

## PHONOLOGICAL REFLEXES OF EMPHASIS IN KWA LANGUAGES OF CÔTE D'IVOIRE

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### 0. Introduction

This paper examines the phonological characteristics of expressions conveying emphasis, insistence, and contrast in some Kwa languages of Côte d'Ivoire. (For the classification of Kwa languages, see Stewart (1989, 2001, 2002)). Our particular interest is to reveal how such phenomena are realized in tonal languages, and we thought it worthwhile to study more than one language yet to confine the study to a closely related group. In this group a variety of phonological strategies are used to mark emphasis, including prosodic devices that have not been widely reported in the literature for Niger-Congo languages, and that may or may not differ from other language groups

For our subject we have avoided the more restrictive term *focus* in favor of the more general term *emphasis* due to the latter's suggestive but open-ended phonological and semantic implications. Some of the constructions examined here correspond to focus as generally used in the literature, notably in Bearth's (1999) survey of focus in African languages. But other cases do not involve focus in the strict sense. For example, some of them are appropriately glossed by adding an expression like "really" or "please" to the word or phrase emphasized. What is interesting is that while the constructions described are quite heterogeneous from a semantic standpoint, they involve many of the same phonological devices.

In a nutshell, our goal is to capture the various phonological means for expressing emphasis in the Kwa languages of Côte d'Ivoire. It is normal to encounter special emphatic particles in these languages, as elsewhere, but there are also specific tonal and intonational effects which apply in the presence or absence of such particles. Also present, and less often described, are cases in

which emphasis interrupts the regular phonological patterns. We capture this disruptive effect with an *emphasis boundary* which creates a new phonological phrase for the emphasized constituent. Cases like these appear to have an analog in other languages, notably Pierrehumbert and Beckman's (1988) analysis of Japanese, where emphasis leads to the formation of new accentual phrases.

The rest of the paper is divided into six sections. Section 1 examines segmental processes and considers independent evidence from tonal processes. Section 2 discusses negation and final particles as contexts for emphasis marking. Section 3 deals with ideophones with emphatic meanings. Section 4 investigates types of emphasis marking by nominalization of the verb. Section 5 illustrates some types of prosodic marking of emphasis by register raising. Section 6 summarizes the results of the paper.

The language for which we have the most detail is Standard Baule, which is the most widely spoken of the group and one spoken natively by one of the authors. We add data from a second Baule dialect, Kode, and from neighboring Kwa languages Adioukrou, Eotile, and Akye. Our analysis is based on data from Leben and Ahoua (2002), the first volume of a comparative study of the phonology of Kwa languages of Côte d'Ivoire currently in progress.

## **1. Domains of Emphasis: Tests with Elision and Tones**

### *1.1. Blocking of Elision*

Baule has a number of multi-word constructions that function phonologically as single prosodic words: proper names, compound nouns, noun-adjective constructions. See Leben and Ahoua (1997) for the analysis. Emphasis on one of the elements of a multi-word prosodic word unit breaks the complex up into two constituents, a non-emphasized portion and an emphasized one. The evidence in 1.3 below will suggest that the emphasized constituent becomes a new phonological phrase.

For example, the first and last names in a proper name ordinarily comprise a single prosodic word (see Leben and Ahoua 1997). One sign of this is the applicability a rule of elision deleting one of two adjacent vowels. This rule applies only within prosodic words, as illustrated in (1a) below, and never applies across different prosodic words. In example (1b), which emphasizes the second name *àmàní*, elision is blocked.

- |     |                        |                     |                       |
|-----|------------------------|---------------------|-----------------------|
| (1) | <i>Underlying form</i> | <i>Surface form</i> |                       |
| a.  | / djáá àmàní /         | [ jámàní ]          | ‘Djaha Amani’         |
| b.  | / djáá   àmàní /       | [ jáá àmàní ]       | ‘Djaha <i>Amani</i> ’ |

The same effect is found in examples (2), (3), and (4) below. In all cases, emphasis on the final element breaks a constituent into two parts, with the emphasized element heading a *new* prosodic constituent. We represent this change by placing an emphasis boundary ( | ) before the emphasized word.

