

**Memory Seminar:
Working memory and automaticity
PSY 595-001**

Fall, 2007 Rich Metzger

- **Goal of the course**

The field of memory has changed dramatically, and not at all, in the last 100 years. The basic theory of memory still rests on the notion of a set of associations that help to organize and give meaning to information from the outside world. Our goal in this course will be to try to come to an understanding of several of the seminal issues in the current study of memory, and to place them in the context of memory research in the last 100 years.

One of the major aspects of memory that has changed is the way in which we have attempted to dissect the elements of the memory system. In the current theory, working memory has gained a certain ascendancy by virtue of being the interface between perception, memory and consciousness. We will spend some time this semester attempting to determine exactly what is working memory.

It has also become increasingly important to distinguish between those aspects of memory function that require the allocation of additional resources and those that function with little intrusion into other processing. This problem is known as the automatic and effortful processing question. We will attempt to examine how we can tell these things apart. Of particular importance, we will attempt to decide how to answer the question, "How do we know when to shift from automatic to effortful?"

The accuracy of memory has long amazed those of us who study cognitive processes. We have also noted that the errors of memory are a valuable tool from which we can attempt to infer the nature of processing that could lead to such errors. We will consider how the notion of false memories informs our understanding of memory. In this context, we will consider the changes in error rates that have been reported as children grow, the reverse developmental trend.

Finally, we will return to the role of working memory as the intersection with consciousness. Jacoby and others have developed methods that are used to measure the role of consciousness in cognitive processes. We will consider this topic.

After several weeks of background discussion led by the instructors, students will take over the direction of the class. Each student will take a topic, select readings, and lead class discussion. The topics for this portion of the class will be derived, in part, from student input.

- **Assignments:** You are responsible for three major tasks. First, you must be the primary presenter for one day of the seminar. This means that you will select the readings and direct the discussion. Second, you must prepare a review of the literature on an approved topic from the course (usually the same topic as your presentation). Third, you will write reaction papers related to the readings and class discussions for any day that you are not presenting your own topic.

Paper and Presentation (75% of your final grade):

1) Topic Approval: 1 page description with minimum of 5 references from refereed journals (not websites). Should include rationale for selection of this topic and your current thoughts about it and where you see it going. Due the first class meeting in October. 10% of final grade

2) Preliminary draft: minimum: outline with annotated bibliography. Minimum 15 references grad students 10 undergrads. Annotations should provide evidence that you have read the article (do not just attach the abstract). Due the class meeting November 13. 20% of final grade.

3) Final paper: APA style, between 15 and 25 pages for grad students (double spaced, normal APA margins); 10 to 20 pages for undergrads. Should show evidence of integration, critical thinking, prediction of direction of field and future research. Not just a summary of prior research. Should be written in a manner that reflects your understanding of the topic (not full of direct quotes from the experts). Due the last day of class. (The student(s) who orally present(s) on the last day of class may have until reading day to turn in the final paper). 25% of final grade

4) Presentation: 20% of final grade. You will select two articles that best represent your topic. Those will be provided to your peers and the instructors at least one week prior to your presentation day. You will then lead the discussion on this topic and these readings. You should be prepared (at a minimum) with an outline and a list of thought-provoking questions. Your date will be assigned based on the topic you choose.

Reaction papers: You will write papers about your reactions to the readings and class discussions of the topics. These papers should focus on questions that have been raised by your reading/discussion, such as: What did you have difficulty understanding? What did you think was lacking in the reading/research? What questions do you think should be answered by further research? What did you find particularly interesting, and what did you learn that you did not know before? What points of the discussion did you find most interesting/helpful? Are there things you disagree with that either the authors or your classmates or instructors said? Would you suggest that this topic be included in a future seminar?

The length of these papers will obviously depend on the amount and nature of the material you have read and the way the discussions go, so it will differ from week to week, but we never expect these to go beyond about 3 double spaced pages. 25% of your final grade. You will be responsible for 10 of these papers over the course of the semester (excluding the day you lead class), due the class meeting following the discussion; if you weren't in class that day you cannot get credit. No late papers will be accepted.