STRONG RECURSION AS A UNIQUELY HUMAN TRAIT? THE *PREFER* TEST

A. Given its central role in the debate about what uniquely identifies human language, it is important to have precise tests to identify the presence of (different types of) recursion, including in under-investigated languages. The notion of recursion that Hauser, Chomsky and Fitch (2002) consider is the ability to combine two units that are the result of previous operations of combination. Given this 'weak' notion, all natural languages show evidence of recursion. However, a stricter notion of recursion is iterative embedding of a category inside another category *of the same type* (say, repetitive embedding of a clause inside a clause). We call this 'strong recursion'. Strong recursion is a better candidate as a uniquely human trait, but it is not obvious that it is a language universal (for example, if a language embeds clauses through nominalization, it lacks strong recursion for clausal embedding).
In this talk, we propose a simple test (the '*prefer*-test') that can detect strong recursion cross-linguistically, including in under-investigated languages.

B. Consider (1) and the two structural analyses (1') and (1'').

(1) The dress that I bought that I never use (is that one)
(1') [$_{NP}$ the dress [that I bought t_{dress}] [that I never use t_{dress}]
(1'') [$_{NP2}$ [$_{NP1}$ dress [that I bought t_{dress}]] [that I never use t_{NP1}]]

The analysis in (1'') is a case of strong recursion: a relativization operation is applied to the N 'dress' and the NP which results ('dress that I bought') becomes the input of a second application of relativization. The final result is a category with same label N ('dress that I bought that I never use'). However, (1') does not involve strong recursion, as two independent operations of relativization target the noun 'dress'. As both analyses generate the meaning conveyed by (1), (1) is not evidence for strong recursion. However, consider (2). (2) is used to pick out the dress that I prefer *among the ones that I bought*, namely the analysis in (2'') is forced. Given (2''), the sentence is correctly predicted to be true in a situation in which the dress that I prefer among those that I bought is not the one I prefer in absolute terms. On the other hand, the analysis in (2') cannot capture this meaning. Therefore, the *prefer*-test can unambiguously identify strong recursion.

(2) The dress that I bought that I prefer (is that one)
(2') *[$_{NP}$ dress [$_{CP}$ that I bought t_{dress}] [$_{CP}$ that I prefer t_{dress}]]
(2'') [$_{NP2}$ [$_{NP1}$ dress [$_{CP}$ that I bought t_{dress}]] [$_{CP}$ that I prefer t_{NP1}]]

C. If strong recursion is an ingredient of universal grammar (rather than a cultural trait), structures like (2) should emerge early in acquisition despite being more complex than those in (1). We plan to administer the *prefer*-test to (7 years old) children who are users of Italian or French Sign Language to control for any effect of modality (signed, spoken). Data collection is scheduled for April and results will be discussed in the workshop.

WORD COUNT: 499

References
Hauser, M., N. Chomsky & T. Fitch 2002. The Faculty of Language: What Is It, Who Has It, and How Did It Evolve?, *Science* 298, 1569-1579.

Keywords: recursion, embedding, relative clauses