



University of Waterloo
Department of Psychology
Waterloo, ON, N2L 3G1

Psychology 398—Research in Memory Winter, 2010

Instructor: Shannon O'Malley
Class Location: HH 334
Office: PAS 4211

E-mail: somalley@uwaterloo.ca
Time: 10:30-12:20, Tues. & Thurs.
Office Hours: 12:30-1:30 Tuesday (or by appointment)

General Goals

The goal of the course is to introduce students to the theoretical and practical aspects of memory research. Lectures will focus on popular topics in memory research with emphasis on the research process. As well, the course will focus on learning how to read and evaluate primary source material in a critical manner. To this end there will be a strong focus on class discussion and participation.

Course Content/Readings

We will sample research from a number of different areas. The first part of the course will focus on traditional issues in memory research while the latter half will focus on “everyday” memory. Readings for the course will consist of primary source material (i.e., journal articles). On average there will be approximately 30-40 pages of required reading a week. You may be tested on material from required readings that is not discussed in class. Reading primary source material is typically much more challenging than textbooks so you should be prepared to read papers more than once. All readings are available on UW-ACE. There is no textbook for this course.

Requirements and Grading Scheme

Class Participation and Presentation (20%) The course is centered around presentations and discussion. We will examine, in class, a number of published journal articles. Each student will present one such article to the class. You are expected to give a considerable amount of care and attention to the preparation of your presentation. It must be concise, but you are the resource expert for the paper that you are presenting. In other words, you should have a lot of the details of the paper at your fingertips (i.e., in memory) in the event that a question is asked (e.g., how many subjects were tested? were the conditions blocked or randomized? was factor Y significant in the analysis as a main effect? was there feedback after every trial? etc). **However, please avoid going into too much detail during your presentation.**

There should be enough detail that your audience can understand:

- (1) what question was investigated
- (2) what the experiment consisted of (i.e., explain what was actually manipulated, and how the experiment was done)
- (3) what the specific predictions were
- (4) what the data are (please **SHOW** us the data in the presentation)
- (5) what the analysis of this data said (without specifying the size of the F, or the degrees of freedom)
- (4) how the data fit or undermine the theoretical hypotheses.

You will be expected to submit your slides the day before your presentation so that they can be posted on ACE. Also, I strongly encourage you to meet with me (or at least send me your slides) a day or two prior to the presentation so that I can review the slides and make suggestions/recommendations if needed.

By “class participation” I mean being responsive to what is going on in the class. For example, listening attentively when students are presenting papers such that you can answer questions about what they are saying. **Be prepared to answer questions with respect to the ongoing discussion.**

Written Component (14%) You will each be assigned one article taken from a journal. Please read the article and become familiar with the research in it. You will then write a 4 page research paper based on your article.

These papers will consist of two components:

- a) **Summary.** You should write a summary of your article, indicating the goal of the research, the design of the experiments, the principal results, and how these results were interpreted theoretically. This should be two typed, double-spaced pages (i.e., not an abstract). It should be clearly written in normal prose (i.e., not "point form").
- b) **Extension.** Using your own ideas, you should suggest one way in which the research in your article might be extended in a meaningful way. Provide sufficient methodological and theoretical detail for a good understanding of the experiment you propose. This should be a principled and substantive proposal, taking two pages. You are most welcome (and encouraged) to consult with me about your ideas.

The final product will be a 4-page paper (not longer), with 1-inch margins and *double-spaced*. Type font must not be smaller than 12-pitch elite. You may not use either of the Summary pages for Extension (or vice versa). Note that this paper is meant to be a self-contained task, so use of reference material is not required. A title page with a brief descriptive title of your own creation should be the first page of your submission, and should be submitted through UW-ACE. You are also responsible for keeping a copy of the final version of your paper.

Quizzes (6%) There will be three short 10-15 question multiple choice **quizzes at the beginning of class** approximately midway between each full test (January 19th, February 11th and March 18th). These quizzes cannot be made up if you are absent. You will have 20 minutes for these quizzes, and we will take them up immediately after the quiz has been completed. Note: There is no penalty for guessing, therefore make sure you indicate an answer for each question.

Testing (60%) There will be three tests (January 28th, March 4th and April 1st) each worth 20%. Tests will consist of approximately 30 – 40 multiple choice questions. You will be tested on in class material and required readings.

The Official Version of the Course Outline

If there is a discrepancy between the hard copy outline (*i.e., if students were provided with a hard copy at the first class*) and the outline posted on UW-ACE, the outline on UW-ACE will be deemed the official version. Outlines on UW-ACE may change as instructors develop a course, but they become final as of the first class meeting for the term.

