

Columbia University Chapter of the American Association of University Professors

(AAUP) Pledge on Academic Freedom in the Classroom. Knowledge flourishes when inquiry is free and respectful. This class, which has been approved as part of the Columbia curriculum by appropriate faculty bodies, aims to advance knowledge through discussion, debate, and carefully selected readings and assignments. In accordance with principles of academic freedom promulgated by the American Association of University Professors and affirmed by many universities, including Columbia, the instructor has the authority to set the class syllabus, which may include controversial material relevant to topics being studied. While all participants and their views will be treated respectfully, no one should expect to be shielded from challenging or even upsetting ideas, since thoughtfully engaging such ideas is crucial to free inquiry and intellectual growth.

SCHEDULE

Chapter numbers refer to the Reisberg textbook. Other readings will be available on Canvas.

Date	Topic	Reading	Problem Set #
9/8	Introductions		1
9/10	The Cognitive Revolution	Ch 1	2
9/15	Research Methods in Cognition	Firestone	3
9/17	Perception	Ch 3	4
9/22	Physical Reasoning	Wang et al	5
9/24	Attention	Ch. 5	6
9/29	Executive Functioning	Watts	7
10/1 Quiz 1			
<i>Note: On 10/5 at 4p, I will be giving a talk on my self-communication research in Uris 310. All are welcome to attend.</i>			
10/6	Memory 1	Ch. 6 - 8	8
10/8	Memory 2	Ch. 6 – 8 Sparrow et al (in class)	9
10/13	Theory of Mind	Barrett et al	10
10/15	Symbolic Development & Pretend Play	Sheehan & Uttal	11
10/20	Neurodiversity & Learning Styles	Isacoff et al.	12

10/22	Concepts & Categories	Ch. 9; Isacoff	13
10/27	TAs Present	TBD	14
10/29 Quiz 2			
11/3 Fall Break			
11/5	Language Part 1	Ch. 10; Wolff & Holmes	15
11/6 Paper Due (11:59p)			
11/10	Language Part 2	Ch 10.; Wolff & Holmes	16
11/12	Reasoning & Decision Making	Ch. 12; Dorin et al	17
11/17	Moral Cognition	Haidt; Awad et al	18
11/19	Consciousness	Ch. 15	19
11/24	Literacy Education & Qualitative Research	Hanford (in class)	20
11/26 Thanksgiving Break			
12/1 Quiz 3			
12/3	TAs Present	TBD	21
12/8	Review Session		
12/14 Final			

Additional Reading List

- Awad, E., Levine, S., Kleiman-Weiner, M., Dsouza, S., Tenenbaum, J. B., Shariff, A., Bonnefon, J.-F., & Rahwan, I. (2020). Drivers are blamed more than their automated cars when both make mistakes. *Nature Human Behaviour*, 4(2), 134–143. <https://doi.org/10.1038/s41562-019-0762-8>
- Barrett, H. C., Broesch, T., Scott, R. M., He, Z., Baillargeon, R., Wu, D., Bolz, M., Henrich, J., Setoh, P., Wang, J., & Laurence, S. (2013). Early false-belief understanding in traditional non-Western societies. *Proceedings of the Royal Society B: Biological Sciences*, 280(1755), 20122654. <https://doi.org/10.1098/rspb.2012.2654>
- Dorin, C., Hainguerlot, M., Huber-Yahi, H., Vergnaud, J.-C., & de Gardelle, V. (2021). How economic success shapes redistribution: The role of self-serving beliefs, in-group bias and justice principles. *Judgment and Decision Making*, 16(4), 932–949
- Firestone, C. (2020). Performance vs. competence in human–machine comparisons. *Proceedings of the National Academy of Sciences*, 117(43), 26562–26571. <https://doi.org/10.1073/pnas.1905334117>
- Haidt J. The emotional dog and its rational tail: a social intuitionist approach to moral judgment. *Psychol Rev.* 2001 Oct;108(4):814-34. doi: 10.1037/0033-295x.108.4.814.
- Isacoff, N. M. (2022). The psycholinguistics of propaganda: Mechanisms of subjugation and how to challenge them. *East European Journal of Psycholinguistics*, 9(2), 136–144. <https://doi.org/10.29038/eejpl.2022.9.2.isa>
- Isacoff, N. M., Imanova, S., Kis-Herczegh, P., Toner, S., Urosevic, T., Varma, V., & Le Cunff, A.-L. (2026). Neurodiversity: Integrating evolutionary, philosophical, and sociocultural perspectives. *Research in Autism*, 131, Article 202783. <https://doi.org/10.1016/j.reia.2025.202783>
- Sheehan, K. J., & Uttal, D. H. (2016). Children’s learning from touch screens: A dual representation perspective. *Frontiers in Psychology*, 7, Article 1220. <https://doi.org/10.3389/fpsyg.2016.01220>
- Sparrow, B., Liu, J., & Wegner, D. M. (2011). Google effects on memory: Cognitive consequences of having information at our fingertips. *Science*, 333(6043), 776–778.
- Wang, S., Baillargeon, R., & Brueckner, L. (2004). Young infants’ reasoning about hidden objects: Evidence from violation-of-expectation tasks with test trials only. *Cognition*, 93(3), 167–198. <https://doi.org/10.1016/j.cognition.2003.09.012>

Watts, T. W., Duncan, G. J., & Quan, H. (2018). Revisiting the marshmallow test: A conceptual replication investigating links between early delay of gratification and later outcomes. *Psychological Science*, 29(7), 1159–1177. <https://doi.org/10.1177/0956797618761661>

Wolff, P., & Holmes, K. J. (2012). Linguistic relativity. *Wiley Interdisciplinary Reviews: Cognitive Science*, 2(3), 253–265. <https://doi.org/10.1002/wcs.104>