Séminaire de recherche en Psycholinguistique Programme des invités externes 2018-2019

(Update : 16.05.2019)

- Monday 1st October 2018 (PA28_126): Prof **Daniel Swingley** (University of Pennsylvania, Department of Psychology)
Babies learning words

- Monday 29th October 2018 (PA28_126): Prof **Sabine Stoll** (University of Zürich, Department of Comparative Linguistics)
How to find universal mechanisms in first language acquisition?
Abstract:
One of the most burning questions in cognitive science has yet to be answered: what cognitive mechanisms enable children to learn a language? While considerable progress has been made with regard to specific mechanisms in specific languages, what remains as one of the biggest challenges is the extreme flexibility that children show when acquiring any one of the approximately 7000 languages of the world. Statistical learning processes and imitation strategies are very likely to play a key role in acquisition. But what has never been explored systematically is to what extent these processes and strategies are indeed used universally, i.e. across very different languages and structures, and how they fare when confronted with languages that differ substantially from the European languages that have almost exclusively been the focus of past research. In this talk I present a new approach called the Maximum-Diversity approach to approach this issue. The reasoning behind a maximum-diversity sample of languages is that if we find learning mechanisms in children and/or patterns in the input that hold for the most diverse languages we can assume that these are universal mechanisms. In this talk I will present a number of universal input patterns we found in longitudinal data of 10 maximally diverse languages (ACQDIV database).

- Monday 18th February 2019 (PA28_126) : **Dr Suzanne Jongman** (Radboud University, Max Planck Institute for Psycholinguistics)
The role of attention in word production and comprehension
Abstract:
Both language production and comprehension have been shown to be capacity demanding (Ferreira & Pashler, 2002; Zhang & Samuel, 2018). The question arises what type of attention, and how much of it, is needed for fluent production and successful comprehension. Furthermore, do certain aspects of the production and comprehension process require more attention than others? In several experiments - using behavioural methods, eye-tracking, and EEG - I have tried to answer these questions. In a first set of studies, I have looked at word production and alerting, the ability to achieve and maintain alertness. I found that alerting is related to the speed of word production, this holds for both brief and prolonged (sustained) alertness. Moreover, alertness seems to be necessary throughout the entire process of word production. In a second set of studies I focused on both production and comprehension and

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whether they require attention to a similar degree. For instance, using a dual-task paradigm, I have shown that combining production and comprehension interferes with speaking, but does not significantly impair listening.

- Monday 4th March 2019 (M5189): **Sophie Brandon** (University of Geneva, Department of Education Sciences)
  Soutenir les apprentissages des jeunes adultes migrants en difficulté dans la formation secondaire

Abstract:

Lors de leur arrivée en Suisse, les élèves migrants doivent rapidement intégrer les nouvelles valeurs et pratiques scolaires appliquées dans le pays d'accueil. En effet, au-delà de la nouvelle langue à apprendre, ils doivent se familiariser à une culture scolaire parfois très différente de celle qu'ils ont connue auparavant. Pour certains, la scolarisation dans leur pays a été quasi-inexistante et ils présentent alors des difficultés d'apprentissage importantes, entravant leur parcours scolaire puis professionnel. Suite aux préoccupations des professionnels de l'ACCES II, encadrant des jeunes adultes allophones (dont un certain nombre provient de pays en guerre), et leur demande de remédier aux difficultés d'ordre (méta-)cognitives et motivationnelles, notre équipe a mené un projet d'intervention avec plusieurs de leurs élèves sur une durée de 5 mois, à raison de deux fois par semaine. Notre intervention s'est notament basée sur les pratiques employées à l'Atelier d'Apprentissage de l'Université de Genève et avait pour objectif principal de développer une démarche de résolution de problème et des stratégies d'apprentissage efficaces.

- Monday 15th April 2019 (PA28_126): Prof **Marilyn Vihman** (University of York, Department of Language and Linguistic Science)
  The effect of sound patterns on the lexicon: Adult and child language

Abstract :

Child phonological templates are whole-word patterns that adapt challenging targets to a partially fixed or pre-set schema rooted in the child's repertoire of vocal patterns. Templates provide an implicit means to increase the diversity of a child's lexical expression while articulatory skills lag behind emergent understanding of referential language and communication. Similarly implicit extension of whole-word patterns to create innovative, productive forms can be observed in adult word formation (e.g., French and Estonian short forms and English rhyming compounds). In other cases the connotations of a small set of words can be seen to spread to related forms, creating a phonaestheme, a form-meaning cluster that resists full grammatical analysis.

Although adult templates have been identified in core grammars, especially within the framework of Prosodic Morphology, the innovative forms most reminiscent of child templates are observed in 'language at play', or marginal areas of word derivation, including the semi-grammatical phonaesthemes. We note the differences in function between child and adult templates: The adult forms are mainly found in colloquial speech, bearing affective connotations and often serving to mark group identity, whereas child templates, which are neither 'playful' nor social markers, are part of the developmental process and bear no direct relation to adult word-formation.

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- Monday 27th May 2019 (PA28_126) : Asst. Prof. **Stephanie Riès** (San Diego State University, Laboratory for the Brain Dynamics of Language)
Brain dynamics supporting lexical retrieval in language production
Lexical retrieval is the process by which we activate and select lexical representations as we speak. Several brain regions have been proposed to be engaged in lexical retrieval, including subregions of the left prefrontal cortex (LPFC) and left temporal cortex (LTC). However, the precise role of these brain regions in lexical activation and selection and how they interact to support lexical retrieval are largely unknown. I will present results from intracranial electrophysiological studies and neuropsychological studies beginning to shed light on these issues. These results support the hypotheses that the posterior LTC can support both lexical activation and selection, and that the left PFC becomes necessary for lexical selection when interference between semantically-related alternatives is increased. Using evidence accumulation modelling of reaction time distributions suggests that different computational mechanisms are affected when patients with LPFC versus LTC stroke-induced lesions perform lexical retrieval. Finally using a graph inference method with iEEG data acquired during picture naming, we show that distant left frontal and temporal brain regions as well as within-lobe regions are functionally connected during word retrieval in picture naming and that connection strength is variable between pairs of brain regions. In addition, the density of the connectivity between regions changes depending on semantic context and repetition. In particular, these results suggest that the way the left inferior frontal gyrus and the left superior frontal gyrus interact in lexical retrieval involves larger neuronal recruitment as lexical selection becomes more and more hampered.

- Monday 3rd June 2019 (PA28_126) : Dr **Vitoria Piai** (Radboud University, Donders Centre for Cognition)
Interfering and facilitating contexts in spoken word production
When speaking, the conceptual content of the message to be expressed constrains possible word candidates, thereby facilitating lexical access and word production. Conversely, lexical selection is assumed to be a competitive process, with semantically related words causing more interference in word production. I will present a number of studies examining these facilitatory and interfering effects using various methodologies, including electrophysiology, non-invasive brain stimulation, and behavioural analyses of individuals with brain lesions, with a particular focus on the roles of the temporal and prefrontal cortex.

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