Introduction to Cognitive Psychology

PSY 102, Term I, Summer 2019
MTuWThF, 11:00 a.m. – 12:15 p.m., Allen 226
May 15th to June 24th
http://cogpsychduke2019.github.io/

Course Instructor:
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Office Hours: By appointment, LSRC B241

What is this course about?

How do psychologists today study the mind and how it works? This is a course for anyone interested in what the mind is, how contemporary researchers study the mind, and what researchers have discovered about how the mind works.

In our first module, we will examine what constitutes engaging story-telling and scientific knowledge (Science Communication), why some methods are better for investigating specific research questions than others as well as current methodological issues within psychology (Cognitive Methods), and how you construct the world you see and feel around you (Perception). We will begin to critically consume academic journal articles and science communication pieces.

Next we will consider how our brain prioritizes and processes information in a world that bombards our senses (Attention), in addition to how we feel and construct emotions (Emotion) and how that shapes our oral communication (Language). The third module will consider how we reason and remember information (Knowledge), conjure possible and impossible scenarios as well as past events (Episodic Memory, Memory Mechanisms), and construct our own life stories (Autobiographical Memory). We will evaluate how to convey these core cognitive psychology concepts to a broad audience with science communication pieces.

We will then apply our theories and skills to understanding more complex feats of the human mind, such as decision-making and interactions between memory, attention, and decision-making. In our final modules, we will think about how we take shortcuts when making choices, how our memory and mind can be tricked and shaped by external events, and what factors promote better learning, both in an educational and academic context.

The first half of the course is primarily focused on basic science concepts within cognitive psychology, while the second half considers how these concepts are interlinked and directly applicable to other aspects of life (e.g., policy, education, history). Through weekly quizzes and several writing assignments, you will have many opportunities to reflect on course material and receive prompt feedback on your learning. The bulk of your grade will be determined by (1) your ability to identify and apply rigorous concepts in cognitive psychology, as assessed with class discussion, reading worksheets, and quizzes, and (2) the clarity and ingenuity with which you can explain scientific findings to a broad and academic audience, as assessed by your science communication and summary pieces.

This course has no pre-requisites. Because our time is abbreviated during the Summer Term, this is course is intensive in its pace through material. You should expect to spend between 2 and 4 hours daily outside of meeting time on course materials.

What are the goals of this course?

The first goal of this course is for you, students, to develop skills as critical consumers of empirical findings within cognitive psychology through academic and news readings as well as facilitated discussions. You will learn to evaluate the strengths and weaknesses of various research methods, and to judge whether the conclusions drawn from using particular methods and obtaining specific findings are justified. You will also learn to identify common behavioral results and paradigms within the field.

The second goal is to develop your skills as communicators of empirical research within cognitive psychology. Through science communication and summary pieces, peer feedback, and reading responses to empirical articles, you will hone your ability to communicate effectively about cognitive psychology and learn how to synthesize academic findings.

The third goal is to apply your skills as critical consumers of cognitive psychology to current issues in psychology and neuroscience, such as open science, good pedagogical practices, and diversity. For example, you will write a Wikipedia page for a current female or underrepresented cognitive scientist, including their biography and three of their most cited findings, to promote a more visibly inclusive face of cognitive psychology (e.g., project first started by Jess Wade). At the end of the course, the instructor will email the scientist who you profiled, with you CC'd and your profile attached, so that you can continue to belong to the cognitive psychology community.

What will I do in class, and how will I learn?

To achieve our course goals, there are five required elements of this course: (1) class meetings, (2) readings, (3) weekly quizzes, (4) science communication pieces, and (5) a science summary piece.

1. Class Meetings

Please arrive no later than 11:00 am and stay until 12:15 pm. There are many excellent reasons why you may need to excuse yourself from a class meeting, both personal and professional. However, in this time-constrained summer course, our time together is the most precious resource we have. Even a single absence from the course will significantly affect your ability to be successful. Thus, if you anticipate attending class regularly to be a difficulty for you, I ask that you do not take this course and consider completing it at another time. I would be happy to help you brainstorm alternative strategies to learn more about the wonderful world of psychological research.

To take this course, you must plan to be able to attend each class session in full. While attendance is required, my expectations for your presence in class are much higher. In addition to your physical presence in class, you should prepare for class by reading and reflecting on assigned material; engaging in small group discussions; helping peers understand tricky concepts; significantly contributing to class discussions; and more.

Each class, you will evaluate your own contributions to the discussion by scoring yourself on a discussion rubric that I will email. I will factor these self-evaluations into a participation score for

each class. At the end of the semester, your two worst scores will be dropped before I calculate your final Participation grade. Absences will be counted as a dropped score.

2. Readings
We do not have a formal textbook for this course. Instead, we will explore readings and media drawn from many different sources, including podcasts and articles from the popular media and primary scientific literature. These are posted on our course website.