Students with Disabilities

The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.

Concerns About the Course or Instructor (Informal Stage)

We in the Psychology Department take great pride in the high quality of our program and our instructors. Though infrequent, we know that students occasionally find themselves in situations of conflict with their instructors over course policies or grade assessments. If such a conflict arises, the Associate Chair for Undergraduate Affairs (Dr. Colin Ellard) is available for consultation and to mediate a resolution between the student and instructor. Dr. Ellard's contact information is as follows:

Email: cellard@uwaterloo.ca
Ph 519-888- 4567 ext 36852

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. See Policy 70 and 71 below for further details.

Academic Integrity, Academic Offenses, Grievance, and Appeals

To protect course integrity, as well as to provide appropriate guidance to students, course outlines in the Faculty of Arts incorporate the following note on avoidance of academic offenses:

Academic Integrity: in order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility.

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4,
<http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm>

Discipline: A student is expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about 'rules' for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 - Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline,
<http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm>

Appeals: A student may appeal the finding and/or penalty in a decision made under Policy 70 - Student Petitions and Grievances (other than regarding a petition) or Policy 71 - Student Discipline if a ground for an appeal can be established. Read Policy 72 - Student Appeals,
<http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm>

For further advice from the Faculty of Arts on the avoidance of academic offenses, see the following website:

http://arts.uwaterloo.ca/arts/ugrad/academic_responsibility.html

Tentative Schedule and Required Readings

Date	Topics and Articles
Week 1 January 5 & 7	Topic: Intro and History Bower, G. H. (2000). A brief history of memory research. In E. Tulving and F. I. M. Craik (Eds.), <i>The Oxford handbook of memory</i> (pp. 3-32). New York: Oxford University Press.
Week 2 January 12	Topics: Methods Lockhart, R.S. (2000) Methods of memory research. in E.Tulving and F.I.M Craik (Eds.), <i>The Oxford handbook of memory</i> (pp.45-57). New York: Oxford University Press.
January 14	Topic: Working Memory & Short-Term Memory Miller, G.A. (1956) The magical number seven, plus or minus two: Some limits on our capacity for processing information. <i>Psychological Review</i> , 63, 81-97. Presented By: Baddeley, A. D., Thomson, N., & Buchanan, M. (1975). Word length and the structure of short-term memory. <i>Journal of Verbal Learning and Verbal Behavior</i> , 14, 575-589. Presented By:
Week 3 January 19 Quiz 1	Topic: Working Memory & Short-Term Memory (cont'd) Baddeley, A.D. (2002). Is working memory still working? <i>European Psychologist</i> , 7, 85-97. Presented by:
January 21	Topic: Memory Systems (Semantic and Episodic Memory) Tulving, E. (1989). Remembering and knowing the past. <i>American Psychologist</i> , 77, 361-367. Presented By: ulving, E., Schachter, D. L., McLachlan, D. R., Moscovitch, M. (1988). Priming of semantic autobiographical knowledge: A case study of retrograde amnesia. <i>Brain & Cognition</i> , 8, 3-20. Presented By:
Week 4 January 26	Topic: Implicit & Explicit Memory Jacoby, L.L. (1991). A process dissociation framework: Separating automatic from intentional uses of memory. <i>Journal of memory and Language</i> , 30, 513-541. Presented By: Shannon Test Review
January 28	TEST 1 - January 28

<p>Week 5 February 2</p>	<p>Topic: Attention & Memory Craik, F. I M., Govoni, R., Naveh-Benjamin, M., & Ander, N. D. (1996). The effects of divided attention on encoding and retrieval processes in human memory. <i>Journal of Experimental Psychology: General</i>, 125, 159-180. Presented By: Lane, S. M. (2006). Dividing attention during a witnessed event increases eyewitness suggestibility. <i>Applied Cognitive Psychology</i>, 20, 199-212. Presented By:</p> <p><i>Articles for Summary & Extension paper will be assigned – Feb 2</i></p>
<p>February 4</p>	<p>Topic: Attention & Memory (cont'd) Barrett, L. F., Tugade, M. M., & Engle, R. W. (2004). Individual differences in working memory capacity and dual-process theories of the mind. <i>Psychological Bulletin</i>, 130, 553-573. Presented By:</p>
<p>Week 6 February 9</p>	<p>Topic: Destination and Source memory Johnson, M.K., Hastroudi, S. & Lindsay, D.S. (1993). Source Monitoring. <i>Psychological Bulletin</i>, 114, 3-28. Presented By: Gopie, N. & MacLeod, C.M. (2009). Destination Memory: Stop me if I've told you this before. <i>Psychological Science</i>, 20, 1492-1499. Presented By:</p>
<p>February 11 Quiz 2</p>	<p>Topic: Memory for Everyday Objects Nickerson, R. S., & Adams, M. J. (1979). Long-term memory for a common object. <i>Cognitive Psychology</i>, 11, 287-307. Presented By:</p>
<p>Week 7 February 16 & 18</p>	<p>Reading Week – No Class</p>
<p>Week 8 February 23</p>	<p>Topic: Memory for Everyday Objects (cont'd) Marmie, W. R., & Healy, A. (2004). Memory for common objects: Brief intentional study is sufficient to overcome poor recall of US coin features. <i>Applied Cognitive Psychology</i>, 18, 445-453. Presented By:</p>

