

**PSYCHOLOGY 506b: Foundations of Cognitive Psychology
Spring 2005**

Tues & Thurs 11:00-12:15; Psychology 317A

Instructors:	Mary Peterson	LouAnn Gerken
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Office Hours:	M 2:30 – 3:30 PM Th 12:30-1:30 PM	Tuesday 1:30 to 2:30 or by appt.
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Date	Topic	Presenter
1/13	Organizational meeting	Mary Peterson & LouAnn Gerken
1/18	Introduction	Mary Peterson & LouAnn Gerken
1/20	Perception and Attention	Mary Peterson
1/25	Perception and Attention	Mary Peterson
1/27	Perception and Attention	Mary Peterson
2/1	Memory - Overview	Betty Glisky
2/3	Memory - Encoding	Lee Ryan
2/8	Memory - Retrieval	Cyma Van Petten
2/10	Memory – Consolidation	Lynn Nadel
2/15	Language - Introduction	Tom Bever
2/17	Language - Lexicon	Ken Forster
2/22	Language – Sentences	Janet Nicol
2/24	Language – Sentences	Merrill Garrett
3/1	Language – Development	LouAnn Gerken
3/3	Wrap up, Receive Exam 1	LouAnn Gerken & Mary Peterson
3/8	EXAM 1, Turn in Exam 1 by 5PM	
3/10	NO CLASS	
3/12-20	SPRING BREAK	
3/22	Discussion of Exam 1	
3/24	Computation and Representation	Tom Shultz (McGill)
3/29	Computation and Representation	Tom Shultz (McGill)
3/31	Learning and Categorization	Rebecca Gómez
4/5	Learning and Categorization	Massimo Piattelli-Palmarini
4/7	Learning and Categorization	LouAnn Gerken
4/12	Executive Function	Anouk Scheres
4/14	Decision Making	Alan Sanfey
4/19	Decision Making	Alan Sanfey
4/21	Emotion	Al Kaszniak
4/26	Consciousness and Self	Al Kaszniak
4/28	Final Wrap Up, Receive Exam 2	Mary Peterson & LouAnn Gerken
5/3	Exam 2, Turn in Exam 2 by 5PM	

Readings are available on the class POLIS web site:

https://www.polis.arizona.edu/courseHomesite.do?course=PSYC_506B-001&semester=spring05

Announcements will also be posted there.

ASSIGNMENTS AND GRADES

1. **Exams.** There will be two open-book take-home essay exams. On each exam, students will answer 6 questions, each worth 5 points. (There will be some choice.) *(60% of final grade; 30 points each)*.
2. **Commentaries.** Students must write at least 15 commentaries on the assigned readings. (If more are written, the best 15 will be counted toward grade.) Commentaries can be written on any or all of the readings assigned for a class meeting, but they must be handed in at the class for which the reading was assigned. Commentaries are to consider the implications of the research, integrate the current readings with issues discussed in the class, and/or raise important theoretical, analytical, or methodological issues. They are not simply to be summaries of the readings, although a brief summary should introduce and position your ideas. Commentaries must be a single typed page. Do not send commentaries via email. *(30% of final grade; 2 points each)*
3. **Participation in Discussion.** Discussion and exchange of ideas is an important component of this class. During class meetings, students are expected to participate in discussion with the visiting speakers, with other students, and with the course instructors. As part of this process, before each class meeting, the instructors will ask students to bring up questions on the assigned readings and/or issues they raised in their commentaries. *(10% of final grade)*

Readings – see next page

Peterson Readings

Class 1: 1/20

Rensink RA, O'Regan JK, and Clark JJ (1997). To See or Not to See: The Need for Attention to Perceive Changes in Scenes. *Psychological Science*, 8:368-373

Peterson, M. A. Object perception. (2001). In E. B. Goldstein (Ed.), *Blackwell Handbook of Perception*, Chapter 6, pp. 168-203. Oxford: Blackwell Publishers.

Class 2: 1/25

Chun, M. M., & Wolfe, J. M. (2001). Visual Attention. In E. B. Goldstein (Ed.), *Blackwell's Handbook of Perception*, (Vol. Ch 9, pp. 272-310). Oxford, UK: Blackwell.

