

## Pitch register reset and embedded clauses in Akan

Frank Kügler

Department of Linguistics, Potsdam University  
kuegler@uni-potsdam.de

This paper investigates the interaction of lexical tone and intonation in embedded clauses in the two-tone Kwa language Akan. Akan distinguishes between lexical H and L tones. Besides lexical distinctions, tone has grammatical function in Akan (cf. Dolphyne 1988; Paster 2010). Based on an analysis of embedded clauses in Akan I claim that syntactic clausal boundaries are expressed by means of a pitch register reset where lexical tonal distinctions are maintained in the embedded clause. The amount of pitch register reset depends on the nature of the following tone, smaller reset in case of a following L tone, and larger reset in case of a following H tone. I will argue that prosodic phrasing at the level of an intonation phrase is thus achieved by means of a pitch register reset.

The interaction of tone and morphosyntactic structure is discussed for adverbial clauses in Akan by Abakah (2005: 117) who shows that in case of a declarative sentence in progressive aspect, that turns into an adverbial clause leftward H tone spread occurs throughout the adverbial clause, cf. the verb in (1). However, Abakah's claim that leftward tone spreading affects the complete adverbial clause seems to be far too general. In my data, the distinct tonal pattern associated with the verb indicates the adverbial clause. Remaining constituents such as a subject NP in (1) keep their tonal specification. Adverbial clausal structure is thus indicated by a particular tonal configuration on the verb that does not span the complete adverbial clause. This is comparable to Akan's rich verbal morphology that, among others, tonally marks tense and aspect categories (Paster 2010).

Despite of tonal changes on the verb, embedded clauses show a pitch register reset at the left edge of the embedded clause. Independent of sentence type, an intonation contour in Akan is characterized by a downward trend in pitch (cf. the term terrace-level language coined by Welmers (1959) for West-African tone languages). Genzel (2013) analysed this downward trend in terms of a sentence-initial high register tone and a sentence-final low register tone. Previous studies analysed the downward trend in pitch as a result of local tonal interactions, i.e. downstep or downdrift (e.g. Clements 1979; Stewart 1993). No matter of the phonological analysis of the downtrend, in case of an embedded clause, e.g. (2), the downward trend in pitch is interrupted, and a pitch reset indicates the beginning of an embedded clause. The reset is still within the general downward trend in pitch, i.e. the embedded clause does not start as high in pitch as a completely new sentence. In addition, pitch reset occurs independent of the type of the embedded clause. In (2a/b), the embedded clause constitutes a subordinate clause while in (2c) the embedded clause constitutes the matrix clause. The amount of pitch reset is identical in all three constructions in (2).

This study presents an analysis of recordings of four native speakers of Asante Twi, one of the major dialects of Akan. A number of different embedded clauses are analysed comparing embedded clauses with initial H or L tones. The data show that speakers regularly realize a pause before the embedded clause. The phrasing of the complementizer is not consistent. While the complementizer *sɛ* is phrased together with the matrix clause (2a), the causative complementizer *maa* is phrased together with the subordinate clause (2b). The data further shows that the pitch reset does not affect lexical tones.

Following the assumptions of the syntax-phonology interface (Selkirk 2011) and of recursive prosodic structure (Itô & Mester 2012) I analyse the pitch reset to indicate a recursively embedded intonation phrase (3). Phrasing at the level of the phonological phrase is achieved by means of regressive [+ATR] vowel harmony across words (Kügler 2015), which is not discussed here.

(1) a. Declarative sentence

kòfí rẹ̀-bisá nó.  
Kofi PROG-ask him  
'Kofi is asking him.'

b. Adverbial clause

kòfí rẹ̀bisá nó ná sẹ̀bẹ̀ àdà  
Kofi PROG.ask him when Sẹ̀bẹ̀ PERF-sleep  
'While Kofi was asking, Sẹ̀bẹ̀ was asleep.'

(2) a. Embedded complementizer clause

nàná kà-à ẹ̀nórà sẹ̀ kúkúó-bá bó.  
Nana say-PST yesterday that pot-DIM break  
'Nana said yesterday that the small pot breaks.'

b. Embedded clause with causative marker *maa*

kòfí frẹ̀ yàw màà nó bàèè  
Kofi call.COMPL Yaw give.COMPL 3.SG come.COMPL  
'Kofi called Yaw so that Yaw came.'

c. Left-dislocated topic

kòfí déè ọ̀-à-bá hà.  
Kofi TOP 3SG.SBJ-PFT-come here  
'As for Kofi, he has come here.'

(3) a. [ [ kòfí ]<sub>φ</sub> [frẹ̀ yàw ]<sub>φ</sub> %reset[ [màà nó bàèè ]<sub>φ</sub> ]<sub>t</sub> ]<sub>t</sub>

b. [ [ kòfí (déè) ]<sub>φ</sub> %reset[ [ ọ̀-à-bá hà ]<sub>φ</sub> ]<sub>t</sub> ]<sub>t</sub>

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