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Structure and acquisition of the left periphery: the growing trees approach

Abstract

Cartographic research raises issues for the study of language acquisition in at least two respects:

1. From the viewpoint of the logical problem of language acquisition and the goal of explanatory adequacy: how can such complex structural configurations be acquired by the language learner?
2. From the viewpoint of developmental psycholinguistics: What is the developmental trajectory and the temporal dimension of the acquisition of the fine structures identified in cartographic research? Do the highly articulated structural maps arrived at in this line of research offer any guidance to the study of language development?

In this talk I will briefly discuss the first point and then focus on the second in a detailed manner. In work conducted jointly with Adriana Belletti (University of Siena) and Naama Friedmann (Tel Aviv University) we have started addressing this point (Friedmann, Belletti & Rizzi 2021). As an initial case study, we have looked at the developmental course of the acquisition of the left periphery of the clause in Hebrew, by capitalizing on 1. A map of the left periphery in this language, also based on the existing literature (Shlonsky 2013), and 2. A cross-sectional corpus study conducted by Friedmann & Reznik (2017), on individual recording of 56 children ranging from age 1.6 to age 6.1, which we have extended in various ways.

The key hypothesis we made to connect cartography and development is very simple: children acquire complex structures bottom up, first acquiring lower zones of the tree, and then progressively adding more external zones. The structural succession of layers in the map reflects the temporal trajectory of development, in that no internal zone is skipped in the growth of the mental tree. This idea connects to old approaches to structural growth from simpler to more complex structures (e.g., Radford 1990, Clahsen 1990/1, Rizzi 1993/4), but innovates in taking full advantage of the details of cartographic maps.

This line of analysis leads to the identification of three stages in the acquisition of the left periphery (LP) in Hebrew:

1. A stage in which no manifestation of the LP is observed;
2. A stage with argument and adjunct wh-questions (but not with *why*) and adverb preposing is found, but with no other manifestations of LP constructions:
3. A stage in which the other major LP constructions are found: relatives, *why* questions, topicalization, and clausal embedding.

These temporal stages match the structural zones that constitute the LP tree. These findings confirm the bottom-up acquisition mode, and raise important theoretical and empirical issues which will be addressed in the talk.