

*Work in Progress Student Symposium 2026*

**SCHEDULE**

**SESSION 1** 9-10:30

Tal Landa (5 min)

Li Zihan (5 min)

Zsolt Mayer (10 min)

Zsolt Ternei (5 min)

Soma Zsebi (5 min)

**SESSION 2** 10:30-12:00

Miha Likar (10 min)

Hanna Asbóth(10 min)

Cintia Anna Nagy (10 min)

Rebeka Braxátor (5 min)

## SEMINAR ABSTRACTS

### **Tracking Meaning in Pretense: An N400 Study**

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Social cognition may play an important role in both language acquisition and the understanding of our communicative partners' intentions. In two electrophysiological experiments, one for adults, and one for toddlers (16-18 months), we aim to investigate whether the semantic system functions also as a mentalistic system. We are using pretense play paradigm, while focusing on the N400 component, a neural marker of semantic incongruity that is also sensitive to social contexts, such as tracking others' false beliefs. We plan to measure brain responses to labels that match an object, match what it was pretended to be in a preceding pretense-play stipulation, or are entirely erroneous. Using this method, we hope to gain insight into whether babies' semantic system represents the intended meanings of social partners, as well as to learn more on the nature of language processing in that kind of social context.

### **Individuals' hedonic editing intensity: exploring the influencing factors**

Li Zihan<sup>1</sup>

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This research explores "hedonic editing," a cognitive strategy where individuals mentally reorganize multiple outcomes to maximize pleasure or minimize pain. While grounded in prospect theory's S-shaped value function, actual behavioral preferences often deviate from theoretical ideals. This study addresses a critical literature gap by quantifying the intensity of hedonic editing effects and examining individual differences. Preliminary findings from over 200 participants indicate that hedonic editing intensity is significantly negatively correlated with emotional flexibility. Higher emotional flexibility appears to promote more rational decision-making, thereby reducing framing biases. Future PhD research will establish a participant-specific quantification criterion, conduct cross-cultural comparisons between Eastern and Western populations, and investigate external modulators like temporal spans.

## **Seven-year-olds' contrastive inferences in a game-like situation**

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2- *Eötvös Loránd University, Hungary; Free University of Berlin, Germany*

Modern pragmatic theories stress that context shapes inferences about meaning (Grice, 1975). Listeners expect optimal informativeness: “Take the sharp pencil!” is underinformative if several sharp pencils exist, but overinformative if only one does, prompting contrastive inferences. While such inferences appear implicitly in preschoolers, seven-year-olds struggle on explicit tasks (Kronmüller et al., 2014). This study examines this gap, focusing on executive functions (EF). We adapted Kronmüller et al.’s paradigm to reduce EF demands. In a preregistered study, 26 seven-year-olds are tested at the ELTE Babylab. Children hear utterances like “Take the brown rabbit,” optimal only if another rabbit is present. Our Modified Contrastive condition highlights contrast via two properties (colour, size). EF is measured with standard tests. Preliminary results suggest success in the modified but not the original task, indicating EF may mask pragmatic competence and reframing explicit–implicit differences as effects of social context.

Grice, H. P. (1975). *Logic and Conversation*. *Speech Acts*, 41–58.

[https://doi.org/10.1163/9789004368811\\_003](https://doi.org/10.1163/9789004368811_003) Kronmüller, E., Morisseau, T., & Noveck, I. A.

(2014). Show me the pragmatic contribution: a developmental investigation of contrastive inference. *Journal of Child Language*, 41(5), 985–1014.

<https://doi.org/10.1017/S0305000913000263>

## **The effect of immersion and embodiment on spatial memory and navigation**

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While virtual environments are increasing in popularity in spatial navigation research, the effects of the presented perspectives on cognitive performance are not yet well understood. While first-person perspectives (1PP) are thought to promote egocentric processing, third-person perspectives (3PP) might attenuate egocentric processing and promote a shift towards allocentric reference frames. Since spatial memory and navigation are heavily dependent on the interplay between egocentric and allocentric reference frames, we aim to assess the effects of these perspectives in a virtual environment, together with electrophysiological (EEG, sEMG) and eye tracking measurements. We predict higher performance in the 1PP as we expect the sense of embodiment to contribute to the salience of the stimuli and the environment. Medial temporal theta activity is also expected to be more robust in the 1PP, with pupil dilation being less prominent compared to 3PP due to reduced cognitive load. We aim to use gluteal sEMG recordings to estimate the measure of embodiment, the activation frequency of which is expected to be higher in the 1PP.