Example (2) shows a title of address followed by a person’s name. These two elements form a single prosodic word in (2a). Emphasis on the second element again breaks this constituent up into two parts in (2b).

- |     |    |                  |               |                     |
|-----|----|------------------|---------------|---------------------|
| (2) | a. | / òdjá àmàní /   | [ òjámàní ]   | ‘Mr. Amani’         |
|     | b. | / òdjá   àmàní / | [ òjá ámàní ] | ‘Mr. <i>Amani</i> ’ |

Examples (3a,b) are names with titles, like (2a). In (3c) the names after the title are used contrastively. As before, an emphasis boundary is placed before the contrastive elements, and so once again elision is blocked. Contrastive emphasis on both elements of (3c) leads to blocking of elision in both cases, as predicted.

- |     |    |                  |                |                          |
|-----|----|------------------|----------------|--------------------------|
| (3) | a. | / mó ámlá /      | [ mámlá ]      | ‘Mrs. Amlan’             |
|     | b. | / mó àmàní /     | [ mámàní ]     | ‘Mrs. Amani’             |
|     | c. | / mó   ámlá ná / | [ mó ámlá ná ] | ‘it is Mrs. <i>Amlan</i> |
|     |    | / mó   àmàní ò / | [ mó àmàní ò ] | not Mrs. <i>Amani</i> ’  |

### 1.2. Tonal Blocking: Interruption of Upsweep

Leben and Ahoua (1997) discuss a gradual rise in F<sub>0</sub> across a sequence of High tones within the same phonological word. This gradual rise is referred to as upsweep (Ahoua 1996, Dafydd Gibbon personal communication).

As seen in 1.1, emphasis on the final element of a phrase causes an emphasis boundary to be inserted before it, blocking elision. Independent motivation for this emphasis boundary is its intonational effects. Compare (4a), which lacks emphasis, to (4b), in which the second element is emphasized:

- |     |    |                   |                |                             |
|-----|----|-------------------|----------------|-----------------------------|
| (4) | a. | / ákíssí bólí /   | [ ákísí bólí ] | ‘Akissi Boli’ (proper name) |
|     | b. | / ákíssí   bólí / | [ ákísí bólí ] | ‘Akissi <i>Boli</i> ’       |

Example (4a) has the melody of the unmarked neutral utterance, with gradual upsweep on successive High tones. The version in (4b) shows emphatic marking of the proper name *Boli*. In this case, the emphasis boundary interrupts upsweep, and tonal register of the whole word is raised. We refer to a High tone in raised register as Super-High and notate it with a double acute. The Super-High sequence *bóllí* is itself subject to upsweep, so that the second Super-High syllable is even higher than the first, but the point of the example is that the emphasis boundary interrupts the normal upsweep pattern.

Now suppose we emphasize the entire expression (4a)? In this case, an emphasis boundary will *not* be inserted within the expression. This in turn predicts that the expression will remain a single phonological word, with a single tonal upsweep pattern. As with the preceding examples, the register will be raised for the emphasized constituent, in this case the entire expression, as shown in (5).

(5) [ ǎ kǐsí bóllí ] ‘*Akissi Boli*’ (entire proper name emphasized)

We have also checked for what would happen when only the first word in this expression was emphasized, but consultants consistently rejected that pattern. In fact, our work suggests a general restriction on the placement of emphasis: only phrase-final elements may be emphasized.

### 1.3. Interruption of Low Tone Spreading.

Baule has a rule of Low Tone Spreading, which applies not only within phonological words but also across phonological words within phonological phrases:

(6) LOW TONE SPREADING: H → L / L \_\_\_ H

The symbols H and L here refer to *strings* of one or more High and Low tones, respectively. Examples (7a) and (8b) show that the rule would need to be complicated if these symbols referred only to individual tone-bearing units.

