

**PSYC 508**  
**Core Seminar in Language**  
**Spring, 2001**

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**Course Description:** This course is required of all graduate students in the Cognition and Development Program. It is intended to provide a comprehensive overview of the literature and theoretical perspectives on language use and language learning. We begin by reviewing the history of important previous work in language research. Following this review, we will discuss major issues, theories and findings in the psychological study of language, using exemplary research as illustrations. Each topic will be addressed from multiple perspectives including cognitive psychology, developmental psychology, cognitive neuroscience, and computational modeling.

**Course Readings:** Readings will be primary sources that cover theory, findings, and methods on the topics of interest. Each reading will be placed on electronic reserve at Woodruff Library. Students are expected to read and provide comments on the weekly readings prior to the class session.

**Course Requirements:** Students will be responsible for leading discussion on assigned papers periodically throughout the semester. Each student will also be expected to submit a minimum of three questions or comments on the readings for each week. These comments should be submitted to the two instructors via email by noon each TUESDAY. The instructors will circulate a list of the email comments and question each week. The final assignment will be a 15-20 page (double spaced) research proposal on an approved topic relating to the study of language. 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 will be due on the last day of class (April 25). Paper topics must be approved by the instructors by April 4.

### Course Schedule

**1. Jan. 24: Introduction**

**2. Jan. 31: History and Major Theories**

- Behaviorism vs. Rules-in-the-Head  
Chomsky, N. (1957). A review of B.F. Skinner's "Verbal Behavior." Language, 35, 26-58
- Modularity/Constraints Theory  
Karmiloff-Smith, A. (1992). Beyond modularity: A developmental perspective on cognitive science. Cambridge, MA: MIT Press. Chapters 1 and 2.
- Dynamic Systems  
Thelen, E. & Smith L.B. (1994). A dynamical systems approach to the development of cognition and action. Cambridge, MA: MIT Press. Chapter 3.

### 3. Feb. 7: History and Evolution

- Big bang vs. incremental change...natural selection as a mechanism?

Bates, E., Thal, D., & Marchman, V. (1991). Symbols and syntax: A Darwinian approach to language development. In Krasnegor, N. A. & Rumbaugh, D. M. (Eds.), Biological and behavioral determinants of language development. (pp. 29-65). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Fernald, A. (1994). Human maternal vocalizations to infants as biologically relevant signals: An evolutionary perspective. In P. Bloom (Ed.), Language acquisition: Core readings (pp. 51-94). Cambridge, MA: MIT Press.

Hauser, M.D. (1996). The evolution of communication. Cambridge, MA: MIT Press.  
Chapter 2.

### 4. Feb. 14: Speech Perception: Phoneme perception and production

Nygaard, L. C., & Pisoni, D. B. (1995). Speech perception: New directions in research and theory. In J. L. Miller & P. D. Eimas (Eds.), Handbook of perception and cognition, volume II: Speech, language, and communication. New York, NY: Academic Press.

Werker, J.F., & Tees, R.C. (1984). Cross-language speech perception: Evidence for perceptual reorganization during the first year of life. Infant Behavior and Development, 7, 49-63.

Zatorre, R. J., Meyer, E., Gjedde, A., & Evans, A. C. (1996). PET studies of phonetic processing of speech: Review, replication, and reanalysis. Cerebral Cortex, 6, 21-30.

Hura, S., & Echols, C.H. (1996). The role of stress and articulatory difficulty in children's early productions. Developmental Psychology, 32, 165-176.

### 5. Feb. 21: Speech Perception: Segmentation and Prosody

Norris, D., McQueen, J.M., Cutler, A., & Butterfield, S. (1997). The possible-word constraint in the segmentation of continuous speech. Cognitive Psychology, 34, 191-243.

Saffran, J.R., Aslin, R.N., & Newport, E.L. (1996). Statistical learning by 8-month-old infants. Science, 274, 1926-1928.

Jusczyk, P.W., Luce, P.A., & Charles-Luce, J. (1994). Infants' sensitivity to phonotactic patterns in the native language. Journal of Memory & Language, 33, 630-645.

Fernald, A., & McRoberts, G. (1996). Prosodic bootstrapping: A critical analysis of the argument and the evidence. In J.L. Morgan & K. Demuth (Eds.), Signal to syntax: Bootstrapping from speech to grammar in early acquisition (pp. 365-388). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Cutler, A., Dahan, D., & van Donselaar, W. (1997). Prosody in the comprehension of spoken language: A literature review. Language & Speech, 40, 141-201.

### 6. Feb. 28: Word Learning

Woodward, A.L., Markman, E.M., & Fitzsimmons, C.M. (1994). Rapid word learning in 13- and 18-month-olds. Developmental Psychology, 30, 553-566.

Mills, D.L., Coffey-Corina, S.A., & Neville, H.J. (1993). Language acquisition and cerebral specialization in 20-month-old infants. Journal of Cognitive Neuroscience, 5, 317-334.

