

Memory and Cognition
Haverford College
Psychology 213
Spring 2014

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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, the biological bases of memory, 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:

- Baddeley, A.D. & Wilkins, A.J. (1984). Taking memory out of the laboratory. In J.E. Harris & P.E. Morris (Eds.), *Everyday memory, actions, and absentmindedness*. London: Academic 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:
factors influencing face recognition
common stereotypes
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:

- Smyth, M., Collins, A., Morris, P. & Levy, P. (1994). Arriving in a new city: Acquiring and using spatial knowledge. In Smyth, et al. (Eds.), *Cognition in action*. (pp. 309-334). Erlbaum Press.
- Matlin, M. (2002). Cognitive maps. In M. Matlin, *Cognition*. (pp. 217-230). Fort Worth, TX: Harcourt College Publishers.
- Ellis, H. D. (1984). Practical aspects of face recognition. In G. Wells & E.F. Loftus (Eds), *Eyewitness testimony*. (pp. 12-37). Cambridge: Cambridge University 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. (1997). Music and consumer behavior. In D.J. Hargreaves & A.C. North (Eds.), *The social psychology of music*. (pp. 268-289). NY: Academic 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.
- Kovera, M. & Borgida, E. (2011). Social psychology and the law.
- Loftus, E.F. (1997). Creating childhood memories. *Applied Cognitive Psychology*, 11, 75-86.
- Loftus, E.J. (1997). Creating false memories. *Scientific American*, 71-75.
- Lindsay, D.S. & Read, J.D. (1994). Psychotherapy and memories of childhood sexual abuse: A cognitive perspective. *Applied Cognitive Psychology*, 8, 281-338.

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:

- Conway, M.A. (1996). Autobiographical memory. In E.L. Bjork & R.A. Bjork (Eds.), *Memory*. (pp. 165-194). NY: Academic Press.
- Robinson, J.A. & Swanson, K.L. (1990). Autobiographical memory: The next phase. *Applied Cognitive Psychology*, 4, 321-335.

- Markus, H. (1980). The self in thought and memory. In D.M. Wegner & R.R. Vallacher (Eds.), *The self in social psychology*. (pp. 102-130). Oxford University Press.
- Buckner, J.P. & Fivush, R. (2000). Gendered themes in family reminiscing. *Memory*, 8, 401-412.
- Nelson, K. (1993). The psychological and social origins of autobiographical memory. *Psychological Science*, 4, 7-14.

Presentation Topic: Autobiographical Memory as a Window to Personality

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.
- Isen, A. (1987). Positive affect, cognitive processes, and social behavior. *Advances in Experimental Social Psychology*, 20, 203-253.
- 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.

- Perfect, T.J. & Askew, C. (1994). Print adverts: Not remembered but memorable. *Applied Cognitive Psychology*, 8, 693-703.
- 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. (2004). 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.
- Slovic, P., Fischhoff, B. & Lichtenstein, S. (1982). Facts versus fears: Understanding perceived risk. In D. Kahneman, P. Slovic & A. Tversky (Eds.), *Judgment under uncertainty: Heuristics and biases*. (pp.463-489). Cambridge University Press.
- 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. language capabilities of primates - implications for cognitive evolution
- d. relationship between language and thought - Does one's linguistic system influence perception, memory, and thinking?
- e. gender differences in language - what do they reflect?
- f. cross-cultural studies in cognition - effects on perception and memory; the impact of schooling and literacy; conceptions of time; collectivism vs. individualism

Readings:

