Memory and Cognition

Haverford College
Psychology 213
Spring 2019

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Office Hours: Before class (M, W: 8 – 9 am) and by appointment

Relative to other areas of psychology, cognitive psychology is a relatively young sub-discipline that emerged in the late 1950's in response to various problems associated with the behaviorist paradigm. In the research which has followed, a primary goal has been to discover the basic underlying mechanisms mediating the processes of selective attention, perception, learning, remembering, forgetting, and both the representation and use of various types of knowledge systems. More recently, however, the trend has been to investigate various ways in which cognitive behavior manifests itself within everyday life. As illustrated in the syllabus below, this covers a broad range of topics that includes the memory for faces and geographical locations, eyewitness testimony, advertising, decision-making, the use of language, and modifying the environment to make it optimally compatible with cognitive resources. In addition, we will also consider some recent developments in the areas of autobiographical memory, meta-cognition, neuroscience, mood and emotion, and cognitive diversity. The overall intent is to address cognitive behavior from a more ecological perspective and to not only consider some of the practical implications of this endeavor but the subsequent influence on certain theoretical constructs.

The format of this course is one that reflects a lecture/seminar style which means it is important you read the assigned papers for each class. There is no textbook but instead a series of readings that have been posted on Moodle. Your course grade will be weighted by the following factors:

Discussion & Participation	10%
Exam I	25%
In Class Presentation	15%
Exam II	25%
Final Paper	25%

Lecture Outline

I. The Study of Memory in Naturalistic Contexts

a. advantages and disadvantages of everyday memory research
b. methods of research

Reading:

- Cohen, G. (2008). The study of everyday memory. In G. Cohen & M. Conway (Eds.), *Memory in the real world*. (pp. 1–20). Psychology Press.

II. Visual Memory and Imagery

a. Dual code theory of memory representation

b. cognitive maps and the internal representation of geographical areas:
typical errors and distortions
learning stages in map acquisition
individual differences

c. memory for faces:
face perception and common stereotypes
factors influencing face recognition
cognitive mechanisms of face processing

d. applications to advertising:
the use of visual and organizational strategies
techniques involving the wording of ads
the impact of background music

Reading:

- Matlin, M. (2012). Cognitive maps. In M. Matlin, *Cognition.* (pp. 217-230). Fort Worth, TX: Harcourt College Publishers.

- Hanley, R. & Cohen, G. (2008). Memory for people: Faces, names, and voices. In G. Cohen & M. Conway (Eds.), *Memory in the real world.* **(pp. 107-126).** Psychology Press.

- Zebrowitz & Montepare (2005). Appearance DOES matter. *Science, 308,* 1565-1566.

- Tellis, G. (2004). Selected chapters from *Effective advertising*. NY: Sage Publications.

  Chapter 2 – Sweet, secret workings of advertising
  Chapter 10 – Emotion in advertising.

- Cook, G. (2001). Excerpt from *The discourse of advertising.* (pp. 85-91).

- North, A.C. & Hargreaves, D.J. (2009). Music and consumer behavior. In S. Hallam, I. Cross, & M. Thaut (Eds.), *Oxford Handbook of Music Psychology.* (pp. 481-490). Oxford University Press.

Presentation Topic: Television Advertising

III. Eyewitness Testimony

a. what perceptual factors contribute to inaccurate testimony?
b. role of memory
c. effects due to the wording of questions
d. what variables predict who will be a good witness and who will not?
e. cognitive processing of jurors
f. repression and false memories - implications for the legal system

Reading:

- Wells, G.L. & Olson, E.A. (2003). Eyewitness testimony. *Annual Review of Psychology, 54,* 277-295.

- Radvansky, G. (2017). Memory and the law. In G. Radvansky, *Human Memory.* (pp. 279-298). Routledge Publishing.

- Loftus, E.F. (1997). Creating childhood memories. *Applied Cognitive Psychology,* 11, 75-86.

- Loftus, E.J. (1997). Creating false memories. *Scientific American,* 71-75.

VI. Autobiographical Memory

a. concept of a self-schema
b. contents, organization, and retrieval of self-memories
c. development of autobiographical memories
d. childhood amnesia

Reading:

- Howes, M.B. (2013). Autobiographical memory. In M.B. Howes, *Human Memory: Structures and Images*. **(pp. 221-240)**. Academic Press.

- Rubin, D., Rahhal, T. & Poon, L. (1998). Things learned in early adulthood are remembered best. *Memory & Cognition, 26,* 3-19.

- Fivush, R. (2011). The development of autobiographical memory. *Annual Review of Psychology, 62,* 559-582.