Rule (6) applies within a phonological phrase but not across phrases. In (7) and (8), *nàńí* means ‘cow’ and *nǎnǎ* means ‘milk.’ The unemphasized expressions (7a) and (8a) sound identical. The only difference between them is a structural one. The compound (7a) is a single prosodic word whereas (8a), a possessive phrase, is a phonological phrase consisting of two prosodic words. Compare the (a) cases to the (b) ones, which add emphasis on the final noun.

- (7) a. /nàní nǒnǒ / [ nàní nǒnǒ ] ‘cow milk’  
 b. /nàní | nǒnǒ / [ nàní nǒnǒ ] ‘cow *milk*’
- (8) a. /nàní nǒnǒ / [ nàní nǒnǒ ] ‘cow’s milk’  
 b. /nàní | nǒnǒ / [ nàní nǒnǒ ] ‘cow’s *milk*’

In the (b) cases, the emphasized second word causes the phonological domain of Low Tone Spreading to be interrupted. Thus, an emphasis boundary in (7b) and (8b) must create not just a new prosodic word but a whole new phonological phrase. The same, of course, must apply to examples (1) through (6). Thus, the conclusion from this section is that an emphasis boundary is placed before an emphasized element, creating a new phonological phrase for that element.

## 2. Constructions and Particles that Signal Emphasis

In this section we describe utterances containing an emphatic particle. We begin with negative constructions. The negative marker *mǎ* behaves as if it is inherently emphatic because it conditions a raising in tone that is characteristic of emphatic expressions.

### 2.1. Negation and Emphasis

To understand what happens in negative utterances, it is first useful to see how positive assertions are expressed, as in (9).

- (9) ò kó ‘he/she goes’  
 ò bá ‘he/she comes’  
 ò dí ‘he/she eats’

Such assertions are negated by adding *má* to the main verb and raising the tone of the verb to a Super-High tone:

- (10) ò kǒ má ‘he/she doesn’t go’  
 ò bá má ‘he/she doesn’t come’  
 ò dí má ‘he/she doesn’t eat’

Next consider the case where the scope of negation is restricted to a single constituent of a sentence. An emphasized noun N can be negated to express ‘it isn’t N’ by prefixing *ná* to the noun, raising the noun’s first tone to Super-High,

and raising any following High to Super-High as well. As we see in (11) and (12), this raising neutralizes the contrast between the High and Low of the first syllable of *bólí* and *nàńí*:

- (11) *bólí* ‘goat’  
*ná bóǎí* è ‘lit. Neg. -goat- Final particle’      ‘it isn’t a *goat*’
- (12) *nàńí* ‘cow’  
*ná nǎńí* è ‘lit. Neg. -cow- Final particle’      ‘it isn’t a *cow*’

## 2.2. The emphatic particles *è*, *dé*, and *ó*

There are at least ten particles in Baule that serve to mark emphasis on a preceding or a following word, each with its own meaning. Particles with similar function are studied in detail by Ameka (1992) in another Kwa group, Akan, where they have a similar phonetic form. In Baule the suffixed particles *è*, *dé*, *ó* raise the tone of the syllable immediately preceding them to Super-High. They may also raise the whole prosodic word, as noted for *è* by Creissels and Kouadio (1979) as a “particule d’insistance.” Examples of each are given in the subsections below.

2.2.1. The emphatic particle *è*. The particle *è* is principally used after a verb or a noun. In (13) we can interpret it as ‘why don’t you?’ or ‘please.’

- (13) a. *mé* ‘swallow (imperative)’      b. *mě́ è* ‘*swallow*, please’  
       c. *dí* ‘eat (imperative)’            d. *dǐ́ è* ‘*eat*, please’  
       e. *nó* ‘drink (imperative)’        f. *nǒ́ è* ‘*drink*, please’

Figure 1 compares typical measurements for (13a,b) as uttered by a male speaker. The F0 of (13a) rises to a maximum around 184 Hz. Adding a Low-toned *è* in (13b) raises this maximum to around 222 Hz in (13a). As with the cases seen earlier, (13a) occurs in normal register while (13b) occurs in raised register. By contrast, a High tone before Low in a non-emphatic environment is pronounced in a normal register (Ahoua 1996, citing Quaireau 1981).

