# Complexity in syntax: the case of recursive modification in French L1

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This paper investigates nominal recursive modification (RM) in the L1 acquisition of French. Although recursion is considered the fundamental property of human languages, recursive self-embedding is found to be difficult for children in a variety of languages and constructions. In child English, recursive possessive and PPs structures are rare in production, and difficult to understand (Limbach & Adone 2010; Roeper 2011; Pérez-Leroux et al. 2012). Despite these challenges, the acquisition of RM proves to be resilient, acquirable even under severely degraded input conditions, such as in deaf home signers (Goldin-Meadow 1982). Which structures can function recursively vary across different languages, fueling the controversy regarding the universality of recursion (Evans & Levinson 2009). From a minimalist perspective on the operations of narrow syntax, recursive embedding is essentially the application of a sequence of Merge operations (Chomsky 1995; Trotzke & Zwart 2014). If the challenge of recursion lies in the narrow syntax operations involved in their derivation, then we expect recursive structures to be equally complex across languages with comparable constructions. If, on the other hand, complexity arises from factors which might shift according to structural variation, then we expect different outcomes cross-linguistically. We compare new data from French to existing English data in order to examine to what extent the developmental path is determined by language-specific properties of RM structures, such as the type of phrasal category (e.g. complement clauses, PPs, relative clauses(RCs)); phrasal directionality (e.g. left- versus right-branching structures), and uniformity of directionality within the language.

We consider French, a uniform right-branching language which allows recursively modified DPs (with two embedded PPs; e.g. *Le ballon de la soeur d'Hélène*). French children acquire simple possessive and locative constructions before age 2 with a variety of prepositions (Clark 1986). As in other languages, relative clauses are difficult for French-speaking children. To our best knowledge, RM DPs in French have not been previously investigated.

In our study, fifty-two French-speaking children (aged 5;7 to 6;7) and twelve adults were presented with a referential elicitation task of possessives, comitative PPs, and locatives. We find quantitative differences between French-speaking and previous English data: both lag behind adults, but five-year-old French-speaking children show an advantage over English age mates in
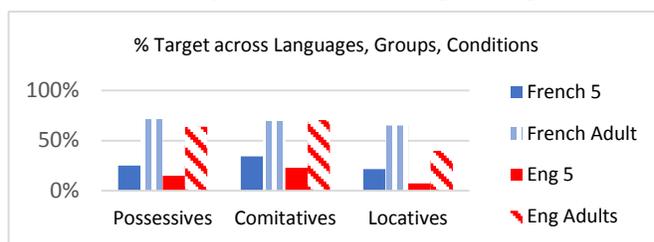


the numbers of target responses for comitative and possessive constructions, although these are equally productive for adults across languages. We also note a qualitative difference: in both languages speakers produced RCs (1b) or a combination of both RCs and PPs (1c), where simpler PP recursion was the target (1a). English-speaking children produce these at the same rate as adults, but French-speaking children initially prefer PPs when compared to adults.

(1)  a. le sac à dos de l'ami de Dora (5;11) (PP-PP)
     b. C'est lui qui est sur le crocodile qui est dans l'eau. (6;03) (RC-RC)
     c. le bébé de la femme qui sort le bouquet de fleurs. (5;11) (PP-RC)

The narrow syntax component of the derivation of RM constructions cannot be the locus of these differences, so we must turn to the interface components and processing considerations to account for the cross-linguistic asymmetries observed. Our findings contribute to the discussion of what makes recursive structures challenging in acquisition and of how universal properties of language interact with language-specific constraints in shaping the acquisition path.

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