3. Weekly Quizzes
We will have six weekly quizzes consisting of multiple-choice and short answer questions. These quizzes are designed to review the material and give you ongoing feedback about how well you are learning in the course. Your two lowest quiz scores will be dropped from your grade.

4. Science Communication Pieces
The science communication pieces (Duke research blog post, science communication pitch, Wikipedia project) are designed to help you learn how to discuss what you are learning with friends and loved ones, and to consume media summaries of psychological research with a critical eye. You will apply what you are learning from your weekly readings into these pieces, which are also aimed towards making you feel a part of the Duke and general cognitive psychology research community. Along the way, you will complete several mini assignments designed to guide you through the processing of finishing these projects. Detailed guidelines are available on our course website, and we will discuss grading rubrics in class.

5. Science Summary Piece
Finally, you will apply what you are learning from your weekly readings into a piece summarizing an article for academic audience. Taken together, the science communication and summary pieces will help you think more critically about the role of the audience in discussing science findings broadly.

How will you be graded?
This course will be graded on a 100-point scale using standard cutoffs for letter grades (A,B,C,D,NP with +/-). Detailed grading rubrics will be self-generated in class.

Your final course grade will be determined in the following way:
o Participation: 20%
o Quizzes: 15%
o Science communication pitch: 5%
o Duke research blog post: 20%
o Science summary piece: 20%
o Wikipedia project: 20%

What are the class policies?
Laptops and Classroom Technology
We will have the opportunity to learn about potential influences of technology on our psychology. During our first class meeting, we will discuss the pros and cons of laptops and other digital forms of note-taking. We will determine as a class whether to allow laptops during portions of our class meetings. Outside of specific class activities, cell phones should be dark and silent during our class meetings. If you are expecting an important message during class that requires you to check your

phone, speak to me. Feel free to step out for brief breaks to check texts, emails, etc.

To complete class assignments, you will need access to a personal computing device, such as a laptop, for accessing class readings, listening to podcasts, and completing and submitting class assignments. You can find available machines at the Duke University Libraries (hours: https://library.duke.edu/about/hours). I am committed to providing an equitable learning environment. If access to technology is a hardship for you, please reach out and you will be supported confidentially.

Missed class or work

If you are unable to attend class or meet an assignment deadline, please contact me as soon as possible, but no later than 48 hours, to discuss your missed work. More than two absences will require a conversation with me to discuss your progress and continued ability to succeed in the course. We may discuss options such as resources to support missed content, revised timelines for turning in assignments, or withdrawing from the course so you can learn this content at another time. You should seek support from your academic dean if you are experiencing long-term illnesses or personal emergencies. See Trinity's illness policies for details.

Commitment to Diversity and Equity

Adapted from https://www.brown.edu/sheridan/teaching-learning-resources/inclusive-teaching/statements by Brenda Yang

Our classroom does not exist in a vacuum: historical and systemic forces powerfully shape our beliefs, interactions with each other, and even the content of the course. It is my intent that students from diverse backgrounds and perspectives be served by this course, that students' needs be addressed both in and out of class, and that diversity be viewed as a resource, strength, and benefit. It is my goal to present materials and activities celebratory of diversity in multiple forms: gender, sexuality, ethnicity, race, culture, disability, age, veteran status, and socioeconomic status. I will encourage us as a community of learners to operate from a place of cultural humility and to assume best intent. Your suggestions are appreciated and encouraged.

Changes to the syllabus

I may make minor changes to the syllabus, such as eliminating or changing a reading assignment, or adjusting a deadline. Such changes will be made in consultation with the class to ensure that sufficient notice is given and that changes are fair and favorable.

Academic accommodations

I am committed to ensuring that students have every opportunity to succeed in our course. Students who have a disability, which may necessitate an academic accommodation or the use of auxiliary aids and services in a class, should initiate the request with the Student Disability Access Office (SDAO). The SDAO will evaluate the request with required documentation, recommend appropriate accommodations, and prepare a verification letter dated in the current academic term in which the request is being made. Please contact the SDAO as soon as possible.

Academic integrity

Students are expected to adhere to Duke's Community Standard and are responsible for understanding the University rules regarding academic integrity. In brief, conduct prohibited includes all forms of academic dishonesty: e.g., unpermitted collaboration, representing another's work as one's own, or helping or allowing someone else to do any of these things. The *minimum* penalty for academic dishonesty is receiving zero credit on the assignment in question.

