

Language Acquisition & Cognitive Development

V89.0300.009

Wednesdays, 2:00 – 3:50 PM, Meyer 851

Professor Gary Marcus

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office hours: by appointment (email to set up a time)

In the first three years of life, children go from helpless creatures, fresh out of the womb, to toddlers with a basic grasp of language and the people and objects in the world around them. How do they do that? This seminar will discuss current issues in language acquisition and cognitive development, exploring nature, nurture, and their interaction.

Requirements

- Class participation & regular attendance
- Frequent short essays (1 page each) — 30% of grade
- Two seminar presentations — 20% of grade
- Seminar participation — 10% of grade
- Paper 10-15 pages; outlines and/or excerpts will also be required — 40% of grade

Paper: Topic Due: October 7
 Outline/Excerpt Due: November 18
 Final Draft: December 16

Preliminary Calendar

September 9, 2009: Introduction

September 16, 2009: Word Learning

Bloom, P. (2001). Precis of How children learn the meanings of words. *Behav Brain Sci*, 24(6), 1095-1103; discussion 1104-1034.

Assignment (due in class): Read the article by Bloom and skim through the commentaries. Choose one of the commentaries and write 1-2 page essay on what that commentary says and how it relates to what Bloom says. Be prepared to talk about your essay in class, and what sorts of experiments you could do to resolve the dispute.

September 23, 2009: What makes language acquisition a challenging problem? What makes studying language acquisition a challenging problem?

Pinker, S. (1995). Language acquisition. *An Invitation to Cognitive Science: Language*/edited by Lila R. Gleitman and Mark Liberman, 135.

Assignment: Find a study on language acquisition that's been published in the last three years, explain what method it uses, and say whether you think that method is appropriate. Prepare to discuss in class.

September 30, 2009: Speech & Statistics

Vouloumanos, A., & Werker, J. F. (2004). Tuned to the signal: the privileged status of speech for young infants. *Developmental Science*, 7(3), 270-276.

Vouloumanos, A., & Werker, J. F. (2007). Listening to language at birth: evidence for a bias for speech in neonates. *Dev Sci*, 10(2), 159-164.

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.

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

Assignment: TBA

October 7, 2009: Rules

Pinker, S. (1991). Rules of Language. *Science*, 253, 530-535.

Marcus, G. F. (1996). Why do children say "brokek"? *Current Directions in Psychological Science*, 5, 81-85.

Marcus, G. F., Vijayan, S., Bandi Rao, S., & Vishton, P. M. (1999). Rule learning in 7-month-old infants. *Science*, 283, 77-80.

Marcus, G. F., Fernandes, K. J., & Johnson, S. P. (2007). Infant rule learning facilitated by speech. *Psychol Sci*, 18(5), 387-391.

Elman, et al, excerpt TBA

Assignment: TBA

October 14, 2009: The Acquisition of Syntax

Crain, S. (1991). Language Acquisition in the Absence of Experience. *Behavioral and Brain Sciences*, 14, 597-650.

Assignment: Read the article by Crain and skim through the commentaries. Choose one of the commentaries and write 1-2 page essay on what that commentary says and how it relates to what Crain says. Be prepared to talk about your essay in class, and what sorts of evidence could resolve the dispute

October 21, 2009: Syntactic Bootstrapping

Gleitman, L. R. (1990). The structural sources of verb meanings. *Language Acquisition*, 1, 3-55.

Assignment: TBA

October 28, 2009: Second Language Acquisition & Invented Languages

Goldin-Meadow, S., & Mylander, C. (1998). Spontaneous sign systems created by deaf children in two cultures. *Nature*, 391(6664), 279-281.

Senghas, A., & Coppola, M. (2001). Children creating language: how Nicaraguan sign language acquired a spatial grammar. *Psychol Sci*, 12(4), 323-328.

Newport, E. L. (1990). Maturation constraints on language learning. *Cognitive Science*, 14, 11-28.

Assignment: TBA

November 4, 2009 Object Permanence & Number

Baillargeon, R., Spelke, E. S., & Wasserman, S. (1985). Object permanence in five-month-old infants. *Cognition*, 20(3), 191-208.

Wynn, K. (1992). Addition and subtraction by human infants. *Nature*, 358, 749-750.
Feigenson, L., Carey, S., & Hauser, M. (2002). The representations underlying infants' choice of more: object files versus analog magnitudes. *Psychol Sci*, 13(2), 150-156.

Assignment: TBA

November 11, 2009 Intuitive psychology and Theory of mind

Wimmer, H., & Perner, J. (1983). Beliefs about beliefs: representation and constraining function of wrong beliefs in young children's understanding of deception.

Cognition, 13(1), 103-128.

Onishi, K. H., & Baillargeon, R. (2005). Do 15-month-old infants understand false beliefs? *Science*, 308(5719), 255-258.

Articles on autism, TBA. (Daniel Tammet?)

November 18, 2009 paper topic workshop.

No readings, but....

Assignment: Prepare a 5 minute discussion of your prospective final paper: what's the main idea in your paper? What sources will you use? What are the important open questions in the area of research you will be discussing? Where are you stuck?

November 25, 2009 Turkey physiology and behavior

Assignment: Dissection, subject to dietary preferences.

December 2 , 2009 Concepts, Causality & Biology

Mandler, J. M. (1992). How to build a baby: II. Conceptual primitives. *Psychol Rev*, 99(4), 587-604.

Sobel, D. M., Yoachim, C. M., Gopnik, A., Meltzoff, A. N., & Blumenthal, E. J. (2007). The Blicket Within: Preschoolers' Inferences About Insides and Causes. *J Cogn Dev*, 8(2), 159-182.

Rhodes, M., & Gelman, S. A. (2009). A developmental examination of the conceptual structure of animal, artifact, and human social categories across two cultural contexts. *Cogn Psychol*, 59(3), 244-274.

December 9, 2009 Class Presentations