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11:30–12:00

Growing trees: How children climb the syntactic tree

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In the beginning of their language acquisition, children do not master yet the whole array of syntactic structures. With time, they acquire more and more syntactic structures. In my talk I will suggest that as the children grow, their syntactic tree grows as well, and I will show that the stages of the growing trees follow closely the cartographic structure of the tree.
I will mainly present a recent work done in collaboration with Adriana Belletti and Luigi Rizzi (Friedmann, Belletti, & Rizzi, 2021), on the basis of data collected by Friedmann and Reznick (2021). The analysis combines:
a. an analysis of the spontaneous speech of 65 typically developing Hebrew-acquiring children aged 1;6-6;1 (27,696 utterances).
b. the cartography of the clausal structure, drawing articulated maps of different zones of the syntactic tree, in particular of the left periphery (Rizzi 1997).
c. a Guttman scale approach (Guttman 1944), which captures implicational dependencies between grammatical properties in acquisition.

Based on the data analysis results, we suggest a **growing trees approach** for capturing the acquisition of syntactic structures. The heart of our account is that stages of acquisition follow the geometry of the syntactic tree, with early stages corresponding to small portions of the adult syntactic tree, which keeps growing bottom-up with the growth of the child. The lower parts of the tree are acquired first, and higher parts are acquired later (for previous bottom-up acquisition accounts cf. Radford 1990; 1996; Guilfoyle & Noonan 1992; Clahsen 1990/1991; Clahsen et al. 1993/1994; 1996, Armon-Lotem 2008).

The three stages of the growing tree that we suggest are:
1) a stage solely involving the IP structure, including the lexical and inflectional layers, including **A-movement** of the object of unaccusative verbs to subject position, , alongside SV sentences with inflected unergative/transitive verbs, but no manifestation of left peripheral positions (stabilizing at age 1;10);
2) a stage in which the lower field of the left periphery is acquired, including finiteness (Fin), Mod (attracting preposed adverbials) and Q (possibly identical to Foc). This allows for the acquisition of **root argument Wh-questions and some adjunct Wh-questions, yes/no questions**, and declaratives with **preposed adverbs** (stabilizing at age 2;5);
3) a stage in which the higher field of the left periphery is acquired, including Top, Int (hosting the embedded question marker *if* and *why*) and Force (introducing all finite embedded clauses, including relatives). This allows for the acquisition of **relative clauses, topicalization**, and ***why* questions** (main and embedded); importantly, this stage is concomitant to the appearance of **finite clause embedding**, of both declaratives and interrogatives (stabilizing 3;3-4;0).
Time of appearance of a given structure varied significantly between children. Nonetheless, the relative order of acquisition of the various structures remained constant across children, and created a perfect Guttman Scale. We suggest that these stages are fully defined in terms of the growth of the cartographic tree.

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