Week	Day	Date, Day #	Topic	Feedback	Readings Due	Assignments Due
1	W	May 15, #1	Science Communication	--	--	Get to Know You Qualtrics survey
1	Th	May 16, #2	Cognitive Methods	--	Chapter on Methodology Ted Talk: Bad Science Huston (2019), Darling (2017)	None
1	F	May 17, #3	Perception	--	Gruters et al. (2018) Science News: Yong (2018), Dean (2018)	Reading worksheet
2	M	May 20, #4	Attention	Worksheet feedback	Kang and Wheatley (2017), Middlebrooks et al. (2017) Podcast: Hidden Brain (Buying Attention)	Tweet summary of SciComm article Reading worksheet
2	Tu	May 21, #5	Attention	Quiz & Worksheet feedback	Wechsler et al. (2018), Seli et al. (2018) Podcast: Hidden Brain (Life, Interrupted)	Headline of SciComm article Reading worksheet
2	W	May 22, #6	Emotion	Tweet & Worksheet feedback	Kragel et al. (2016), Siegel et al. (2018) Podcast: All in the Mind (The Creation of Emotions)	Reading worksheet
2	Th	May 23, #7	Emotion	Headline & Worksheet feedback	D'Arbeloff et al. (2018), MacCormack and Lindquist (2019) Science News: Chen (2018), Strickland (2016)	Opening paragraph SciComm article Reading worksheet
2	F	May 24, #8	Emotion/Language	Worksheet feedback	Fan et al. (2019), Brady et al. (2017) Podcast: The Psych Files (Facebook Experiment)	Reading worksheet
May 27, Memorial Day – no class, readings, or assignments						
3	Tu	May 28, #9	Language	Quiz	Bergelson and Aislin (2017), Yu et al. (2019) Science News: Gutman (2017)	Choose scientist for Wikipedia profile Reading worksheet
3	W	May 29, #10	Knowledge	Reverse outline of paragraph	Eckstein et al. (2019), Pine et al. (2018) Pew Research: Science Knowledge Quiz	Science pitch of Scicomm piece Reading worksheet
3	Th	May 30, #11	Episodic Memory	--	Uitvlugt and Healey (2019) Ben-Yakov and Henson (2018) Scientist summary: Williams et al. (2019) Science News: Shute (2014)	Reading worksheet
3	F	May 31, #12	Memory mechanisms	Pitch feedback	Koster et al. (2018) Vaz et al. (2019) Scientist Summary: Gelinas (2019)	Multiple paragraph SciComm article Reading worksheet
4	M	June 3, #13	Autobiographical Memory	Quiz	Rubin et al. (2019), Stanley et al. (2017) Science News: Leung (2019) Podcast: All in the Mind (A Highly Superior Memory)	Opening paragraph of scientist audience summary article Reading worksheet
4	Tu	June 4, #14	Working memory / cognitive training	Reverse outline of paragraphs	Kable et al. (2017), Dowd et al. (2017) Science News: Noë (2017), Hamilton (2017)	Midsemester Qualtrics survey Reading worksheet
4	W	June 5, #15	Attention, Memory, Decision-Making, Emotion Interact	--	Gwinn et al. (2019), deBettencourt et al. (2017) Podcast: Hidden Brain (Looking Back)	Biography of Wikipedia profile Reading worksheet

4	Th	June 6, #16	Decision-making	Opening paragraph feedback	Pryor et al. (2019), Pearson et al. (2018) Science News: Lombrozo (2014)	Reading worksheet
4	F	June 7, #17	Motivated Reasoning	Biography feedback Quiz	Pennycook and Rand (2018), Stanley et al. (2019) Podcast: Hidden Brain (I'm Right, You're Wrong)	Reading worksheet
5	M	June 10, #18	Cognitive Biases	--	Levari et al. (2018), Klein and O'Brien (2018) Podcast: You Are Not So Smart (Active Information Avoidance) Oatmeal comic: Believe	Outline of Duke Research Blog Reading worksheet
5	Tu	June 11, #19	False Memory	Outline feedback	Frenda et al. (2016), Zhu et al. (2019) TED Radio Hour: Can Eyewitnesses Create Memories?	Multiple paragraphs scientist article Reading worksheet
5	W	June 12, #20	Misinformation	Multiple paragraph feedback	Grinberg et al. (2019), Vosoughi et al. (2018) Play computer game ncase.me/crowds	Reading worksheet
5	Th	June 13, #21	Misinformation	--	Fazio et al. (2015), Putnam et al. (2017) Scientist summary: Lazer et al. (2018)	Draft of Duke Research Blog Reading worksheet
5	F	June 14, #22	Collective Memory	Quiz	Maswood et al. (2019), Abel et al. (2019) Science News: Stix (2018), Cummins (2018)	Outline of research for Wikipedia profile Reading worksheet
6	M	June 17, #23	Creativity & Problem-Solving	Draft feedback	Addis et al. (2016), Beaty et al. (2018) Podcast: Scott Barry Kaufman (Creativity with Constraints)	Outline scientist audience summary article Reading worksheet
6	Tu	June 18, #24	Learning & Motivation	Outline feedback	Marvin and Shohamy (2016), Charpentier et al. (2018) Scientist summaries: Levy (2018), DiMenichi & Tricomi (2016)	Reading worksheet
6	W	June 19, #25	Learning & Motivation	Outline feedback	Lydon-Staley et al. (2018), Lieshout et al. (2018) Science News: Yuhas (2014)	Final Duke Research Blog Reading worksheet
6	Th	June 20, #26	Education	--	Smith et al. (2016), Brady et al. (2018) Scientist summary: Dunlosky et al. (2013)	Scientist summary article Reading worksheet
6	F	June 21, #27	Education	Quiz	Ravizza et al. (2017), Sana et al. (2013) Science News: Lombrozo (2013), Supiano (2019)	Reading worksheet
7 (3)	M	June 24, #28	Overview	Review	None	Wikipedia profile

