

Syllabus Infant Cognition

PhD Research Course

Department of Cognitive Science Central European University Fall 2022, 2 credits

Class: Wednesdays 11:00am to 12:40pm, in Room C503, Quellenstrasse 51, Vienna.

Introductory session: 11:00am on Wednesday, Sep 14 Room C503, Quellenstrasse 51, and Zoom

<https://us04web.zoom.us/j/8963983809?pwd=Rm9Vd3hzU0tOUVpucU45K2VZdVRwdz09>

Instructors:

Ágnes Melinda Kovács; György Gergely; Ernő Téglás; Jonathan Kominsky

Office hours: by appointment

Description:

This course introduces students to the ongoing research at the Cognitive Development Center. It provides an overview of contemporary theories and research techniques of cognitive development of human infants below 2 years of age, focusing on different domains of cognition. The course also involves laboratory practice to familiarize students with research techniques including behavioral, eye-tracking and neuroimaging methods.

Learning Outcomes

By the end of the course, students should

§ be familiar with recent findings in the research of infant cognition, and understand the difficulties of research with human infants,

§ have a basic grasp of the methods used with infants, and

§ be able to choose appropriate methods for research questions.

Evaluation:

Students will have to

- attend classes and lab practice,
- read the assigned papers for each class,
- present selected papers to the class, and
- write detailed Methods sections for two studies running in the CDC labs (submission deadline: January 4, 2023).

Date	Tutor	Topic	Literature
Sep 14	All	Intro Session	
Sep 21	Kominsky	The validity of infant methods	Packer, M. J., & Moreno-Dulcy, F. A. (2022). Theory of puppets?: A critique of the use of puppets as stimulus materials in psychological research with young children. <i>Cognitive Development, 61</i> , 101146. Kominsky, J. F., Lucca, K., Thomas, A. J., Frank, M. C., & Hamlin, J. K. (2022). Simplicity and validity in infant research. <i>Cognitive Development, 63</i> , 101213.
Sep 28	Téglás	Object tracking, object individuation	Wynn, K. & Chiang, W-C. (1998). Limits to infants' knowledge of objects: The case of magical appearance. <i>Psychological Science, 9</i> (6), 448-455.
Oct 5	Kovács	Acquiring linguistic structure	Marcus, G. F., Fernandes, K. J., & Johnson, S. P. (2007). Infant rule learning facilitated by speech. <i>Psychological Science, 18</i> (5), 387-391.
Oct 12	Gergely	Ostensive communication and Natural pedagogy	Gergely, G., & Jacob, P., (2012). Reasoning about Instrumental and Communicative Agency in Human Infancy. In J. B. Benson (Serial Ed.) & F. Xu & T. Kushnir

			(Vol. Eds.), <i>Rational Constructivism in Cognitive Development</i> (pp. 59–94). Elsevier Inc.: Academic Press. Gergely, G., & Csibra, G. (2006). Sylvia's recipe: The role of imitation and pedagogy in the transmission of cultural knowledge. (pp. 229-255) In: S. Levenson & N. Enfield (Eds.) <i>Roots of Human Sociality: Culture, Cognition, and Human Interaction</i> , Oxford: Berg Publishers.
Oct 19	Kovács	Information seeking	Lucca, K. & Wilbourn, M. P (2019). The what and the how: Information-seeking pointing gestures facilitate learning labels and functions. <i>Journal of Experimental Child Psychology</i> , 178, 417-436.
Oct 26	Kovács	Perspective taking	Kampis, D., Parise, E., Csibra, G., & Kovács, Á.M. (2015). Neural signatures for sustaining object representations attributed to others in preverbal human infants. <i>Proceedings of the Royal Society, London B</i> 282: 20151683.
Nov 2	Kovács & Gergely	Early ToM competencies	Kovács, Á. M., Téglás, E. & Csibra, G. (2021). Can infants adopt underspecified contents into attributed beliefs? Representational prerequisites of theory of mind. <i>Cognition</i> , 213, 104640. Tauzin, T., & Gergely, G. (2018). Communicative mind-reading in preverbal infants. <i>Scientific Reports</i> , 8, 9534.
Nov 9	Téglás	Probability understanding	Téglás, E., Vul, E. Girotto, V., Gonzalez, M., Tenenbaum, J.B, & Bonatti, L. L. (2011). Pure reasoning in 12-months-olds as probabilistic inference. <i>Science</i> , 332, 1054– 1059.
Nov 16	Téglás	Infant logic	Cesana-Arlotti, N., Kovacs, A. M. & Téglás, E. (2020). Infants recruit logic to learn about the social world. <i>Nature Communication</i> , 11, 5999.
Nov 23	Kominsky	Baby Newton (intuitive physics)	Kominsky, J.F., Wertz, A. E., Elsner, C., Wynn, K., & Keil, F. C. (2017). Categories and Constraints in Causal Perception. <i>Psychological Science</i> , 28(11), 1649-1662
Nov 30	Kominsky	Baby ontology/naive biology	Kominsky, J. F., Li, Y., & Carey, S. (2022). Infants' Attributions of Insides and Animacy in Causal Interactions. <i>Cognitive Science</i> , 46(1), e13087.
Dec 7	Gergely	Reason giving and action justification	Wu, Y., Schulz, L. E., Frank, M. C., & Gweon, H. (2021). Emotion as information in early social learning. <i>Current Directions in Psychological Science</i> . Egyed, Király, and Gergely, 2013, Communicating Shared Knowledge in Infancy, <i>Psych. Sci</i> .