

Reduplication strategies & Scopal interaction at the syntax-semantics interface:
Evidence from Highland Mayan Sign Language

Overview: Reduplication, or the repetition of a word, stem, or root, is a widespread phenomenon across languages of the world. Several functions have been identified for this phenomenon, including plurality, distributivity, emphasis, size, reciprocity, iteration, among others. Notably, there is an element of iconicity involved in every one of these functions, which led to the formulation of the Iconicity Principle, according to which multiplication of a form creates multiplication of a meaning (Kouwenberg & LaCharité 2015). In this paper, we present empirical data bearing on the relation between iconic compositionality, reduplication, and plurality from Highland Mayan Sign Language (HMSL), an essentially undocumented Indigenous sign language from rural Guatemala. More specifically, we identify three distributive constructions in HMSL and report puzzling levels of variation with regards to their interpretation. We propose that the strategies can be decomposed and identify different pluralizing morphemes. Notably, each morpheme instantiates a different type of reduplication. We show that, though iconic, reduplication does not always generate the same meaning and conclude that different meanings arise depending on the way the iconic morpheme interacts with the morphosyntax. **Reduplication:** In spoken language, reduplication can occur at the word, stem, or root level, and may be full or partial. The same holds for sign language. However, the visuo-spatial nature of sign language affords further possibilities. For instance, full reduplication of the numeral *one* in English would be *one-one*. In contrast, full reduplication of the same numeral in HMSL could have several exponents: two 1-handshapes signed by each hand simultaneously, sequential repetition of one 1-handshape with the dominant hand, or even a V-handshape where each finger functions as an instantiation of a 1-handshape. Additionally, these could be signed with different movements and over different areas of space (check Fig. 2 below for some of the possibilities), allowing for iconicity to surface in many ways in sign language. Iconicity, however, does not preclude variation, particularly in village sign languages like HMSL which tend to show a lot of variation (see, for example, Meir et al. 2010 on Al-Sayyid Bedouin Sign Language). In this paper, we look at how these two forces interact. **Methodology:** Data Collection: Data for this study is the result of two fieldwork tasks conducted 10 months apart. Task 1 was a picture-description task designed to elicit semantic contrasts (e.g., distributivity vs. collectivity). The stimuli included, for example, depictions of people carrying boxes in different configurations (e.g., distributively or collectively). Task 2 was a picture-matching task. Participants were shown clips from their answers to Task 1 and asked to select the image that best represented each clip. Participants: Participants were contacted in collaboration with community-based Maya linguists. The data comes from 14 signers from two Kaqchikel departments (Chimaltenango and Sololá) in highland Guatemala. **Empirical findings:** The ‘x-FOR-i’ construction: First, we note that numerals can be inflected in space, in a way that resembles verbal inflection. In Fig. 1, movement towards a locus associated with either (a) a person or (b) a box communicates either (a) two (boxes)-FOR-person_i or (b) two (people)-FOR-box_i. Here, movement and loci are used to refer to two arguments and establish an allocation relation between them. Notably, the structure of this construction resembles that of a little vP in ‘John gave a book to Ivy’ (i.e., ‘a book to Ivy’). We call this construction ‘x-FOR-i’ and assume that FOR first attaches to the goal argument, creating ‘FOR-i’, which then applies to a full,

possibly complex NP. In the case at hand, only the numeral modifying the NP is phonologically produced, likely due to articulatory and contextual constraints. Notably, three elements are produced simultaneously here, and one is elided: the numeral TWO is pronounced as the handshape, the allocating relation FOR as the movement, the goal as the end point of the movement; finally, the noun BOX is elided and recoverable from context. The result is a single monosyllabic word with a highly complex structure which, we will argue, can be pluralized at different nodes (Fig. 1c). *Distributivity in HMSL*: We observed several strategies for the marking of distributivity, but here highlight three: i) smooth one-handed marking over circular area of space, or ‘ONE.smooth’ (Fig. 2a), ii) punctuated one-handed marking over circular area of space, or ‘ONE.punct’ (Fig. 2b), and iii) alternating two-handed marking moving away from the body, or ‘ONE.alt’ (Fig. 2c). Results from Task 2 show varying distributive interpretation for these strategies. 13/14 signers interpreted ‘ONE.alt’ as distributive, while ‘ONE.punct’ was slightly less distributive (11/14 distributive interpretations across stimuli). In contrast, ‘ONE-smooth’ was evenly split between distributive and cumulative interpretations (7/14 distributive). **Discussion:** We assume 3 different morphemes (/arc/, /punct/, /alt/) and analyze the observed strategies as plural forms built from the application of each morpheme to different levels of ‘x-FOR-i’, with each morpheme instantiating a different kind of reduplication. Accordingly, we analyze ‘ONE.smooth’ as /arc/ applied to the goal argument of ‘x-FOR-i’, whereby /arc/ (iconically) establishes a plural goal, by visually encoding an infinite plurality of end points of the FOR relation. We show that the two interpretations attested for ‘ONE.smooth’ are determined by where the constituent /goal i-arc/ takes scope: when in-situ, we have a cumulative reading (cf. (a) in Fig. 1c); when scoping above the full structure ((c) in Fig. 1c), a distributive reading arises. As for ‘ONE.punct’, we assume that, as before, /arc/ applies to the goal argument to establish a plural goal, and that /punct/ applies to the theme argument, thus creating a second plurality (cf. (b) in Fig. 1c). Finally, though ‘ONE.alt’ does not invoke an area of space with /arc/, it once again iconically represents plurality in two different ways: the reduplication of the motion, and the use of two hands. Since a pluractional morpheme /alt/ has been identified for other languages (e.g., Kuhn and Aristodemo 2017 on LSF), we propose that the same morpheme applies to the entire ‘x-FOR-i’ structure (i.e., (c) in Fig. 1c). Note that /alt/ is intrinsically different from /arc/ in that it acts as a pluractional and can occupy (c) alone, whereas /arc/ acts as a plural marker and creates an island with the constituent it pluralizes and cannot move independently. Notably, the pluralization of different nodes of the structure is instigated by different morphemes, sometimes plural (/arc/ and /punct/), sometimes pluractional (/alt/), which is iconically reflected in the choice of reduplication strategy.

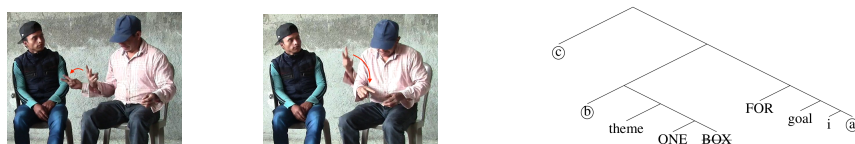


Fig. 1 - a) two (boxes) for him b) two (people) for that box c) ‘x-FOR-i’ and its pluralizable nodes.



Fig. 2 - a) smooth marking, b) punctuated marking, c) alternating marking.

References:

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