

LAMiNATE Talks

Spring 2024

LAMiNATE Talks is a seminar series that aims to foster interdisciplinary discussion on language acquisition, multilingualism and language teaching. Talks are held every other Tuesday afternoon 15.15-16.30 CET, with participant from Lund and beyond.

The spring Talks series starts on 13 February and will host 8 events with presentations given both by LAMiNATE members at Lund University and by international colleagues. The talks will continue in the virtual modality. Half of the talks will be structured into thematic blocks:

Theme 1: Development of Reference Tracking

Theme 2: Neural Foundations for the Flexible Switching Between Languages



February 13

Panos Athanasopoulos (Lund University)

Conceptual integration in bilingual memory

Some concepts have direct translation equivalents but most can only be partially translated, and some cannot be translated word for word and require less codable, periphrastic means to convey the same meaning in the other language (De Groot, 2000; Kemmerer, 2019). How does the bilingual mind represent language-specific concepts? One way to investigate this question is to vary the language context of operation and then trace observable signs of conceptual transfer, both forward (L1 to L2) and reverse (L2 to L1). Here I synthesize recent findings from two conceptual domains, namely event endpoints (related to grammatical aspect) and event frames (related to path/manner encoding). Findings from cognitive categorization tasks are in line with previous studies showing effects of language experimental context (Bylund & Athanasopoulos, 2017; Emmorey, 2019; Kersten et al., 2010; Lai et al., 2013), but qualify these findings in an important way. While cognitive categorisation can appear to be language-selective, as indexed by effects of language context and verbal interference, the overall categorisation patterns do not resemble those of monolinguals of either language, showing evidence in favour of partial integration of language-specific conceptual representations.

27 February

Annick De Houwer (Harmonious Bilingualism Network, HaBilNet)

Language diversity in our schools: research needs and pedagogical approaches

In today's world, needing to learn and use several languages is of utmost concern and importance to many. Both emergent and expert bilingualism are thus very frequent and need to be studied even more than they already are. We especially need an increased focus on the communicative needs and well-being of the many bilingual and emergent bilingual children in our (pre)schools. Children in European schools have a need to learn to speak the societal/school language. Simultaneously, they need to continue learning any other language(s) they might be hearing at home. There often is a clash between those needs, which negatively affects both children and families' well-being. This talk demonstrates and explains the problem and offers ways forward in both research and teaching, so that all children who hear a non-societal language at home may develop harmonious bilingualism.

Theme 1:

Some aspects affecting the development of reference tracking

Organizer: Maria Graziano

Referential expressions are among the linguistic devices that allow to achieve cohesion in discourse. They are used to introduce and refer back to entities in discourse and include nouns, pronouns, demonstratives, zero anaphora. The choice of the appropriate device depends on several aspects, such as the salience of the entities, the information status of the referent (new vs given). Developmental studies on the ability to use different types of anaphoric devices have shown that this skill is the result of a gradual process, with conflicting opinions on its timeline. Studies have also shown that the mastery of referential expressions can be influenced by a number of factors, such as language specificity and contextual constraints.

The two talks in this theme will discuss two of such factors: Josefin Lindgren (Uppsala University) & Jorrig Vogels (University of Groningen) will focus on how presenting (Swedish) children with a model story affects their choice of referential expressions in their narratives. Jennifer Arnold (University of North Carolina, Chapel Hill), will examine which patterns influence speakers' and learners' interpretation of ambiguous pronouns.

March 26

Josefin Lindgren (Uppsala University) & **Jorrig Vogels** (University of Groningen)

The effect of listening to a model story on Swedish-speaking children's choice of referring expression in narratives

Two common elicitation methods to measure children's narrative skills are *story retelling*, where children listen to a model story that they retell, and *story generation*, where children are not provided with a model. However, it is largely unknown how the task influences the quality of referential links throughout the story. In this talk, we discuss two possible hypotheses: First, listening to a model story may have a positive influence on the quality of the referential links, in line with results for other narrative skills. In this case, we would expect referring expressions in the retelling task to be better matched to the referent's salience level (roughly speaking: indefinite NPs for referent introduction, definite NPs for referent reintroduction, and pronouns for referent maintenance). Second, retelling may cause a familiarity effect on referring expression production. That is, the model story causes the story characters to become salient to the child before the narration starts, which may lead to referring expressions signaling a higher salience level than is appropriate for the addressee. If this is the case, we would expect for example an increase in definite NPs for referent introduction and/or use of pronouns for referent reintroduction. We present preliminary results of a study testing these predictions, in which we elicited two narratives from 74 Swedish-speaking children aged 6 and 8, one using a telling task and one using a retelling task.

April 9

Jennifer Arnold (University of North Carolina at Chapel Hill)

Discourse level adaptation: what categories are important?

