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An Experimental Investigation into the Semantics of Akan's Plural Morphology

This research tests Ahenkora's (2022) claim that Akan has exclusive plurals through experimental means and to provide a more comprehensive picture of Akan's plural semantics. In most languages, plurals in an upward-entailing context (1a) refer only to a plurality, making them exclusive of the atomic reading. However, plurals in a downward-entailing context (1b) refer to atoms and pluralities.

(1)	a. John planted trees.	
	#'John planted one or more trees.'	[Inclusive]
	'John planted more than one tree.'	[Exclusive]
	b. John didn't plant trees.	
	'John planted one or more trees.'	[Inclusive]
	#'John planted more than one tree.'	[Exclusive]

Ahenkora (2022) claims that the plural circumfix is inclusive, similar to English, but the prefix is exclusive. The present experiments test these two plural morphemes in multiple downward-entailing contexts. One experiment for each morpheme was run, using the same design: CONTEXT [0, 1] (i.e., how many of each object occurs in the context) was fully crossed with SENTENCE_TYPE [positive, negative, question, universal_quantifier]. 24 test items interspersed with 12 filler items were shown in random order. By using auditory stimuli, native Akan speakers rated each test item on a five-point scale.

Both morphemes were found to be inclusive in all three downward-entailing contexts. These results are contrary to Ahenkora's claim about the plural prefix, but in line with her claim concerning the plural circumfix. In Ahenkora's original analysis, she suggests each morpheme has a different meaning contribution. However, to account for the results of the experiments, we claim that the prefix is the only plural morpheme, and that the suffix part of the circumfix serves as a kinship marker that adds no additional plural meaning to the noun.

The results of this study support the idea of inclusive plurals in downward-entailing contexts as a semantic universal. Therefore, our analysis augments the understanding of plurality cross-linguistically.

References

Ahenkora, C. (2022). The Semantics of Akan Number Morphology. Unpublished Manuscript, Yale University