Bibliography

Science Communication (#1/28 of class):

- None

Cognitive Methods (#2/28 of class):

- Gazzaniga, M., Ivy, R.B., Mangum, G.R. (2008). Methods of Cognitive Neuroscience. In: Cognitive Neuroscience: The Biology of the Mind, pp. 110-162. New York City: W.W. Norton & Company Third Edition.
- Goldacre, B. (2011). *Battling bad science*. Retrieved from https://www.ted.com/talks/ben_goldacre_battling_bad_science
- Huston, M. (2019). A Revolution Is Happening in Psychology. Here's How It's Playing Out. Retrieved from Psychology Today website: https://www.psychologytoday.com/articles/201905/revolution-is-happening-in-psychology-heres-how-its-playing-out
- Darling, N. (2017). Attracting WEIRD Samples. Retrieved from Psychology Today website: https://www.psychologytoday.com/blog/thinking-about-kids/201710/attracting-weird-samples

Perception (#3/28 of class):

Article:

- Gruters, K. G., Murphy, D. L. K., Jenson, C. D., Smith, D. W., Shera, C. A., & Groh, J. M. (2018). The eardrums move when the eyes move: A multisensory effect on the mechanics of hearing. *Proceedings of the National Academy of Sciences*, *115*(6), E1309–E1318. https://doi.org/10.1073/pnas.1717948115

Science News:

- Yong, E. (2018, January 23). When Your Eyes Move, So Do Your Eardrums. Retrieved from The Atlantic website: https://www.theatlantic.com/science/archive/2018/01/when-your-eyes-move-so-do-your-eardrums/551237/
- Dean, S. (2018, January 25). Our Eye Movements Also Move Eardrums, And Nobody Knows Why. Retrieved from https://www.sciencealert.com/eye-movements-cause-vibrations-eardrums-hearing-weird-brain

Attention, Day 1 (#4/28 of class):

Articles

- Kang, O., & Wheatley, T. (2017). Pupil dilation patterns spontaneously synchronize across individuals during shared attention. *Journal of Experimental Psychology: General*, *146*(4), 569–576. https://doi.org/10.1037/xge0000271
- Middlebrooks, C. D., Kerr, T., & Castel, A. D. (2017). Selectively Distracted: Divided Attention and Memory for Important Information. *Psychological Science*, *28*(8), 1103–1115. https://doi.org/10.1177/0956797617702502

Podcast

- Vedantam, S., Shah, P., & Boyle, T. (2018). *Buying Attention | Hidden Brain : NPR*. Retrieved from https://www.npr.org/2018/01/01/574073721/our-mental-space-under-attack

Attention, Day 2 (#5/28 of class):

Articles:

- Wechsler, K., Drescher, U., Janouch, C., Haeger, M., Voelcker-Rehage, C., & Bock, O. (2018). Multitasking During Simulated Car Driving: A Comparison of Young and Older Persons. *Frontiers in Psychology*, *9*. https://doi.org/10.3389/fpsyg.2018.00910
- Seli, P., Carriere, J. S. A., Wammes, J. D., Risko, E. F., Schacter, D. L., & Smilek, D. (2018). On the Clock: Evidence for the Rapid and Strategic Modulation of Mind Wandering. *Psychological Science*, *29*(8), 1247–1256. https://doi.org/10.1177/0956797618761039

Podcast

- Vedantam, S. (2017). *Radio Replay: Life, Interrupted | Hidden Brain : NPR*. Retrieved from https://www.npr.org/2017/12/01/567834281/radio-replay-life-interrupted

Emotion, Day 1 (#6/28 of class):

Articles

- Kragel, P. A., Knodt, A. R., Hariri, A. R., & LaBar, K. S. (2016). Decoding Spontaneous Emotional States in the Human Brain. *PLOS Biology*, *14*(9), e2000106. https://doi.org/10.1371/journal.pbio.2000106
- Siegel, E. H., Wormwood, J. B., Quigley, K. S., & Barrett, L. F. (2018). Seeing What You Feel: Affect Drives Visual Perception of Structurally Neutral Faces. *Psychological Science*, *29*(4), 496–503. https://doi.org/10.1177/0956797617741718

Podcast:

- Malcolm, L. (2017, July 5). *The creation of emotions | All in the Mind*. Retrieved from https://www.abc.net.au/radionational/programs/allinthemind/the-creation-of-emotions/8576540

Emotion, Day 2 (#7/28 of class):

Articles

- d'Arbeloff, T. C., Kim, M. J., Knodt, A. R., Radtke, S. R., Brigidi, B. D., & Hariri, A. R. (2018). Microstructural integrity of a pathway connecting the prefrontal cortex and amygdala moderates the association between cognitive reappraisal and negative emotions. *Emotion*, *18*(6), 912–915. https://doi.org/10.1037/emo0000447
- MacCormack, J. K., & Lindquist, K. A. (2019). Feeling hangry? When hunger is conceptualized as emotion. *Emotion*, *19*(2), 301–319. https://doi.org/10.1037/emo0000422

Science News

- Chen, A. (2018). How Hunger Pangs Can Make Nice People "Hangry." Retrieved from NPR.org website: https://www.npr.org/sections/health-shots/2018/06/11/618395072/how-hunger-pangs-can-make-nice-people-hangry
- Strickland, A. (2016). This is what emotions look like in your brain. Retrieved from CNN website: https://www.cnn.com/2016/10/06/health/spontaneous-emotions-brain-scans/index.html

Emotion/Language (#8/28 of class):

Articles

- Fan, R., Varol, O., Varamesh, A., Barron, A., van de Leemput, I. A., Scheffer, M., & Bollen, J. (2019). The minute-scale dynamics of online emotions reveal the effects of affect labeling. *Nature Human Behaviour*, *3*(1), 92–100. https://doi.org/10.1038/s41562-018-0490-5
- Brady, W. J., Wills, J. A., Jost, J. T., Tucker, J. A., & Bavel, J. J. V. (2017). Emotion shapes the diffusion of moralized content in social networks. *Proceedings*

of the National Academy of Sciences, *114*(28), 7313–7318. https://doi.org/10.1073/pnas.1618923114

Podcast

- Britt, M. (2014). *Facebook Experiment | The Psych Files*. Retrieved from http://www.thepsychfiles.com/2014/07/ep-221-facebook-study-a-brief-summary-and-did-they-use-informed-consent/

Language (#9/28 of class):

Articles

- Bergelson, E., & Aslin, R. N. (2017). Nature and origins of the lexicon in 6-mo-olds. *Proceedings of the National Academy of Sciences*, *114*(49), 12916–12921. https://doi.org/10.1073/pnas.1712966114
- Yu, C., Suanda, S. H., & Smith, L. B. (2019). Infant sustained attention but not joint attention to objects at 9 months predicts vocabulary at 12 and 15 months. *Developmental Science*, *22*(1), e12735. https://doi.org/10.1111/desc.12735

Science news:

- Gutman, R. (2017, November 20). The Connected Vocabularies of Six-Month-Olds. Retrieved from The Atlantic website: https://www.theatlantic.com/science/archive/2017/11/babies-language-vocabularies/546320/
- Hayakawa, S., & Marian, V. (2019). How Language Shapes the Brain. Retrieved from Scientific American Blog Network website: https://blogs.scientificamerican.com/observations/how-language-shapes-the-brain/

Knowledge (#10/28 of class):

Articles

- Eckstein, M. K., Starr, A., & Bunge, S. A. (2019). How the inference of hierarchical rules unfolds over time. *Cognition*, *185*, 151–162. https://doi.org/10.1016/j.cognition.2019.01.009
- Pine, A., Sadeh, N., Ben-Yakov, A., Dudai, Y., & Mendelsohn, A. (2018). Knowledge acquisition is governed by striatal prediction errors. *Nature Communications*, *9*(1), 1673. https://doi.org/10.1038/s41467-018-03992-5

Pew Research Center Quiz: https://www.pewresearch.org/science/quiz/science-knowledge-quiz/

Episodic Memory (#11/28 of class):

Articles

- Uitvlugt, M. G., & Healey, M. K. (2019). Temporal Proximity Links Unrelated News Events in Memory. *Psychological Science*, *30*(1), 92–104. https://doi.org/10.1177/0956797618808474
- Ben-Yakov, A., & Henson, R. N. (2018). The Hippocampal Film Editor: Sensitivity and Specificity to Event Boundaries in Continuous Experience. *Journal of Neuroscience*, *38*(47), 10057–10068. https://doi.org/10.1523/JNEUROSCI.0524-18.2018

Scientist Summary:

- Williams, A. N., Postans, M., & Hodgetts, C. J. (2019). How the Human Brain Segments Continuous Experience. *Journal of Neuroscience*, *39*(17), 3172–3174. https://doi.org/10.1523/JNEUROSCI.3041-18.2019

Science News

- Shute, N. (2014). Our Brains Rewrite Our Memories, Putting Present In The Past. Retrieved from NPR.org website: https://www.npr.org/sections/health-shots/2014/02/04/271527934/our-brains-rewrite-our-memories-putting-present-in-the-past