Language processing is adaptive; even adults adjust their biases to the most frequent structures in the local context (e.g., Thothathiri & Snedeker, 2008; Fine et al., 2013). Such adaptation even occurs at the discourse level, where the interpretation of ambiguous pronouns is biased toward recently encountered patterns (Kaiser, 2009; Contemori, 2019). Johnson & Arnold (2023) exposed participants to multiple stories with pronouns that either always referred to the prior subject (Subject exposure list: Ana went hiking with Matt. She...) or the prior prepositional object (Nonsubject exposure list: Ana went hiking with Matt. He...). This exposure guided interpretation of ambiguous pronouns, which were assigned more often to the subject in the subject-exposure list than the nonsubject-exposure list. This shows that people adapt to the most frequent type of pronoun-antecedent relation in the local context.

But an open question is how the system figures out which of many possible patterns to adapt to. In a series of experiments, we systematically test whether adaptation only affects the interpretation of very similar contexts, or whether it generalizes across anaphor and antecedent types. Results suggest that discourse comprehension involves the activation of pronoun-antecedent structures. These representations pool input across different third person anaphoric pronouns (but not names or indexical pronouns), and they pool input across different predicate types for the purpose of classifying antecedents. People track the frequency of these structures and modulate processing biases in the direction of locally frequent patterns; we hypothesize that similar learning may underlie the development of discourse processing biases.

Theme 2

Neural foundations for the flexible switching between languages

Organizer: Roger Johansson

The adept skill of seamlessly switching between two or multiple languages is a hallmark of early simultaneous bilinguals and multilingual individuals. Existing research has firmly established that multilingualism exerts a notable influence on the development of fundamental brain structures involved in cognitive control and memory processes. However, a long-standing debate revolves around the functional relationship between multilingual competence and broader cognitive capabilities, including mental flexibility, task switching, and executive control. Ongoing scholarly discussions also center on the intricate interactions between these cognitive systems and the flexible switching between languages, encompassing both rapid code switching and more deliberate, controlled language transitions.

While recent advancements in neurocognitive studies have contributed valuable insights into various language systems and the brain's memory and cognitive control systems, the underlying neurocognitive mechanisms subserving the rapid up- and downregulation of different language systems during switches between them remain relatively underexplored. In line with these considerations, the overarching goal of this theme is to offer an updated perspective on studies and methodologies, with the objective to broaden and enhance our current understanding of the neural dynamics and underlying mechanisms associated with the intricate processes involved in switching between languages.

May 7

Roger Johansson (Lund University)

Neurocognitive methods to capture the temporal dynamics in switching between language systems

In the present talk, we will introduce a methodological approach, incorporating multivariate pattern analysis (MVPA) of EEG and eye-tracking techniques. In our previous research, we have successfully utilized this approach to study memory retrieval and mnemonic interference control. Here, we propose how these techniques could be adapted to investigate the switching between language systems in connection with related memory and cognitive control systems.

Our methodological approach utilizes techniques with high temporal resolution. This allows us to capture the temporal dynamics of content-specific neural representations and connect them to distinct cognitive activities, such as memory retrieval and language decoding. Implementing machine learning techniques, MVPA employs classifiers trained to decode specific mental states from distributed patterns of brain activity. These classifiers can then reveal the content of specific mental representations during memory formation or retrieval. For instance, if the visual content of a retrieved memory trace is a human face or an inanimate object. While MVPA has primarily been utilized on MR-data over longer time periods, recent approaches leverage high-temporal resolution EEG to track the dynamic activation of mental representations over time. Members of our research team have been pioneering such techniques in studies of episodic memory and cognitive control. Here, we will present a proposal for applying our approach to decode specific language systems in real-time (e.g., L1 vs L2), and how capturing such dynamics could address fundamental questions concerning how the brain's memory and cognitive control systems interact with the switching between language systems.

May 21

Marianne Gullberg & Jonas Granfeldt (Lund University)

RJ Programme Introduction: Transdisciplinary Approaches to Learning, Acquisition, Multilingualism (TEAM)

Learning and speaking other languages provides new opportunities in life. However, achieving skill in a new language and multilingual ease is a slow and meandering process, and harder for some than for others. Why should this be? Surprisingly, research does not yet provide clear answers to that question. Language acquisition and multilingualism are complex phenomena, and yet are often studied as if single factors (e.g. age, socioeconomic status) could explain all variation found. Moreover, these phenomena are often studied in separate disciplines with little mutual contact, leading to a fragmentation of knowledge. This partly explains the lack of clear answers. The research programme TEAM will therefore apply a transdisciplinary approach to study the complex interaction between linguistic, cognitive, neurological and social prerequisites that underpin language acquisition and multilingualism at the level of the individual and of social interaction. Empirically, we will examine language production and comprehension, motivation and linguistic social activities in children and adults, in typical and atypical populations, speaking one or several languages. Both behavioural and neurocognitive methods are applied. The ultimate goal is to propose an empirically based integrated, transdisciplinary model of variation in acquisition and multilingualism to generate new hypotheses and guide applied and translational research forward.