Presentation Topic: Autobiographical Memory as a Window to Personality

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V. Emotion and Memory

a. effects due to arousal and stress - repression, Yerkes-Dodson Law
b. mood and memory - state dependent learning, mood congruence, effects of clinical depression on cognition
c. anxiety, memory, and perception
d. effects of mood and emotions on social behavior

Reading:

- Smith, E. & Kosslyn. S. (2007). Emotion and cognition. In E. Smith & S. Kosslyn, *Cognitive Psychology: Mind and Brain*. (pp. 325-365). McGraw-Hill.

- Sapolsky, R. (2003). Taming stress. *Scientific American*, 87-95.

- Sternberg, E. & Gold, P. (2002). The mind-body interaction in disease. *Scientific American.*

Presentation Topic: **Memory for Trauma**

VI. Metacognition

a. systemic and epistemic awareness
b. calibration
c. prospective memory
d. reality monitoring
e. implicit memory - unconscious learning?

Reading:

- Metcalfe, J. (1996). Metacognitive processes. In E.L. Bjork & R.A. Bjork , *Memory.* (pp. 383-407). Academic Press.

- Horton, C.L., Conway, M.A. & Cohen, G. (2008). Memory for thoughts – Reality monitoring. In G. Cohen & M.A. Conway (Eds.), *Memory in the real world.* (pp. 269 – 281). Psychology Press.

- Excerpts from Gladwell, M. (2005). *Blink: The power of thinking without thinking.* Little, Brown, and Company.

- Greenwald, A. & Banaji, M. (1995). Implicit social cognition, attitudes, self-esteem, and stereotypes. *Psychological Review, 102,* 4-27.

Presentation Topic: Implicit Memory in Everyday Life

VII. Decision Making

a. heuristics and biases
b. perception of risk

Reading:

- Galloti, K.M. (2013). Making decisions. In K.M. Galloti, *Cognitive psychology in and out of the laboratory.* (pp. 337-368). Brooks-Cole Publishing.

- Tversky, A. & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science,* 185, 1124-1131.

- Esser, J.K. (1998). Alive and well after 25 years: A review of groupthink research. *Organization Behavior and Human Decision Processes, 73,* 116-141.

Presentation Topic: Group Decision-Making

VIII. Cognitive and Linguistic Diversity

a. gender differences in cognition - spatial, verbal, and quantitative skills; the role of the environment, hormones, and hemispheric laterality
b. schizophrenic thought and language - cognitive characteristics and neurological differences
c. relationship between language and thought - Does one's linguistic system influence perception, memory, and thinking?
d. gender differences in language - what do they reflect?
e. cross-cultural studies in cognition - effects on perception and memory; the impact of schooling and literacy; conceptions of time; collectivism vs. individualism

Readings:

- Kimura, D. (1999). Sex differences in the brain. *Scientific American,* 26-31.

- Cahill, L. (2005). His brain, her brain. *Scientific American,* 40-47.

- Miller, D.I. & Halpern, D.F. (2014). The new science of cognitive sex differences. *Trends in Cognitive Sciences, 18,* 37-45.

- Excerpt from textbook chapter on schizophrenia

- Boroditsky, L. (2005). How language shapes thought. *Scientific American, 304,* 62-65.

- Lau, I., Lee, S. & Chiu, C. (2004). Language, cognition, and reality: Constructing shared meanings through communication. In M. Schaller & C. Crandall (Eds.), *The psychological foundations of culture.* Mahwah, NJ: Lawrence Erlbaum Associates.

- Mooney, A. & Evans, B. (2015). Language and gender. In A. Mooney & B. Evans, *Language, society, & power.* (pp. 108-131). Routledge Press.

- Tannen, D. (1995). The power of talk: Who gets heard and why. *Harvard Business Review,* 138-148.

- Tannen, D. (1997). Put down that paper and talk to me! Rapport-talk and report-talk. In D. Sattler & V. Shabatay (Eds*.), Psychology in context.* Boston: Houghton-Mifflin.

- Lehman, D.R., Chiu, C. & Schaller, M. (2004). Psychology and culture. *Annual Review of Psychology, 108,* 291-310.

- Nisbett, R., etal. (2001). Culture and systems of thought: Holistic vs. analytic cognition. *Psychological Review, 108,* 291-310.

Presentation Topic: Collective Memory

IX. Biological Bases of Memory and Cognition

a. neurological tools and techniques
b. structure of brain and biological substrates of cognition
c. hemispheric laterality
d. aphasia and the biological bases of language
e. memory disorders - amnesia; Korsakoff's Syndrome; Alzheimer's disease; declines due to aging
f. case studies of Oliver Sacks

Readings:

- Radvansky, G. (2017). Neuroscience of memory. In G. Radvansky, *Human memory.* (pp. 21-44). Allyn & Bacon Publishers.