Memory Mechanisms (#12/28 of class):

Articles

- Koster, R., Chadwick, M. J., Chen, Y., Berron, D., Banino, A., Düzel, E., … Kumaran, D. (2018). Big-Loop Recurrence within the Hippocampal System Supports Integration of Information across Episodes. *Neuron*, *99*(6), 1342-1354.e6. https://doi.org/10.1016/j.neuron.2018.08.009
- Vaz, A. P., Inati, S. K., Brunel, N., & Zaghloul, K. A. (2019). Coupled ripple oscillations between the medial temporal lobe and neocortex retrieve human memory. *Science*, *363*(6430), 975–978. https://doi.org/10.1126/science.aau8956

Scientist Summary

- Gelinas, J. (2019). Ripples for memory retrieval in humans. *Science*, *363*(6430), 927–928. https://doi.org/10.1126/science.aaw6767

Autobiographical Memory (#13/28 of class):

Articles

- Rubin, D. C., Deffler, S. A., & Umanath, S. (2019). Scenes enable a sense of reliving: Implications for autobiographical memory. *Cognition*, *183*, 44–56. https://doi.org/10.1016/j.cognition.2018.10.024
- Stanley, M. L., Parikh, N., Stewart, G. W., & De Brigard, F. (2017). Emotional intensity in episodic autobiographical memory and counterfactual thinking. *Consciousness and Cognition*, *48*, 283–291. https://doi.org/10.1016/j.concog.2016.12.013

Science News

- Leung, W. (2019). Record and replay: How a Canadian-made app is aiming to help Alzheimer's patients improve their daily lives - The Globe and Mail. Retrieved from https://www.theglobeandmail.com/canada/article-toronto-teams-hippocamera-a-high-tech-memory-aid-for-alzheimers/

Podcast

- Malcolm, L. (2019). *A highly superior memory | All in the Mind*. Retrieved from https://www.abc.net.au/radionational/programs/allinthemind/a-highly-superior-memory/11021088

Working Memory / Cognitive Training (#14/28 of class):

Articles

- Kable, J. W., Caulfield, M. K., Falcone, M., McConnell, M., Bernardo, L., Parthasarathi, T., … Lerman, C. (2017). No Effect of Commercial Cognitive Training on Brain Activity, Choice Behavior, or Cognitive Performance. *Journal of Neuroscience*, *37*(31), 7390–7402. https://doi.org/10.1523/JNEUROSCI.2832-16.2017
- Yin, S., Sui, J., Chiu, Y.-C., Chen, A., & Egner, T. (2019). Automatic Prioritization of Self-Referential Stimuli in Working Memory. *Psychological Science*, *30*(3), 415–423. https://doi.org/10.1177/0956797618818483

Science News

- Noe, A. (2017). More Bad News For Brain-Training Games. Retrieved from NPR.org website: https://www.npr.org/sections/13.7/2017/07/14/536759455/more-bad-news-for-brain-training-games

- Hamilton, J. (2017). In Memory Training Smackdown, One Method Dominates. Retrieved from NPR.org website: https://www.npr.org/sections/health-shots/2017/10/23/558767704/in-memory-training-smackdown-one-method-dominates

Attention, Memory, & Decision-Making Interact (#15/28 of class):

Articles

- Gwinn, R., Leber, A. B., & Krajbich, I. (2019). The spillover effects of attentional learning on value-based choice. *Cognition*, *182*, 294–306. https://doi.org/10.1016/j.cognition.2018.10.012
- deBettencourt, M. T., Norman, K. A., & Turk-Browne, N. B. (2017). Forgetting from lapses of sustained attention. *Psychonomic Bulletin & Review*, 1–7. https://doi.org/10.3758/s13423-017-1309-5

Podcast:

- Vedantam, S. (2018). *Looking Back | Hidden Brain : NPR*. Retrieved from https://www.npr.org/2018/06/21/622298227/radio-replay-looking-back

Decision-making (#16/28 of class):

Articles

- Pryor, C., Perfors, A., & Howe, P. D. L. (2019). Even arbitrary norms influence moral decision-making. *Nature Human Behaviour*, *3*(1), 57–62. https://doi.org/10.1038/s41562-018-0489-y
- Pearson, J. M., Law, J. R., Skene, J. A. G., Beskind, D. H., Vidmar, N., Ball, D. A., … Skene, J. H. P. (2018). Modelling the effects of crime type and evidence on judgments about guilt. *Nature Human Behaviour*, *2*(11), 856–866. https://doi.org/10.1038/s41562-018-0451-z

Science News

- Lombrozo, T. (2014). Blame Your Brain: The Fault Lies Somewhere Within. Retrieved from NPR.org website: https://www.npr.org/sections/13.7/2014/06/16/322556750/blame-your-brain-the-fault-lies-somewhere-within

