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09:30–10:30

How to interpret variable input

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Generative approaches to language acquisition study how grammar (the mental symbolic system that underlies human language) grows in the minds of children. Despite their great diversity (Longobardi, 2018), human languages exist within a limited space of formal possibilities. In this presentation I review recent work on the acquisition of variable phenomena, exploring a potential integration of developmental sociolinguistics into a generative framework.

There is growing consensus that grammar grows from the interaction between statistical learning and innate structural biases that support inferences (i.e., rules; Yang, 2016) about sentences poorly represented in experience (Lidz & Gagliardi, 2015). Under minimalist assumptions, what children learn is the encyclopedic and functional lexicon of a language (Chomsky 2001), through their visible distributions (Gleitman et al., 2005). Distributional learning gives us categories, but is it sufficient to guide how children learn the interpretation of those categories? Are further constraints required? The literature articulates a range of what I will call contrast inferences. These are implicit assumptions that listeners and learners make about the expressive choices of speakers. Contrast inferences include various lexical learning biases (Mutual exclusivity, Marchman & Wachtel, 1988; Principle of contrast, Clark, 1993; Morphological Uniqueness, Pinker, 1984; etc.) as well as semantics and pragmatic principles such as Maximize resuppositions (Heim, 1982), scalar implicatures (Schlenker 2012), etc.

I rely on three types of data from recent work to explore the role that learning and contrast inferences play in incorporating noisy and sparse input into the developing grammar:

- I. Data on language phenomena with scarce and opaque input, including recursive nominal modification (Pérez-Leroux, Roberge, & Brunner, to appear), and undetected ambient variability in Korean scope (Han, Musolino and Lidz 2016))
- II. Data on phenomena undergoing sociolinguistic variation and diachronic change, including children's incrementation of epistemic reading of modals (*the cat must be fed ... because he is hungry vs. because he is not hungry*, Cournane 2016, Cournane & Pérez-Leroux, 2020), the selection of English possessives (*the tail of the cat/the cat's tail*; Hall & Pérez-Leroux, 2022), and form selection in future contexts (*the boy will/is going to/can go down the slide*; Hall & Pérez-Leroux, in prep).
- III. Studies examining the impact of phonetic variability on the acquisition of functional categories, including plurals across dialects of Spanish (Miller & Schmitt, 2010) and gender agreement in Spanish-English bilinguals (Pérez-Leroux et al, 2022).

In the course of acquisition, children map formal contrasts in a layered process. Contrast inferences constrain how children interpret distributional variability in grammatical, discursive, or social terms. Distributional learning yields categories and paradigmatic contrasts; it also supports learning meanings, but additional constraints are necessary. Once differences in elements in related distributions are detected, contrasts are mapped at different levels of linguistic knowledge: lexicon (different words), grammar (different categories/sentences), truth functional semantics (different truth values relative to the world), perspectival semantics (nontruth functional distinctions that reflect speaker perspectives on a situation or referent),

variation typical of non-standard German and language change. I argue that German verb placement (verb second and verb final, see 1a/b) is very stable in early bilinguals, even in contexts of minority language acquisition over several generations, as long as language exposure is not interrupted in childhood. Contrary, late learners and early bilinguals who experienced prolonged loss of exposure to German in childhood, show similar effects of unstable knowledge (with frequent verb third and non-final placement in subordinate clauses and complex predicates, see 2a/b). Furthermore, apparent non-final placement in verb clusters in the speech of Hunsrück heritage bilinguals (see 3) is the outcome of dialectal variation, and not an instance of language attrition.

- (1) a. Und am Ende **flüchten** der Mann und die Frau.
and at+the end flee the man and the woman
b. Als der Mann dann in die Konditorei reingegangen **ist**,
when the man then in the pastry shop entered has (Oliveira & Flores, in preparation)
- (2) a. Dort ich **spreche** nur Deutsch.
there I spoke only German
b. ... damit sie **kann** essen.
so that she can eat (Flores, 2010)
- (3) ..., wo net **het** défa passiera .
where not had should happened (Flores, Rinke & Wagner, 2022).

References

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