

Mark E. Bouton
Fall 2008

Psychology 303: Biobehavioral Proseminar
Part I: Learning

9:05 – 12:00 Wednesdays, Room 100 John Dewey Hall

The first half of this semester-long course will examine a number of core issues in Learning. The second half will focus on related issues in behavioral neuroscience. The course is a prerequisite for all biobehavioral seminars offered in the Psychology Department, and is taken by first-year General-Experimental Psychology students, first-year Neuroscience students, and second-year Clinical Psychology students.

My goal in this part of the course is to expose you to some of the fundamental issues that define modern learning theory, and to get you thinking about how they might relate to (and be useful in) your own area of psychology or neuroscience. This is consistent with the department's explicit goals for proseminar, which are to

- Promote understanding and knowledge related to the specific foundational area through readings, class discussion, and assignments,
- Identify principles and analytic tools that may broaden students' understanding of issues in their own discipline,
- Improve the quality of students' research by making them aware of relevant research and theory in areas outside their own discipline.

I hope these next weeks will be stimulating, useful, and fun.

The Learning part of the course will follow a discussion format, with occasional micro-lectures by me when the spirit moves me. It is essential that you do the required reading *before* the corresponding class meeting. Each week's readings will be left in a folder in the department xerox area. Please make your own copies.

To help facilitate discussion, I will distribute some "thought questions" a week ahead of each class. These are mainly intended to help you orient to and integrate the reading. You will also be required to write a 2-page "thought paper" before each class. In these papers, I ask that you simply reflect on any aspect of the reading that interests you. Your thought papers can address the thought questions, but they do not have to. I will read and comment on each paper, but I will not grade them. They are only designed to stimulate your discussion and thinking. Sometimes they generate a dialogue between student and instructor.

I will distribute a take-home exam in the last class (October 15) that will be due a week later (October 22). The exam will encourage review of some of the key concepts and have you relate some of the material we have covered to a topic that excites you in your own research area.

The readings for each class are given beginning on the next page. They have been chosen for their coverage and for their ability to generate discussion. The a's and b's at left merely indicate natural groupings of readings when more than three readings are assigned.

Class Meetings and Readings

September 3 (brief meeting)

Introduction and orientation

September 10

Core concepts, applications in everyday life, and scientific explanations and unity in psychology

- a. Baldwin, J. D., & Baldwin, J. I. (2001). *Behavior principles in everyday life* (fourth edition). Upper Saddle River, NJ: Prentice-Hall. Chapters 1 - 3, pp. 1-78.
 - b. Epstein, R., Lanza, R. P., & Skinner, B. F. (1980). Symbolic communication between two pigeons. *Science*, *207*, 543-545.
- Epstein, R., Lanza, R. P., & Skinner, B. F. (1981). "Self-awareness" in the pigeon. *Science*, *212*, 695-696.
- Epstein, R., Krishnit, C., Lanza, R. P., & Rubin, L. (1984). "Insight" in the pigeon: Antecedents and determinants of an intelligent performance. *Nature*, *308*, 61-62.
- Kimble, G. A. (2000). Behaviorism and unity in psychology. *Current Directions in Psychological Science*, *9*, 208-212.

September 17

What Pavlovian learning is really all about

- a. Rescorla, R. A. (1988). Pavlovian conditioning: It's not what you think it is. *American Psychologist*, *43*, 151-160.
- Bouton, M. E. (2002). Context, ambiguity, and unlearning: Sources of relapse after behavioral extinction. *Biological Psychiatry*, *52*, 976-986.
- b. Hollis, K. L. (1997). Contemporary research on Pavlovian conditioning: A "new" functional analysis. *American Psychologist*, *52*, 956-965.
- Bouton, M. E. (2001). Classical conditioning and clinical psychology. In N. J. Smelser & P. B. Baltes (Eds.), *International Encyclopedia of the Social and Behavioral Sciences*. Oxford: Elsevier Science.

September 24

Role of conditioning in drug tolerance and drug dependence

- a. Siegel, S. (1989). Pharmacological conditioning and drug effects. In A. J. Goudie & M. Emmett-Oglesby (Eds.), *Psychoactive drugs* (pp. 115-180). Humana Press, Inc.
- b. Siegel, S., Hinson, R. E., & Krank, M. D. (1981). Morphine-induced attenuation of morphine tolerance. *Science*, *212*, 1533-1534.

Siegel, S., Hinson, R. E., Krank, M. D., & McCully, J. (1982). Heroin "overdose" death: Contribution of drug-associated environmental cues. *Science*, *216*, 436-437.

McDonald, R. V., & Siegel, S. (2004). Intra-administration associations and withdrawal symptoms: Morphine-elicited morphine withdrawal. *Experimental & Clinical Psychopharmacology*, *12*, 3-11.

October 1

Perspectives on the effects of reinforcers I

a. McDowell, J. J. (1988). Matching theory in natural human environments. *The Behavior Analyst*, *11*, 95-109.

Klatt, K. P., & Morris, E. K. (2001). The Premack principle, response deprivation, and establishing operations. *The Behavior Analyst*, *24*, 173-180.

b. Eisenberger, R., & Cameron, J. (1996). Detrimental effects of reward: Reality or myth? *American Psychologist*, *51*, 1153-1166.

[optional] Eisenberger, R., & Rhoades, L. (2001). Incremental effects of reward on creativity. *Journal of Personality and Social Psychology*, *81*, 728-741.

October 8

Perspectives on the effects of reinforcers II

Rescorla, R. A. (1987). A Pavlovian analysis of goal-directed behavior. *American Psychologist*, *42*, 119-129.

Dickinson, A., & Balleine, B. W. (2000). Causal cognition and goal-directed action. In C. Heyes & L. Huber (Eds.), *The evolution of cognition* (pp. 185-204). Cambridge, MA: The MIT Press.

Bargh, J. A. (2005). Bypassing the will: Towards demystifying the nonconscious control of social behavior. In R. R. Hassin, J. S. Uleman, & J. A. Bargh (Eds.), *The new unconscious* (pp. 37-58). New York: Oxford University Press.

October 15

Memory

a. Neisser, U., & Harsch, N. (1992). Phantom flashbulbs: Memories of ordinary news about Challenger. In E. Winograd & U. Neisser (Eds.), *Affect and accuracy in recall: Studies of "flashbulb" memories* (pp. 9-31). Cambridge, UK: Cambridge University Press.

Fivush, R., & Nelson, K. (2004). Culture and language in the emergence of autobiographical memory. *Psychological Science*, *15*, 573-577.

- b. Richardson, R., & Hayne, H. (2007). You can't take it with you: The translation of memory across development. *Current Directions in Psychological Science*, 16, 223-227.
- Roediger, H. L., & McDermott, K. B. (2000). Tricks of memory. *Current Directions in Psychological Science*, 9, 123-127.
- Lindsay, D. S. (1993). Eyewitness suggestibility. *Current Directions in Psychological Science*, 2, 86-89.
- Loftus, E. F., & Davis, D. (2006). Recovered memories. *Annual Review of Clinical Psychology*, 2, 469-498.