Lamme, V. A. F. (2003). Why visual attention and awareness are different *Trends in Cognitive Sciences*, 7, 12-18.

Treisman, A. (1999). Feature binding, attention and object perception. In G. W. Humphreys, J. Duncan, & A. Treisman (Eds.), *Attention, space, and action: Studies in cognitive neuroscience*. London: Oxford University Press, pp. 91-111.

Class 3: 1/27

Tarr, M. J. (2003). Visual Object Recognition: Can a Single Mechanism Suffice? In M. A. Peterson and G. Rhodes (eds.), *Perception of Faces, Objects, and Scenes: Analytic and Holistic Processes* (pp. 177-211). Oxford, UK: Oxford University Press.

Tarr, M. J., Williams, P., Hayward, W. G., & Gauthier, I. (1998). Three-dimensional object recognition is viewpoint dependent. *Nature Neuroscience*, 1(4), 275-277.

Yovel, G. and Kanwisher, N. (2004) Face perception; domain specific, not process specific.. *Neuron*. 44 (5) 889-98.

Glisky Readings

Baddeley, A. (2004). *The Essential Handbook of Memory Disorders for Clinicians*. Edited by A.D. Baddeley, M.D. Kopelman and B.A. Wilson. NY: John Wiley & Sons.

Schacter, D. L., Wagner, A. D., & Buckner, R. L. (2000). Memory systems of 1999. In *The Oxford Handbook of Memory* (pp. 627-643). New York, NY: Oxford University Press.

Ryan Reading

Baddeley, A. (1997). *Human Memory: Theory and Practice*. Boston: Allyn and Bacon, chapter 10.

Van Petten Readings

Brown, S. C. & Craik, F.I.M. (2000). Encoding and retrieval of information, In E.C. Tulving, F.I.M. Craik (Eds.), *The Oxford Handbook of Memory*, Oxford University Press, New York.

Mithcell, K. J. & Johnson, M. K. (2000) Source Monitoring: Attributing Mental Experiences. In E.C. Tulving, F.I.M. Craik (Eds.), *The Oxford Handbook of Memory*, Oxford University Press, New York.

Roediger, H. L. & McDermott, K. B. (2000). Distortions of memory. In E.C. Tulving, F.I.M. Craik (Eds.), *The Oxford Handbook of Memory*, Oxford University Press, New York.

Nadel Readings

Brown, A. S. (2002). Consolidation theory and retrograde amnesia in humans. *Psychonomic Bulletin & Review* 9 (3), 403-425

Nadel, L. & Moscovitch, M. (1998). Hippocampal contributions to cortical plasticity. *Neuropharmacology* 37, 431-439

Bever Reading

Townsend, D. J., & Bever, T. G. (2001). *Sentence comprehension: The integration of habits and rules*. Cambridge, MA: MIT Press, chapter 3.

Forster Reading

Balota, D. (1994). Visual word recognition: The journey from features to meaning. In M. Gernsbacher (Ed.), *The handbook of psycholinguistics*. New York: Academic Press.

Nicol Reading

- Barss, A. & Nicol, J. (2002). The processing of anaphora. *The Encyclopedia of Cognitive Science*. Macmillan Publishers.
- Tanenhaus, M. (2002). Sentence processing. *The Encyclopedia of Cognitive Science*. Macmillan Publishers.

Garrett Readings

- Friederici, A. (2001). Neural basis of Syntactic Aspects of Language. In N. J. Smelser and P. B. Baltes (eds.), *International Encyclopedia of Social and Behavioral Sciences*.
- Garrett, M. (2001). The psychology of speech errors. In N. J. Smelser and P. B. Baltes (eds.), *International Encyclopedia of Social and Behavioral Sciences*.
- Vigliocco, G. (2001). The psychology of speech production. In N. J. Smelser and P. B. Baltes (eds.), *International Encyclopedia of Social and Behavioral Sciences*.
- Vigliocco, G., Lauer, M., Damian, M., & Levelt, W. J. M. (2002). Semantic and Syntactic Forces in Noun Phrase Production. *Journal of Experimental Psychology: Human Perception and Performance*, 28, 46-58

Gerken Language Reading

- Gerken, L. A. (2002). Early sensitivity to linguistic form. *Annual Review of Language Acquisition*, 2, 1-36.