Motivated Reasoning (#17/28 of class):

Articles

- Pennycook, G., & Rand, D. G. (2018). Lazy, not biased: Susceptibility to partisan fake news is better explained by lack of reasoning than by motivated reasoning. *Cognition*. https://doi.org/10.1016/j.cognition.2018.06.011
- Stanley, M. L., Henne, P., Yang, B. W., & De Brigard, F. (2019). Resistance to Position Change, Motivated Reasoning, and Polarization. *Political Behavior*. https://doi.org/10.1007/s11109-019-09526-z

Podcast

- Vedantam, S., & Penman, M. (2017). *When It Comes To Politics and "Fake News," Facts Aren't Enough | Hidden Brain: NPR*. Retrieved from https://www.npr.org/2017/12/25/572162132/enter-title

Cognitive Biases (#18/28 of class):

Articles

- Levari, D. E., Gilbert, D. T., Wilson, T. D., Sievers, B., Amodio, D. M., & Wheatley, T. (2018). Prevalence-induced concept change in human judgment.

Science, *360*(6396), 1465–1467. https://doi.org/10.1126/science.aap8731

- Klein, N., & O'Brien, E. (2018). People use less information than they think to make up their minds. *Proceedings of the National Academy of Sciences*, *115*(52), 13222–13227. https://doi.org/10.1073/pnas.1805327115

Podcast

- McRaney, D. (2018, March 26). *YANSS 123 – Active Information Avoidance*. Retrieved from: https://youarenotsosmart.com/2018/03/26/yanss-123-active-information-avoidance/
- Inman, M. (2017). Believe. Retrieved from The Oatmeal website: https://theoatmeal.com/comics/believe

False Memory (#19/28 of class):

Articles

- Frenda, S. J., Berkowitz, S. R., Loftus, E. F., & Fenn, K. M. (2016). Sleep deprivation and false confessions. *Proceedings of the National Academy of Sciences*, *113*(8), 2047–2050. https://doi.org/10.1073/pnas.1521518113
- Zhu, B., Chen, C., Shao, X., Liu, W., Ye, Z., Zhuang, L., … Xue, G. (2019). Multiple interactive memory representations underlie the induction of false memory. *Proceedings of the National Academy of Sciences*, *116*(9), 3466–3475. https://doi.org/10.1073/pnas.1817925116

Ted talk (part of TED Radio Hour podcast):

- Fraser, S. (2013). *Can Eyewitnesses Create Memories?* Retrieved from https://www.npr.org/2013/11/29/182671574/can-eyewitnesses-create-memories

Misinformation, Day 1 (#20/28 of class):

Articles

- Grinberg, N., Joseph, K., Friedland, L., Swire-Thompson, B., & Lazer, D. (2019). Fake news on Twitter during the 2016 U.S. presidential election. *Science*, *363*(6425), 374–378. https://doi.org/10.1126/science.aau2706
- Vosoughi, S., Roy, D., & Aral, S. (2018). The spread of true and false news online. *Science*, *359*(6380), 1146–1151. https://doi.org/10.1126/science.aap9559

Computer Game

- Social networks, wisdom of the crowds, groupthink, and idea propagation: https://ncase.me/crowds/

Misinformation, Day 2 (#21/28 of class):

Articles

- Fazio, L. K., Brashier, N. M., Payne, B. K., & Marsh, E. J. (2015). Knowledge does not protect against illusory truth. *Journal of Experimental Psychology: General*, *144*(5), 993–1002. https://doi.org/10.1037/xge0000098
- Putnam, A. L., Sungkhasettee, V. W. & Roediger I, H. L. (2017). When Misinformation Improves Memory: The Effects of Recollecting Change. *Psychological Science*, *28*(1), 36–46. https://doi.org/10.1177/0956797616672268

Scientist Summary

- Lazer, D. M. J., Baum, M. A., Benkler, Y., Berinsky, A. J., Greenhill, K. M., Menczer, F., … Zittrain, J. L. (2018). The science of fake news. *Science*, *359*(6380), 1094–1096. https://doi.org/10.1126/science.aao2998

Collective Memory (#22/28 of class):

Articles

- Maswood, R., Rasmussen, A. S., & Rajaram, S. (2019). Collaborative remembering of emotional autobiographical memories: Implications for emotion regulation and collective memory. *Journal of Experimental Psychology: General*, *148*(1), 65–79. https://doi.org/10.1037/xge0000468
- Abel, M., Umanath, S., Fairfield, B., Takahashi, M., Roediger, H. L., & Wertsch, J. V. (2019). Collective Memories across 11 Nations for World War II: Similarities and Differences Regarding the Most Important Events. *Journal of Applied Research in Memory and Cognition*. https://doi.org/10.1016/j.jarmac.2019.02.001