- Hampsen, E. & Kimura, D. (1992). Sex differences and hormonal influences on cognitive function in humans. In J.B. Becker, S.M. Breedlove & D. Crews. *Behavioral Endocrinology*. (pp. 357-398). MIT Press.
- Kimura, D. (1999). Sex differences in the brain. *Scientific American*, 26-31.
- Cahill, L. (2005). His brain, her brain. *Scientific American*, 40-47.
- Excerpt from textbook chapter on schizophrenia
- Tartarr, V.C. (1986). Language changes from personality disorders. In V.C. Tartarr, *Language processes*. (pp. 485-513). Holt, Rinehart, & Winston.
- 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.
- Savage-Rumbaugh, D. & Savage-Rumbaugh, E.S. (1994). Language in a comparative perspective. In N.J. Mackintosh (Ed.), *Animal learning and cognition*. (pp. 307-333).
- Henley, N. & Kramarae, C. (1994). Gender, power, and miscommunication. In C. Roman, S. Juhasz & C. Miller (Eds.), *The women and language debate*. (pp. 383-406). Rutgers University Press.
- 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., et al. (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. (1998). 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.
- Sternberg, R.J. (1996). Biological foundations of cognitive psychology. In R.J. Sternberg, *Cognitive psychology*. (pp.28-67). Harcourt Brace Publishing.
- Searleman, A. & Herrmann, D. (1994). Memory disorders. In A. Searleman & D. Herrmann, *Memory from a broader perspective*. (pp. 325-351). McGraw Hill.
- Baddeley, A. (1998). Understanding amnesia. In A. Baddeley, *Human memory*. (pp. 293-310). Allyn & Bacon Publishing.
- 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

X. Human Factor Research

- a. driving behavior and highways
- b. action slips
- c. some applications of circadian timing
- d. food psychology

Reading:

- Sander, M. & McCormick, E. (1993). Human factors and the automobile. In M. Sanders & E. McCormick, *Human factors in engineering and design*. McGraw-Hill.
- Norman, D. (1986). Post-Freudian slips.
- Reason, J. (1979). Absent minds. *New Society*, 4.
- Palmer, J. (2002). Human Rhythms: Basic Processes. Chapter 2 from *The Living Clock*. New York: Oxford University Press.
- Wansink, B. & Van Ittersum, K. (2003). Bottoms up! The influence of elongation on pouring and consumption volume. *Journal of Consumer Research*, 30, 455-463.

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. 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). Your paper will be due on **April 1**.

III. Exams

Two exams will be given and both will be "take-home" administered on a Thursday and due the following day (Friday) at noon. In accord with the Haverford Honor Code, one should not consult class notes, readings, or other students when completing the exams. In addition, a time limit will be given for each.

TOPIC AND PRESENTATION SCHEDULE
Psychology 213 – Memory and Cognition
Spring 2014

Tues - Jan. 21	Methodological Issues in Everyday Memory
Thurs - Jan. 23	Cognitive Maps
Tues – Jan. 28	Encoding and Remembering of Faces
Thurs – Jan. 30	Face Perception
Tues - Feb. 4	Advertising
Thurs - Feb. 6	Advertising; Presentation on Television Advertising
Tues - Feb. 11	Eyewitness Testimony
Thurs – Feb. 13	False Memories
Tues - Feb. 18	Autobiographical Memory
Thurs – Feb. 20	Autobiographical Memory: Presentation on AB and Personality
Tues – Feb. 25	Emotion and Memory
Thurs – Feb. 27	Emotion and Memory; Presentation on Memory and Trauma
	EXAM One distributed
Friday – Feb. 28	Exam One due
Tues - March 4	Metacognition
Thurs - March 6	Presentation on Implicit Memory ; Decision Making
Tues - March 11	Fall Break – No Class
Thurs – March 13	Fall Break – No Class
Tues – March 18	Decision Making; Presentation on Group Decision Making
Thurs - March 20	Gender Differences in Cognition
Tues - March 25	Gender Differences in Language
Thurs - March 27	Schizophrenic Thought and Language
Tues - April 1	Language and Thought – Paper Due
Thurs - April 3	Primate Cognition
Tues - April 8	Cross-Cultural Cognition
Thurs - April 10	Cross-Cultural Cognition; Presentation on Social Memory
Tues - April 15	Biological Bases of Cognition
Thurs - April 17	Memory Disorders
Tues - April 22	Memory Disorders; Effects of Aging; Presentation on Neuroecology
Thurs - April 24	Human Factors
Tues - April 29	Human Factors; Presentation on Cognition & Technology
Thurs - May 1	EXAM Two distributed
Friday – May 2	EXAM Two due

A few weeks before your presentation, I would like to meet with each group at least once to discuss your particular topic.