Syllabus

Language from a developmental and comparative perspective

PhD Elective Course
Department of Cognitive Science
Central European University
Fall 2019, 2 credits

Class: Wednesdays 9:00 to 10:40, in room 103, Cognitive Science Department, October 6 utca, 7.

Instructors:
Ágnes Melinda Kovács (invited contributions by Csaba Pleh, Christope Heinz/ Thom Scott-Phillips)

Office hours: by appointment

Description:
This course introduces students to crucial issues in language acquisition as well as in questions regarding the human specificity and the language specificity of some of the involved processes. Some of the questions relate to the following topics: What are the features of language that are first learned by infants? What learning processes are in place early on to aid language acquisition? Are these processes specific to language and to humans? The course also aims to familiarize students with research methods used with infants and comparative research, including behavioral, eye-tracking and neuroimaging methods.

Learning Outcomes
By the end of the course, students should

- be familiar with findings in the research of early language acquisition and processing
- understand the difficulties of research with human infants, and comparative research
- have a basic grasp of the methods used with infants and other species, and
- be able to critically analyze research paradigms and theoretical proposals.

Evaluation:
Students will have to
§ attend classes,
§ read the assigned papers for each class,
§ present selected papers to the class, and
§ write an essay in a related question

Schedule and literature:

Sep 18
Introduction: The problem of language learning- (with Csaba Pleh)

Sep 25
Discriminating the phonetic features of language in infants and other species
- Ramus, F., Hauser, M. D., Miller, C., Morris, D. & Mehler, J. (2000). Language discrimination by human newborns and by cotton-top tamarin monkeys. *Science* 288, 349-51.
- Abboub N, Nazzi T, Gervain J. (2016). Prosodic grouping at birth. *Brain Lang*, *162*, 46-59.

Oct 2
Statistical regularity learning in humans and nonhumans
- Saffran, J. R., Aslin, R. N., & Newport, E. L. (1996). Statistical learning by 8-month-old infants. *Science*, *274,* 1926-1928.
- Toro, J.M., Nespor, M., & Gervain, J. (2016). Frequency-based organization of speech sequences in a non-human animal. *Cognition*, *146,* 1-7.

Oct 9
Rule learning in various species
- Marcus G, Vijayan S, Bandi Rao S, Vishton P. Rule learning by seven-month-old infants. Science. 1999; 283:77–80. [PubMed: 9872745]
- Murphy, R. A., Mondragon, E., & Murphy, V. A. (2008). Rule learning by rats. Science, 319 (5871), 1849–1851.

Oct 16
Hierarchical learning and compositionality
- Hauser, M. D., Chomsky, N., & Fitch, W. T. (2002). The faculty of language: What is it, who has it, and how did it evolve? *Science*, *298*, 1569-1579.
- Kovács, Á. M. & Endress, A.D. (2014). Hierarchical processing in 7-month-olds. *Infancy*, 19, 409-425, DOI: 10.1111/infa.12052

Oct 30
Word learning in humans and nonhumans
-Diesendruck, G., & Markson, L. (2001). Children's avoidance of lexical overlap: a pragmatic account. Developmental Psychology, 37 (5), 630–641.
-Kaminski, J., Call, J., & Fischer, J. (2004). Word learning in a domestic dog: Evidence for "fast mapping." *Science*, *304*, 1682–1683. http://dx.doi.org/10.1126/science.1097859

Nov 6
Lessons from sign-language learners and gesture use
-Goldin-Meadow, S., & Mylander, C. (1998). Spontaneous sign systems created by deaf children in two cultures. Nature, 391, 279–281.
-Langus, A., and Nespor, M. (2010). Cognitive systems struggling for order. Cogn. Psychol. 60, 291–318. doi: 10.1016/j.cogpsych.2010.01.004

Nov 13

Ostensive communication & the evolution of language (with Christophe Heinz and Thom Scott-Phillips)

- Scott-Phillips, T. C., Kirby, S., & Ritchie, G. R. S. (2009). Signalling signalhood and the emergence of communication. Cognition, 113(2), 226-233.
- Origgi, G., & Sperber, D. (2000). Evolution, communication, and the proper function of language. In P. Carruthers & A. Chamberlain (eds.), Evolution and the Human Mind: Language, Modularity and Social Cognition. (Cambridge University Press), 140-169.

Nov 20

Learning multiple regularities/languages simultaneously

-Kovács, Á. M. & Mehler, J (2009). Flexible learning of multiple speech structures in bilingual infants. *Science*, *325*. 611 – 612. doi:10.1126/science.1173947.
-Weiss, Daniel J., Gerfen, Chip and Mitchel, Aaron D.(2009)'Speech Segmentation in a Simulated Bilingual Environment: A Challenge for Statistical Learning?',Language Learning and Development,5:1,30 — 49

Nov 27

Language in the brain of different species

-Peña, M., Maki, A., Kovacic, D., Dehaene-Lambertz, G., Koizumi, H., Bouquet, F., & Mehler, J. (2003). Sounds and silence: an optical topography study of language recognition at birth. Proceedings of the National Academy of Sciences, 100 (20), 11702–11705.
-Andics A, Gácsi M, Faragó T, Kis A, Miklósi Á. Voice-sensitive regions in the dog and human brain are revealed by comparative fMRI. Current Biology. 2014;24(5):574–578. doi: 10.1016/j.cub.2014.01.058.

Dec 4

Language and other cognitive abilities/Wrap up