February 25	<p>Topic: Learning, Consolidation and Sleep Rasch, B. & Born, J. (2008), Reactivation and consolidation of memory during sleep. <i>Current Directions in Psychological Science</i>, 17, 188-192.</p> <p>Presented By: Kornell, N., Hays, M.J. & Bjork, R.A. (2009). Unsuccessful retrieval attempts enhance subsequent learning. <i>Journal of Experimental Psychology: Learning, Memory and Cognition</i>, 35, 989-998.</p> <p>Presented By: Test Review</p>
Week 9 March 2	<p>Topic: Learning, Consolidation and Sleep (cont'd) Barnett, S. M., & Ceci, S. J. (2002). When and where do we apply what we learn?: A taxonomy for far transfer. <i>Psychological Bulletin</i>, 128, 612-637.</p> <p>Presented By:</p>
March 4	<p>TEST 2 - March 4</p>
Week 10 March 9	<p>Topic: Forgetting Wixted, J.T. (2005). A theory about why we forget what we once knew. <i>Current Directions in Psychological Science</i>, 14, 6-9.</p> <p>Presented By: Parker, E.S., Birnbaum, I.M, Weingartner, H., Hartley, J.T., Stillman, R.C., & Watt, R.J. (1980) retrograde enhancement of human memory with alcohol. <i>Psychopharmacology</i>, 69, 219-222.</p> <p>Presented By:</p>
March 11	<p>Topic: Autobiographical Memory (False Memories) Sheen, M., Kemp, S., & Rubin, D. (2001). Twins dispute memory ownership: A new false memory phenomenon. <i>Memory & Cognition</i>, 29, 779-788.</p> <p>Presented By: Loftus, E. F., & Davis, D. (2006). Recovered memories. <i>Annual Review of Clinical Psychology</i>, 2, 469-498.</p> <p>Presented By:</p> <p><i>Summary & Extension Paper due – March 11</i></p>
Week 11 March 16	<p>Topic: Autobiographical Memory (Flashbulb Memories) Brown, R. & Kulik, J. (1977). Flashbulb memories. <i>Cognition</i>, 5, 73-99.</p> <p>Presented By: Hirst, W., Phelps, E.A., Buckner, R.L., Budson, A.E., et al. (2009). Long-term memory for the terrorist attack of September 11: Flashbulb memories, event memories and the factors that influence their retention. <i>Journal of Experimental Psychology: General</i>, 138, 161-176.</p> <p>Presented By:</p>

March 18 Quiz 3	Topic: Prospective Memory Einstein, G. O. & McDaniel, M. A. (1990). Normal aging and prospective memory. <i>Journal of Experimental Psychology: Human Perception and Performance</i> , 16, 717-726. Presented By:
Week 12 March 23	Topic: Prospective Memory (cont'd) Rendell, P. G., & Craik, F.M.I. (2000). Virtual week and actual week: Age related differences in prospective memory. <i>Applied Cognitive Psychology</i> , 14, 43-62. Presented By:
March 26	Topic: Cognitive Training Basak, C., Boot, W.R., Voss, M.W. & Kramer, A.F. (2008). Can training in a real-time strategy video game attenuate cognitive decline in older adults? <i>Psychology and Aging</i> , 23, 765-777. Presented By: Willis, S.L., Tennstedt, S.L., Mariske, M., Ball, K., et al. (2006). Long-term effects of cognitive training on everyday functional outcomes in older adults. <i>Journal of the American Medical Association</i> , 296, 2805-2814. Presented By:
Week 13 March 30	Topic: Disorders of Memory (Alzheimer's Disease) TBA Presented By: Shannon Test Review
April 1	TEST 3 - April 1