Science News

- Stix, G. (2018). A Math Function Describes How Whole Societies Remember--and Forget. Retrieved from Scientific American website: https://www.scientificamerican.com/article/a-math-function-describes-how-whole-societies-remember-and-forget/
- Cummins, E. (2018). How long can an event hold humanity's attention? There's an equation for that. Retrieved from Popular Science website: https://www.popsci.com/how-collective-memories-decay

Creativity and Problem-Solving (#23/28 of class):

Articles

- Addis, D. R., Pan, L., Musicaro, R., & Schacter, D. L. (2016). Divergent thinking and constructing episodic simulations. *Memory*, *24*(1), 89–97. https://doi.org/10.1080/09658211.2014.985591
- Beaty, R. E., Kenett, Y. N., Christensen, A. P., Rosenberg, M. D., Benedek, M., Chen, Q., … Silvia, P. J. (2018). Robust prediction of individual creative ability from brain functional connectivity. *Proceedings of the National Academy of Sciences*, *115*(5), 1087–1092. https://doi.org/10.1073/pnas.1713532115

Podcast

- Kaufman, S. B. (2018). *Creativity from Constraints with Patricia Stokes*. Retrieved from: https://scottbarrykaufman.com/podcast/creativity-constraints-patricia-stokes/

Learning & Motivation, Day 1 (#24/28 of class):

Articles

- Marvin, C. B., & Shohamy, D. (2016). Curiosity and reward: Valence predicts choice and information prediction errors enhance learning. *Journal of Experimental Psychology: General*, *145*(3), 266–272. https://doi.org/10.1037/xge0000140
- Charpentier, C. J., Bromberg-Martin, E. S., & Sharot, T. (2018). Valuation of knowledge and ignorance in mesolimbic reward circuitry. *Proceedings of the National Academy of Sciences*, *115*(31), E7255–E7264. https://doi.org/10.1073/pnas.1800547115

Scientist summary

- Levy, I. (2018). Information utility in the human brain. *Proceedings of the National Academy of Sciences*, *115*(31), 7846–7848. https://doi.org/10.1073/pnas.1809865115
- DiMenichi, B. C., & Tricomi, E. (2016). Are You Smarter Than a Teenager? Maybe Not When It Comes to Reinforcement Learning. *Neuron*, *92*(1), 1–3. https://doi.org/10.1016/j.neuron.2016.09.043

Learning & Motivation, Day 2 (#25/28 of class):

Articles

- Lieshout, L. L. F. van, Vandenbroucke, A. R. E., Müller, N. C. J., Cools, R., & Lange, F. P. de. (2018). Induction and Relief of Curiosity Elicit Parietal and Frontal Activity. *Journal of Neuroscience*, *38*(10), 2579–2588. https://doi.org/10.1523/JNEUROSCI.2816-17.2018
- Lydon-Staley, D. M., Zurn, P., & Bassett, D. S. (2018). Inconsistent curiosity: Augmentation and blunting of curiosity in daily life and implications for well-being. *PsyArXiv*. https://doi.org/10.31234/osf.io/2vf94

Science News

- Yuhas, D. (2014). Curiosity Prepares the Brain for Better Learning. Retrieved from Scientific American website: https://www.scientificamerican.com/article/curiosity-prepares-the-brain-for-better-learning/

Education, Day 1 (#26/28 of class):

Articles

- Smith, A. M., Floerke, V. A., & Thomas, A. K. (2016). Retrieval practice protects memory against acute stress. *Science*, *354*(6315), 1046–1048. https://doi.org/10.1126/science.aah5067
- Brady, S. T., Hard, B. M., & Gross, J. J. (2018). Reappraising test anxiety increases academic performance of first-year college students. *Journal of Educational Psychology*, *110*(3), 395–406. https://doi.org/10.1037/edu0000219

Science News

- Dunlosky et al. (2013). What works, what doesn't. *Scientific American Mind,* 24(4), 47 – 53

Education, Day 2 (#27/28 of class):

Articles

- Ravizza, S.M., Uitvlugt, M.G., and Fenn, K.M. (2017). Logged in and zoned out: How laptop internet use relates to classroom learning. *Psychological Science*, 28, 171-180.
- Sana, F., Weston, T., & Cepeda, N. J. (2013). Laptop multitasking hinders classroom learning for both users and nearby peers. *Computers & Education*, *62*, 24–31. https://doi.org/10.1016/j.compedu.2012.10.003

Science News

- Supiano, B. (2019, February 6). Should You Allow Laptops in Class? Here's What the Latest Study Adds to That Debate. *The Chronicle of Higher Education*. Retrieved from https://www.chronicle.com/article/Should-You-Allow-Laptops-in/245625
- Lombrozo, T. (2013, August 19). Stop Multitasking! It's Distracting Me (And You). Retrieved from NPR.org website: https://www.npr.org/sections/13.7/2013/08/19/213439794/stop-multitasking-it-s-for-other-people-s-good