

Core Seminar in Knowledge and Conceptual Processes
Psychology 507
Emory University
Fall 2007

Instructor Information

Instructors:	Laura Namy	Phillip Wolff
Office:	Psychology 328	Psychology 321
Phone:	404-727-6878	(404) 727-7140
Email:	lnamy@emory.edu	pwolff@emory.edu
Office hours:	By appointment	By appointment

Time and Location

Mon, 12:00—3:00 PM in Psychology 332 (Feel free to bring lunch to class)

Course Description

Theories of knowledge representation are a natural starting point for the study of cognition. They indicate, for example, what children learn when they acquire new knowledge and what people mean when they put their knowledge into words. They also place constraints on the kinds of processes that may be used in reasoning. This course will review the core literature related to the representation and processing of knowledge with a particular emphasis on how we categorize objects, events, and abstract entities. For each topic, important issues, theories, findings, and methods will be addressed by examining exemplary research. Each topic will be addressed from multiple perspectives. The perspectives most likely to be represented include cognitive psychology, developmental psychology, cognitive neuroscience, and computational modeling. The course is required of all graduate students in the Cognition and Development Program. Students from other psychology programs, other Emory departments, and other Atlanta universities are also welcome.

Format

The course will be conducted as a seminar. Students will be expected to read assigned papers, write weekly reaction papers, and come to class prepared to discuss the readings. Students will also prepare a presentation on a “special topic” and will write an end-of-semester research proposal. Details are provided below.

Course Materials

Assigned readings will be posted electronically and accessible through Blackboard. You will automatically be enrolled in the Blackboard course site for this class. You may access Blackboard by going to classes.emory.edu and entering your username and password. Readings for each week will be posted in the Course Materials section.

Course Requirements

Class preparation and participation. All participants are required to have read every assigned article carefully prior to class. All class participants should also bring a printout of the assigned readings. Please come to class prepared to discuss these papers and the topic more generally.

Tickets. For each class, students must turn in a “ticket.” The tickets should have two parts: a comment and a question. Ask good questions, that is, questions whose answers (if known) would be consequential. In formulating your ticket, you might begin with an observation (the comment part), then raise a question. Alternatively, you might begin with a question, and then propose an answer. Your tickets should be 120 words or less, printed out (not emailed), and turned in at the end of class. Be prepared to read your comments and questions. Your tickets will be graded as either submitted or unsubmitted.

Student presentations. During the last four-to-five weeks of class, students will team up to tackle some “special topics” associated with the study of conceptual knowledge. Each team will be responsible for familiarizing themselves with the literature on their topic, assigning 3-4 readings to the class on their topic, and preparing a powerpoint presentation on the topic. Each student will take responsibility for a particular aspect of the topic (to be determined by the team) and will prepare his or her own powerpoint presentation on that aspect. Readings must be selected at least two weeks before the class session to ensure time to post on electronic reserve or photocopy. Each presentation should include a 1 page handout including an outline, key points, or visual illustrations. Please do not read a written text for your presentation. Be sure to incorporate some points for discussion. Presentations will be graded on the quality of the summary, critical reaction, and overall coherence.

Research Proposal. The final assignment will be a 12-15 (double spaced) research proposal on an approved topic relating to the study of concepts and knowledge. The proposal should include a literature review, formulation of the question of interest, methods section and description of the predictions and their implications. Final papers should be submitted to both instructors by email by noon on December 13. Students must prepare a two page prospectus on their proposal topic, briefly describing the research question, summarizing the prior work on the topic, and motivating the planned research design. This prospectus is due via email by the start of class on November 12. Paper topics must be approved by the instructors, and you may be asked to revise your prospectus based on our feedback.

All papers must 12-15 pages long, double spacing, with 1 inch margins, in 12 point Times-Roman font (or 11 point Arial). Citations and references should be in APA style. Papers not meeting these style requirements will be returned ungraded. Provide subheadings.

Grades

Your class grade will be based on your class participation (20%), tickets (20%), presentation (20%) and research proposal (40%).

Students taking the course Pass/Fail must attend course meetings regularly, read the assigned articles, turn tickets, participate in class discussion, and make a class presentation. A class paper is not required.

Schedule and Assigned Readings

Date	Topic
Sept. 3	Labor Day holiday (no classes)
Sept. 10	Introduction – big issues Functions of a conceptual system Levels of description Nature versus nurture Modular versus interactive / domain-general
Sept. 17	Theories of category representation / Kinds of categories 1. Murphy, G. L. (2002). The big book of concepts. Cambridge, MA: The MIT Press [Chapters 2 and 3] 2. Medin, D. L., Lynch, E. B., & Solomon, K. O. (2000). Are There kinds of concepts? <i>Annual Review of Psychology</i> , 51, 121–147. 3. Leslie, A. M., Xu, F., Tremoulet, P. D., & Scholl, B. J. (1998). Indexing and the object concept: Developing 'what' and 'where' systems. <i>Trends in Cognitive Sciences</i> , 2, 10-18.
Sept. 24	Taxonomies and other conceptual organizations 1. Rosch, E.H., Mervis, C.B., Gray, W.D., Johnson, D.M., & Boyes-Braem, P. (1976). Basic objects in natural categories. <i>Cognitive Psychology</i> , 8, 382-439. 2. Waxman, S.R., & Namy, L.L. (1997). Challenging the notion of a thematic preference in young children. <i>Developmental Psychology</i> , 33, 555-567. 3. Mandler, J. M. (2004). Thought before language. <i>Trends in Cognitive Sciences</i> , 8, 508-513.
Oct. 1	Categorization and the role of intention, function and causation 1. Malt, B. C., & Sloman, S. A. (in press). Category essence or essentially pragmatic? Creator's intention in naming and what's really what. <i>Cognition</i> .

