

The meaning of reduplication with movement in LSC

Raquel Veiga Busto

Prior research has identified a number of morphological operations used to express numerosity in sign languages (Wilbur 1987; Pfau & Steinbach 2006; a.o.). One such strategy is reduplication with movement, whereby the relevant sign is repeated at different locations within the signing space, yielding a plural interpretation. While the meaning associated with each operation in the pronominal domain has not been extensively analyzed for most sign languages, earlier studies generally assume that pronouns reduplicated with movement convey a distributive/exhaustive interpretation (Sandler & Lillo-Martin 2006). Building on felicity/grammaticality judgments and production tasks elicited with two native deaf signers of Catalan Sign Language (LSC), this paper aims at analyzing the meaning contributed by the combination of reduplication and movement in personal pronouns. Ultimately, this study shows that pronouns reduplicated with movement in LSC present a number of properties which are not compatible with a distributive/exhaustive plural analysis.

I. Upper bound cutoffs: in LSC, pronouns reduplicated with movement are used to recover entities whose cardinality is equal or lower than 5 (1). Alternatively, they may pick up more than 5 entities, but in such cases, they also yield the interpretation that only certain members of the set are being referred to. This is shown in the (2a), where a group of 50 people is introduced in the context sentence and the subsequent reduplicated third person pronoun is interpreted as referring to a subset of them. If reference is intended to the whole plurality, the so-called collective plural pronouns must be used instead (2b).

(1) Context: At today's comic play there are only three people in the audience. To make fun of them, one performer says to the other:

IX₃-rep³¹ FOOLISH.

'They are foolish.'

(2) Context: At today's comic play there are about 50 people in the audience. To make fun of them, one performer says to the other:

a. IX₃-rep³ FOOLISH.

'Some of them are foolish.'

b. IX₃-straight FOOLISH.

'They are foolish.'

II. Exhaustivity: unlike (1), where reduplication with movement enforces an exhaustive reading, the pronoun in (2a) does not require the entities in the context to be exhausted and their interpretation is analogous to that of the partitive reading of the quantifier *some*. In fact, the upper bound implicature ('some, not all') of reduplicated pronouns undergoes suspension (3) and cancelation (4) in the same contexts as those described for *some* (Horn 1972). Further, just like the existential quantifier *some*, pronouns reduplicated with movement are logically consistent with the conjunction of their inner negation (5), unlike plural pronouns and universal quantifiers.

(3) a. IX₃-rep³ FOOLISH, POSSIBLY EVEN ALL.

b. SOME FOOLISH, POSSIBLY EVEN ALL.

'Some of them are foolish, and possibly even all of them are.'

(4) a. IX₃-rep³ FOOLISH. IN FACT, ALL FOOLISH.

b. SOME FOOLISH. IN FACT, ALL FOOLISH.

'Some of them are foolish. In fact, all of them are foolish.'

¹ The gloss -rep_n stands for signs modified by reduplication with movement, where *n* represents the total amount of repetitions; the subscript -straight stands for signs modified by a horizontal trajectory movement, but no reduplication.

- (5) a. IX₃-rep₃ FOOLISH, IX₃-rep₃ NOT.
 b. SOME FOOLISH, SOME NOT.
 ‘Some are foolish, and some are not.’

III. Distributivity: pronouns reduplicated with movement do not enforce the reading that the predicate applies to every individual member in the extension of a plurality. This is shown in (6), in which the reduplicated pronoun, combined with the mixed predicate *push a car*, is not interpreted as ‘The two women pushed a car each’, but rather as ‘The two women (together) pushed a car’. To get the reading that the members of the set are picked out separately (i.e., distributively), it is necessary to reduplicate other elements, such as the predicate, the quantifier or both the predicate and the quantifier (7).

- (6) WOMAN TWO IX₃-rep₂, CAR PUSH.
 ‘Two women (together) pushed a car’.
 (7) WOMAN TWO, CAR PUSH-PUSH.²
 WOMAN THE-TWO, CAR EACH-rep₂ PUSH-PUSH.
 ‘Two women pushed a car each.’

Analysis and implications. The results of this study show that pronouns reduplicated with movement present significant functional differences with respect to pronouns reduplicated with movement as previously described for other sign languages. Considering that distributive/exhaustive plural pronouns would be expected to show the opposite properties, it is proposed that the meaning of reduplication with movement in LSC pronouns is not distributivity, but rather paucity. As it is the case of other languages with a paucal value, the paucal in LSC is used to specify that the cardinality of the referents is small (i.e., it comes with upper bound cutoffs). Besides, its range is not clearly predetermined (i.e., it is an approximative number, cf. Corbett 2000) and its meaning depends on the size of the referred group (i.e., it has a contrastive interpretation, cf. Crowley 1982). These results raise the question of whether reduplication with movement might have a different meaning across sign languages and, hence, that the array of number values generally taken to be distinguished in sign language personal pronouns (singular, dual, distributive plural and collective plural) might be more varied than previously assumed. As far as I am aware, no previous study has considered the existence of a paucal value in sign language pronominals. However, Turkish Sign Language classifiers have been shown to use reduplication with movement to express paucity (Kubuş 2008). Therefore, the association of reduplication and movement with a paucal interpretation might not be restricted to LSC nor to personal pronouns.

References.

Coppola, Marie; Elizabet Spaepen & Susan Goldin-Meadow. 2013. Communicating about quantity without a language model: Number devices in homesign grammar. *Cognitive Psychology* 67. 1–25. **Corbett, Greville G.** 2000. *Number*. Cambridge: Cambridge University Press. **Crowley, Terry.** 1982. *The Paamese Language of Vanuatu*. Pacific Linguistics, B-87. Canberra: Australian National University. **Horn, Laurence.** 1972. *On the semantic properties of logical operators in English*. Los Angeles: University of California dissertation. **Kubuş, Okan.** 2008. *An analysis of Turkish Sign Language (TİD) phonology and morphology*. The Middle East Technical University, Ankara. MA thesis. **Pfau, Roland & Markus Steinbach.** 2006. Pluralization in sign and in speech: a cross-modal typological study. *Linguistic Typology* 10. 135–182. **Sandler, Wendy & Diane Lillo-Martin.** 2006. *Sign Language and Linguistic Universals*. Cambridge: Cambridge University Press. **Wilbur, Ronnie B.** 1987. *American Sign Language: Linguistic and applied dimensions*. Boston: College Hill.

² The gloss PUSH-PUSH stands for punctuated reduplication, that is, a reduplication type in which each repetition of the sign is clearly separated from each other (cf. Coppola, Spaepen & Goldin-Meadow 2013).