- Salthouse, T. (2012). Consequences of age-related cognitive decline. *Annual Review of Psychology, 63,* 201-226.

- Radvansky, G. (2017). Amnesia. In G. Radvansky, *Human Memory.* (pp. 339-359). Routledge Publishing.

- Souchay, C. & Moulin, C. (2008). Memory dysfunction: Alzheimer's Disease. In G. Cohen & M. Conway (Eds.), *Memory in the real world*. (pp. 357-380). Psychology Press.

- Bennett, D.A. (2016). Banking against Alzheimer's. *Scientific American Mind,* August, 85-91.

- Hertzog, C., Kramer, A., Wilson, R. & Lindenberger, U. (2009). Fit body, fit mind? *Scientific American Mind,* July/August, 32-39.

- Selected case studies from Oliver Sacks (1990), *The Man Who Mistook his Wife for a Hat and Other Clinical Tales:*

    -- The Man Who Mistook his Wife for a Hat.
    -- The President's Speech.
    -- The Lost Mariner.
    -- Reminiscence.

Presentation Topic: The Evolution of Human Cognition - Neuroecology

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X. Human Factor Research

a. cognition and the internet

Reading:

- Loh, K.K. & Kanai, R. (2016). How has the internet reshaped human cognition? *The Neuroscientist, 22,* 506-520.

- Carr, N. (2008) – Is google making us stupid? *The Atlantic,* July/August.

Presentation Topic: Cognition and Technology

Course Requirements

I. Class Presentation

Each of you will assemble in groups of 3-4 and be required to give an in-class presentation on a topic designed to provide greater breadth to an area discussed in class. You should plan on speaking for 30 min. and rely on a Powerpoint presentation (which I will then post on Moodle so that it is available to everyone). Each person in the group is expected to speak and so you should allocate the half hour in an equitable fashion. I've provided a set of presentation topics on the syllabus and will try to ensure that everyone receives a topic that is acceptable to them.

II. Synthesis Paper

In addition to the presentation, you will also be required to write a paper for the course. You are free to choose any topic that interests you as long as it involves some aspect of memory and cognition. It could be a topic that was never discussed (e.g., music cognition; olfactory memory; cases of exceptional memory; problem-solving, the development of memory) or a topic that was addressed in class but explored from a different perspective. In either case, the paper should be around 10-15 pages and rely on the APA style of referencing. Most of the paper should serve as a review of the relevant literature but the last 2-3 pages should provide your own thoughts and evaluation (e.g. critiques of the literature; ideas for future research). For more information, go to the first section of Moodle, Synthesis Paper. Your paper will be due on **Monday, April 1.**

III. Exams

The two exams comprise 50% of your grade and consist of essay questions. Each exam is non-cumulative and only covers material since the previous exam. They will be administered in class on those dates designated on the schedule. Extensions are only granted under extreme circumstances or bona fide medical emergencies, and must be requested prior to the exam.

TOPIC AND PRESENTATION SCHEDULE
Psychology 213 – Memory and Cognition
Spring 2019

Wed - Jan. 23	Methodological Issues in Everyday Memory
Mon - Jan. 28	Cognitive Maps
Wed – Jan. 30	Encoding and Remembering of Faces
Mon – Feb 4	Face Perception
Wed - Feb 6	Advertising
Mon - Feb 11	Advertising; **Presentation on Television Advertising**
Wed - Feb 13	Eyewitness Testimony
Mon – Feb 18	False Memories
Wed - Feb 20	Autobiographical Memory
Mon – Feb 25	Autobiographical Memory: **Presentation on AB and Personality**
Wed – Feb 27	Emotion and Memory
Mon – March 4	Emotion and Memory; **Presentation on Memory and Trauma**
Wed - March 6	**Exam One**
Mon - March 11	Fall Break – No Class
Wed - March 13	Fall Break – No Class
Mon – March 18	Metacognition
Wed – March 20	Metacognition: **Presentation on Implicit Memory**
Mon - March 25	Decision Making; **Presentation on Group Decision Making**
Wed - March 27	Gender Differences in Cognition
Mon - April 1	Gender Differences in Language – **Paper Due**
Wed - April 3	Schizophrenic Thought and Language
Mon - April 8	Language and Thought
Wed - April 10	Cross-Cultural Cognition
Mon - April 15	Cross-Cultural Cognition; **Presentation on Social Memory**
Wed - April 17	Biological Bases of Cognition
Mon - April 22	Memory Disorders
Wed - April 24	Memory Disorders; Effects of Aging; **Presentation on Neuroecology**
Mon - April 29	Human Factors; **Presentation on Cognition & Technology**
Wed - May 1	**EXAM Two**

A few weeks before your presentation, I'll send you an email about your particular topic.