## **The role of emotions in Virtual Reality based Cognitive Testing**

Soma Zsebi, János Zsuffa MD PhD, Cecilia Sik-Lányi, Renáta Cserjési

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Virtual Reality (VR) offers an immersive and controllable setting that facilitates the evaluation of cognitive performance while concurrently manipulating the affective context. Despite the development of numerous VR-based cognitive tasks, their complexity complicates the separation of cognitive demands from emotional influences, especially when contrasting VR assessments with traditional paper-and-pencil tasks. To explore how emotional context influences cognitive performance, we constructed a 1:1 virtual replica of the Corsi Block-Tapping Task, integrating the task within neutral, negative, and positive emotional environments. Elderly participants engaged in the VR-based task across all three emotional conditions in both forward and backward formats. We evaluated task performance alongside emotional responses, anxiety and depression, cybersickness. Preliminary findings reveal emotional induction hindered performance in the cognitively less demanding forward condition, while enhancing performance in the more challenging backward condition. Cybersickness did not influence cognitive performance. Depression had a minor effect on performance, whereas anxiety didn't significantly impact outcomes.

## **What Drives Mind Wandering in Daily Life? Investigating The Interplay of Internal States and External Demands**

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What determines whether our minds stay on task or drift away during daily activities? We investigated how various state-level factors jointly predict MW and its deliberateness in daily life, focusing especially on the interaction of attentional demands and alertness. MW probability was robustly reduced by attentional demands across all levels of alertness. Importantly, the association of MW probability with alertness exhibited a crossover effect depending on attentional demands. In less demanding tasks, higher alertness was associated with substantially increased MW probability, consistent with the reallocation of attentional resources. This effect progressively attenuated as demands increased, and reversed at high demand levels, where increased alertness produced a small but significant reduction in MW compared to low alertness. These findings suggest that MW reflects qualitatively different processes depending on task

context, namely deliberate attentional reallocation under undemanding conditions and susceptibility to executive control failure when demands are high.

### **A possible advantage of recruiting non-academic student samples: Testing the effect of sample heterogeneity on the reliability of executive function measurements**

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Adequate reliability is critical in correlational analysis, as low reliability attenuates the observed correlation. However, commonly used executive function tasks frequently show inadequate reliability, raising the need to explore methods to enhance reliability. As reliability can be defined as the magnitude of variance relative to measurement noise, enhancing reliability can be achieved by increasing individual variance through recruiting a sample more heterogeneous along the measured property. The present study explored how the reliability of a task varies between a relatively homogeneous and heterogeneous sample by recruiting a university (relatively homogenous) and a highschool (relatively more heterogeneous) sample. To calculate reliability, a split-half method was used with bootstrapping to obtain a robust point and interval estimate of reliability with applying multiple outlier filtering methods. The results showed that task reliability strongly depends on the outlier filtering method, suggesting that a more heterogeneous sample does not necessarily provide higher reliability than a more homogeneous one.

### **Possibilities of transfer across stimulus–response mappings: the role of specific sequence and structure**

Cintia Anna Nagy<sup>1</sup>, Orsolya Pesthy<sup>2,4</sup>, Teodóra Vékony<sup>3</sup>, Flóra Hann<sup>1,4,5</sup>, Eszter Tóth-Fáber<sup>1,2</sup>, Bianka Brezóczki<sup>1,4,5</sup>, Dezső Németh<sup>2,3,6</sup>

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Adaptive behaviour depends not only on learning environmental regularities but also on applying this knowledge in new contexts. Prior research suggests statistical learning can transfer across tasks even when several parameters change, yet it remains unclear what transfers: specific sequence knowledge or understanding of the underlying statistical structure. To investigate, participants completed two sessions 24 hours apart, performing statistical learning tasks with different stimulus–response mappings. In the sequence transfer group, the same hidden sequence appeared in both sessions. In the structure transfer group, participants learned different sequences while the statistical structure of the task remained the same. A control group encountered a sequence only in the second session. Results showed that neither sequence nor structural knowledge improved performance when mappings changed, although performance differed across task types.

### **Language Acquisition: A comparison of Social and Translation Learning in Second Language Acquisition**

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The aim of this study is to compare the effectiveness of social learning and translation-based learning in second language (L2) acquisition. As social learning resembles first language (L1) acquisition, we hypothesize that this method leads to more native-like proficiency. In contrast, translation-based learning, which remains common in L2 teaching, may result in cross-linguistic interference. To test this hypothesis, participants learn an unfamiliar grammatical structure in an L2 using one of two methods: videos depicting social interaction or the translation of the sentences. The video condition is designed to provide meaningful social context, whereas the translation condition emphasizes direct equivalence between languages. Following the learning phase, participants' understanding of the novel grammar is assessed using new sentences. The findings of this study will contribute to a better understanding of how different learning approaches impact L2 grammatical acquisition.