

Prosodic Edge Marking in Ewe

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1 Introduction

Tone languages such as Mandarin Chinese (Xu, 1999) and the Bantu language Chichewa (Downing, 2003) display tonal properties beyond the lexical level when some part of the utterance is in focus. Ameka (1992) describes the Gbe language Ewe to utilize morpho-syntactic means to signal focus without making any reference to prosody. The question arises whether there are typological commonalities with regard to prosody across different types of tone languages when signaling focus. Möhlig's (1971) makes reference to '*expressive prosodemes*' in Ewe which serve to emphasize a word or phrase or intensify the main meaning. We tested for these '*expressive prosodemes*' by comparing the phonetic realization of the high-toned /-é/ focus marker (FM) in subject focus condition and in ex-situ object focus utterances to see if the language also makes use of prosodic (durational or pitch) cues to highlight or structure information. While duration appears to mark phrasal boundaries after the focussed constituents, F0 measurements of controlled tonal patterns were inconclusive as of now (and thus are not discussed here).

2 Methods

The corpus consisted of simple SVO (out of the blue, subject focus and *in-situ* object focus) utterances, and OSV *ex-situ* object focus sentences, controlled for tonal co-occurrences on the lexical level as we were looking for prosodic effects of focus on the fundamental frequency (F0) and duration. Six tonal patterns were selected for further investigation of the following 3 conditions:

1.	S	V	O	(36 utterances)
2.	S + FM	V	O	(36 utterances)
3.	O + FM	S	V	(39 utterances)

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The corpus was read by a single native speaker of the Anglo dialect of Ewe. Thus, from our descriptive phonetic study, for methodological reasons we cannot generalize over the entire language nor to all speakers: our findings pertain to this one speaker and serve as a starting point for further investigation of the morpho-phonological system of Ewe.

Phonemic segmentation was carried out according to standard measurement criteria: Double articulated consonants such as /gb/ were labeled as single phonemes. Release bursts were included with the stop, not the following vowel. Two adjacent vowels were segmented by analyzing changes in the formant trajectories or dips in the amplitude.

3 Results

We measured the durations of each phoneme in all sentences in the different focus contexts. In the argument focus conditions (2) and (3), we also measured the duration of the high-toned FM /-é/ at the right edge of the subject or ex-situ object (see focus conditions). In Ewe, there is ambiguity in the interpretation between in-situ object focus without morpho-syntactic marking and *out-of-the-blue* utterances.

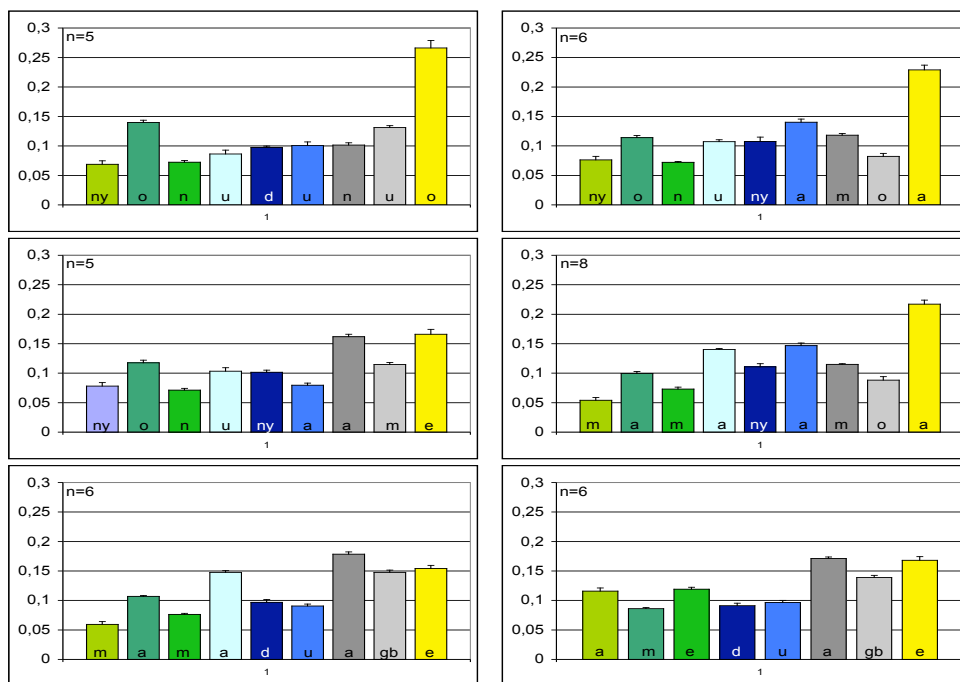


Fig 1: Mean duration (with standard error bars) of each phoneme (in seconds) for each tonal pattern.

Regardless of these pragmatic differences, visual inspection of the mean phoneme duration across the six tonal contours (Fig. 1) indicates that only the final vowel is systematically elongated, suggesting that our Ewe speaker does final lengthening, a phonological process by which the right edge of a phrase is lengthened. Durational

cues also play a significant role in structuring and/or highlighting the information in the S-Foc and O-*ex-situ* conditions: an ANOVA (linear mixed effects model with S+FM vs. O+FM as the fixed effect and the tonal contours as the random factor) shows a significant effect on the dependent variable ‘the duration’ of the focus marker ($p < .05$, $df=1$, $F=15.77$).

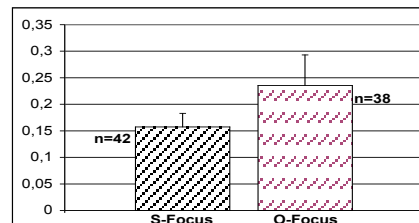


Fig 2: Mean duration (with standard deviation bars) of FM (in seconds) for S-Foc and O-*ex-situ* utterances.

This suggests a stronger phonological boundary between the *ex-situ* focused object and the remaining SV complex compared to the focused S and the VO.

4 Discussion

There is evidence for Möhlig’s ‘*expressive prosodemes*’ in the speech of our Ewe speaker: lengthening can have a perceptual effect of increased salience resulting in an interpretation of emphasis. Both S and O are set off prosodically when focussed, suggesting that the S could also be interpreted as *ex-situ*. This analysis in turn supports the *narrative hypothesis* (Fiedler & Schwarz), suggesting that historically, focus constructions in Ewe can be regarded as bi-clausal constructions, consisting of an NP and a narrative clause.

References

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