Family name, Given name
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Summary of Proposal

The summary of your research proposal should indicate clearly the problem or issue to be addressed, the potential contribution of the research both in terms of the advancement of knowledge and of the wider social benefit, etc.

Given that syntactic complexity is a fundamental characteristic of human language, it is astonishing how little we know about its development in children. We propose to investigate child acquisition of syntactic complexity by focusing on the emergence of the ability to produce complex noun phrases (NPs) as (1), consisting of recursively embedded NPs.

(1) The baby with the woman with the flowers.

By the age of three most children possess the ingredients necessary for phrasal elaboration, but do not become active users of complex language for a few years. In the NP domain, young children produce primarily simple, unmodified NPs until after the age of five. This remarkable gap is not easily explained by limitations in sentence length, as the mean length of utterance of a typical five-year-old approximates that of adults'. Recursive NPs, defined here as iterative NP embedding, as in (1), are infrequent in adult speech, but required under referential conditions. Experimental elicitation shows that adults and some five-year-olds can use them, but younger children simply do not.

It is crucial to study how structural complexity develops. Current strategies for assessing grammatical development fail to tap into structural complexity because they only measure utterance length and diversity of grammatical markers or constructions. Phrases can have many words yet be simple to use and easy to acquire (compare (1) to a coordinate structure "The baby, the woman and the flowers"). Recursive structures allow us to examine the development of structural complexity in isolation. Compared to first level NP embedding ("the woman with the hat"), recursive (second level embedding) NPs do not require a child to learn additional grammatical terms. However, children do not automatically acquire second level embedding after learning first level embedding.

The formal acquisition literature has formulated developmental complexity in terms of movement operations, without addressing how phrasal complexity itself develops, and what type of learnability problems it represents. Recursive modification has a universal dimension (the fundamental structure-building operations), and a cross-linguistic dimension (differences in the categories that allow hierarchical embedding of structures of the same category). Such variation is not accounted for in current formal assumptions about phrase structure, and is presently at the center of intense debate within linguistics and the other cognitive sciences concerning the universality and learnability of language. Ongoing data collection from English reveals asymmetries in the acquisition of various constructions, but also provides data that support the development of a specific, unified recursive ability in children. To understand the individual and language factors that are at play in the acquisition of recursive structures we need more data, across a range of languages, targeting additional constructions.

The goals of this project are threefold. We seek 1) to build the first comparative database on the acquisition of complex NP recursion in five languages (English, French, Spanish, Japanese, German); 2) to build a model of how individual child factors determine acquisition of the ability to produce complex NPs, using developmental data from English-speaking children; and 3) to develop a framework for addressing the learnability problem of structural complexity. The impact of this project is theoretical and applied. A recursion-based approach can contribute to our understanding of the remarkable human ability for language by shedding light on children's acquisition of complex structures. It will also provide clinical professionals and child researchers with an alternative strategy for assessing linguistic complexity.