	<ol style="list-style-type: none"> 2. Bloom, P. (in press). Categorization is more than just naming. A reply to Malt and Sloman. <i>Cognition</i>. 3. Kemler Nelson, D. G., Herron, L., & Morris, C. (2002). How children and adults name broken objects: Inferences and reasoning about design intentions in the categorization of artifacts. <i>Journal of Cognition and Development</i>, 3, 301-332. 4. Chaigneau, S.E., Barsalou, L.W., & Sloman, S. (2004). Assessing the causal structure of function. <i>Journal of Experimental Psychology: General</i>, 133, 601-625.
Oct. 8	FALL BREAK
Oct. 15	<p>Conceptual combination / Ad hoc categories</p> <ol style="list-style-type: none"> 1. Barsalou, L.W. (1983). Ad hoc categories. <i>Memory & Cognition</i>, 11, 211-227. 2. Wisniewski, E. J., & Middleton, E. L. (2002). Of bucket bowls and coffee cup bowls: Spatial alignment in conceptual combination. <i>Journal of Memory and Language</i>, 46, 1 – 23. 3. Ross, B.H., & Murphy, G.L. (1999). Food for thought: Cross-classification and category organization in a complex real-world domain. <i>Cognitive Psychology</i>, 38, 495-553.
Oct. 22	<p>Action and Event Categories, Week 1</p> <ol style="list-style-type: none"> 1. Gentner, D. (1978). On relational meaning: The acquisition of verb meaning. <i>Child Development</i>, 49, 988-998. 2. Kersten, A. W. & Billman, D. (1997). Event category learning. <i>Journal of Experimental Psychology: Learning, Memory, and Cognition</i>, 23, 638-658. 3. Morris, M. W., & Murphy, G. L. (1990). Converging operations on a basic level in event taxonomies. <i>Memory & Cognition</i>, 18, 407-418. 4. Hudson, J. A., Fivush, R., & Kuebli, J. (1992). Scripts and episodes: The development of event memory. <i>Applied Cognitive Psychology</i>, 6, 483-505.

Oct. 29	<p>Action and Event Categories, Week 2</p> <ol style="list-style-type: none"> 1. Malt, B., Gennari, S., Imai, M., Majid, A. (in press). Talking about walking: Biomechanics and the language of locomotion. <i>Psychological Science</i>. 2. Wynn, K. (1996). Infants' individuation and enumeration of actions. <i>Psychological Science</i>, 7, 154 – 169. 3. Levin, B. and M. Rappaport Hovav (1991) "Wiping the Slate Clean: A Lexical Semantic Exploration", in B. Levin and S. Pinker, eds. (1991), 123-151. 4. Maouene, J., Hidaka, S., & Smith, L. B. (2006). Body parts and the first 100 verbs. <i>Proceedings of the 28th Annual Conference of the Cognitive Science Society</i>, 555-560.
Nov. 5	<p>Abstract categories</p> <ol style="list-style-type: none"> 1. Casasanto, D., & Boroditsky, L. (2007). Time in the mind: Using space to think about time. <i>Cognition</i>. 2. Gentner, D., & Kurtz, K. (2005). Relational categories. In W. K. Ahn, R. L. Goldstone, B. C. Love, A. B. Markman & P. W. Wolff (Eds.), <i>Categorization inside and outside the lab</i>. (pp. 151-175). Washington, DC: APA. 3. Barsalou, L.W., & Wiemer-Hastings, K. (2005). Situating abstract concepts. In D. Pecher and R. Zwaan (Eds.), <i>Grounding cognition: The role of perception and action in memory, language, and thought</i> (pp. 129-163) . New York: Cambridge University Press.
Nov. 12	<p>Embodiment and Simulation of Category Knowledge</p> <p>2 PAGE PROSPECTUS OF PROPOSAL TOPIC DUE!</p> <ol style="list-style-type: none"> 1. Glenberg, A. M. (1997). What memory is for. <i>BBS</i>, 20, 1-55. 2. Hegarty, M. (2004). Mechanical reasoning by mental simulation. <i>TRENDS in Cognitive Sciences</i>, 8, 280-285. 3. Takarae Y, & Levin DT. (2001). Animals and artifacts may not be treated equally: Differentiating strong and weak forms of category-specific visual agnosia. <i>Brain and Cognition</i>, 45, 246-264.

	4. Barsalou, L. W., Simmons, W. K., Barbey, A. K., & Wilson, C. D. (2003). Grounding conceptual knowledge in modality-specific systems. <i>Trends in Cognitive Sciences</i> , 7, 84-91.
Nov. 19	Social categories READINGS TBA
Nov. 26	Categorization and expertise READINGS TBA
Dec. 3	Comparative cognition: cross-species comparisons of categorization READINGS TBA
Dec.10	Categorization across cultures READINGS TBA
Thursday Dec 13	FINAL PAPER DUE (by email to BOTH instructors)