Shultz Readings

- Shultz, T. (2003). *Computational Developmental Psychology*. Cambridge, MA: MIT Press, chapters 2 and 3.

Gómez Readings

- Gerken (2003). Not So Tight: Evidence for Incomplete Constraints on Linguistic Generalization. Unpublished ms. University of Arizona
- Gómez, R. L. (2002). Variability and detection of invariant structure. *Psychological Science*, 13(5), 431-436.
- Kirkham, N. Z., Slemmer, J. A., & Johnson, S. P. (2002). Visual statistical learning in infancy: Evidence for a domain general learning mechanism. *Cognition*, 83, B35-B42.

Piattelli-Palmarini Readings (note: the 3 files contain just these 2 readings)

- Rosch, E. (1988). *Principles of Categorization*, in A. Collins and E. E. Smith (eds.), *Readings in Cognitive Science: A Perspective from Psychology and Artificial Intelligence*.
- Smith, E. E., & Osherson, D. N. (1988). Conceptual Combination with Prototype Concepts. in A. Collins and E. E. Smith (eds.), *Readings in Cognitive Science: A Perspective from Psychology and Artificial Intelligence*.

Gerken Categorization Readings

- Giurfa, M., Zhang, S. W., Jenett, A., Menzel, R., & Srinivasan, M. V. (2001). The concepts of 'sameness' and 'difference' in an insect. *Nature*, 410, 930-933.
- Khallad, Y. (2004). Conceptualization in the pigeon: What do we know? *International Journal of Psychology*, 39, 73-94.
- Smith, J. D., Minda, J. P., & Washburn, D. A. (2004). Category Learning in Rhesus Monkeys: A Study and Jenkins (1961) Tasks. *Journal of Experimental Psychology: General*, 133, 398-414.

Sanfey Readings

Class 1: 4/12

- Kanheman, D. (2003). A perspective on judgment and choice. *American Psychologist* 58, 697-720.
- Shafir, E. & LeBoeuf R. (2003). Rationality. *Annual Review of Psychology* 53, 491-517.

Class 2: 4/14

- Hastie, R. (2001). Problems for judgment and decision-making. *Annual Review of Psychology* 52, 653-683.

Glimcher, P. (2002). Decisions, decisions: choosing a biological science of choice. *Neuron* 36, 323-332.
Loewenstein G. & Lerner J. (2001). The role of affect in decision-making. Book Chapter.

Scheres Readings

Miyake, A., Friedman, N. P., Emerson, M. J., Witzki, A. H., & Howerter, A. (2000). The Unity and Diversity of Executive Functions and Their Contributions to Complex "Frontal Lobe" Tasks: A Latent Variable Analysis. *Cognitive Psychology* 41, 49–100.
Ridderinkhof, R. K., Ullsperger, M., Crone, E. A., & Nieuwenhuis, S. (2004). The Role of the Medial Frontal Cortex in Cognitive Control, *Science*, 306: 443-447.

Kaszniak Emotion Readings

Scherer, K.R. (2003). Introduction: Cognitive components of emotion. In R.J. Davidson, K.R. Scherer, & H.H. Goldsmith (Eds.), *Handbook of affective sciences* (pp. 563-571). New York: Oxford University Press.

Ochsner, K.N., & Schacter, D.L. (2003). Remembering emotional events: A social cognitive neuroscience approach. In R.J. Davidson, K.R. Scherer, & H.H. Goldsmith (Eds.), *Handbook of affective sciences* (pp. 643-660). New York: Oxford University Press.

Kaszniak Consciousness Readings

Baars, B.J. (2003). Introduction: Treating consciousness as a variable: The fading taboo. In B.J. Baars, W.P. Banks, & J.B. Newman (Eds.), *Essential sources in the scientific study of consciousness* (pp. 1-10). Cambridge, MA: MIT Press.
Farah, M. (1995). Visual perception and visual awareness after brain damage: A tutorial overview. In C. Umiltà & M. Moscovitch (Eds.), *Attention and performance XV: Conscious and nonconscious information processing* (pp. 37-75). Cambridge, MA: MIT Press.