Bloom, L., Tinker, E., & Margulis, C. (1993). The words children learn: Evidence against a noun bias in early vocabularies. Cognitive Development, 8, 431-450.

Tomasello, M., & Barton, M. (1994). Learning words in nonostensive contexts. Development Psychology, 30, 639-650.

## 7. Mar. 7: Lexical Processing and Production

McClelland, J. L., & Elman, J. L. (1986). The TRACE model of speech perception. Cognitive Psychology, *18*, 1-86.

Radeau, M., Besson, M., Fonteneau, E., & Castro, S.L. (1998). Semantic, repetition and rime priming between spoken words: Behavioral and electrophysiological evidence. Biological Psychology, *48*, 183-204.

Foygel, D., & Dell, G.S. (2000). Models of impaired lexical access in speech production. Journal of Memory & Language, *43*, 182-216.

## 8. Mar. 14: Spring Break

## 9. Mar. 21: Syntax acquisition and sentence processing

Tomasello, M., & Brooks, P.J. (1999). Early syntactic development: A Construction grammar approach. In M. Barrett (Ed.), The development of language: Studies in developmental psychology (pp. 161-190). Philadelphia, PA: Psychology Press/Taylor & Francis.

Maratsos, M. (1999). Some aspects of innateness and complexity in grammatical acquisition. In Barrett, M. (Ed). The development of language. Studies in developmental psychology (pp. 191-228). Philadelphia, PA: Psychology Press/Taylor & Francis.

Hare, M., & Elman, J. L. (1995). Learning and morphological change. Cognition, *56*, 61-98.

Bock, K., Loebell, H., & Morey, R. (1992). From conceptual roles to structural relations: Bridging the syntactic cleft. Psychological Review, *99*, 150-171.

## 10. Mar. 28: Pragmatics and Discourse Processing

Clark, E.V. (1991). Acquisitional principles in lexical development. In S.A. Gelman & J.P. Byrnes (Eds.), Perspectives on language and thought: Interrelations in development. (pp. 31-71). New York, NY: Cambridge University Press.

Brennan, S. E., & Clark, H. H. (1996). Conceptual pacts and lexical choice in conversation. Journal of Experimental Psychology: Learning, Memory, & Cognition, *22*, 1482-1493.

Kaschak, M. P., & Glenberg, Arthur M. (2000). Constructing meaning: The role of affordances and grammatical constructions in sentence comprehension. Journal of Memory & Language, *43*, 508-529.

Carpenter, P.A., Miyake, A., & Just, M.A. (1994). Working memory constraints in comprehension: Evidence from individual differences, aphasia, and aging. In M. Gernsbacher (Ed.), Handbook of Psycholinguistics (pp. 1075-1115). New York, NY: Academic Press.

## 11. Apr. 4: Brain Localization and Critical Periods

Johnson, J. S., & Newport, E. L. Critical period effects in second language learning: The influence of maturational state on the acquisition of English as a second language. Cognitive Psychology, *21*, 60-99.

Neville, H.J., & Bavelier, D. (1998). Neural organization and plasticity of language. Current Opinion in Neurobiology, *8*, 254-258.

Goldin-Meadow, S., & Mylander, C. (1998). Spontaneous sign systems created by deaf children in two cultures. Nature, *391*, 279-281.

Pisoni, D.B., Lively, S.E., & Logan, J.S. (1994). Perceptual learning of nonnative speech contrasts: Implications for theories of speech perception. In J.C. Goodman, & H.C. Nusbaum, (Eds.), The development of speech perception: The transition from speech sounds to spoken words (pp. 121-166). Cambridge, MA: MIT Press.

## **12. Apr. 11: Non-human animal communication and the species-specificity of language**

Kluender, K. R., Diehl, R. L., & Killeen, P. R. (1987). Japanese quail can learn phonetic categories. Science, 237, 1195-1197.

Savage-Rumbaugh, S., & Brakke, K.E. (1996). Animal language: Methodological and interpretive issues. In M. Bekoff, & D. Jamieson (Eds.), Readings in animal cognition (pp. 269-288). Cambridge, MA: MIT Press.

Kako, E. (1999). Elements of syntax in the systems of three language-trained animals. Animal Learning & Behavior, 27, 1-14.

Pepperberg, I.M. (1999). Rethinking syntax: A commentary on E. Kako's "Elements of syntax in the systems of three language-trained animals." Animal Learning & Behavior, 27, 5-17.

## **13. Apr. 18: No class (SRCD)**

## **14. Apr. 25: Language and Thought**

Gerrig, R.J., Banaji, M.R. (1994). Language and thought. In R.J. Sternberg (Ed.), Thinking and problem solving. Handbook of perception and cognition (2nd ed.) (pp. 233-261). San Diego, CA: Academic Press, Inc.

Waxman, S.R., & Markow, D.B. (1995). Words as invitations to form categories: Evidence from 12 to 13 month old infants. Cognitive Psychology, 29, 257-302.

Hunt, E., & Agnoli, F. (1991). The Whorfian hypothesis: A cognitive psychology perspective. Psychological Review, 98, 377-389.