Surprisingly, the Super-High imposed by the emphatic particle *è* extends leftward to the beginning of the emphasized expression, including even phonological Low tones in its path. As a result, the contrast between Low and High tone is neutralized. In figure 2, the pitch curves on the right are nearly identical for /gbàflè nǒńǒ è/ ‘young man’s milk’ and /bólí nǒńǒ è/ ‘goat’s milk.’

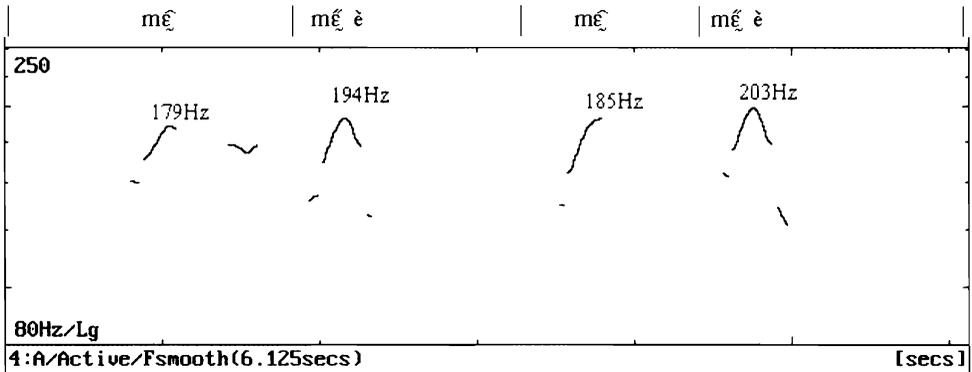


Figure 1: Monosyllabic utterance with and without emphatic è.

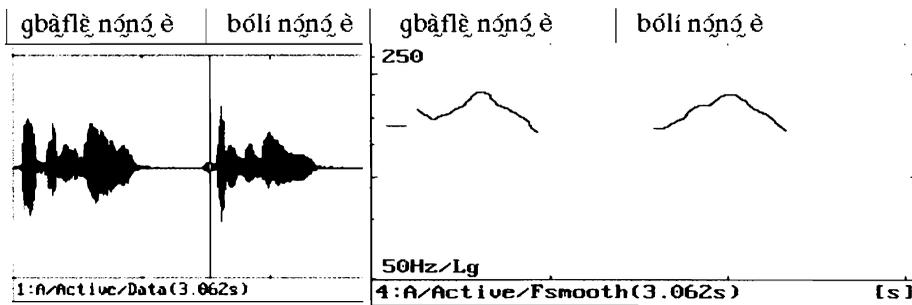


Figure 2: Two polysyllabic utterances tonally neutralized before emphatic è.

The neutralization appears to extend over arbitrarily long sequences of High and Low tones. Thus, when / *kòfí nàní* / ‘Koffi’s cow’ appears before particle *è* both the initial Low of *kòfí* and the initial Low of *nàní* are pronounced no differently from the High tones of *bóli nɔ́nɔ́ è*. That is, before *è* the tones of the entire expression become Super-High.

2.2.2. *The emphatic particle ɔ̃.* The particle *ɔ̃* can generally be paraphrased by ‘really’ or ‘indeed.’ It can appear after any syntactic category but tends to appear especially after verbs. Notice that it raises the rightmost syllable of the immediately preceding word to Super-High, with no other tonal changes.

- (14) ò tì bóǎí ǒ                    ‘he/she is a real goat!’ (an insult, he/she’s silly)’  
 3sg -be-goat-Part  
 ò s̀ì jùé sró ǒ                    ‘he/she can sing songs very well!’  
 3sg -can-song-sing -Part  
 ò nǎ́ ǒ                                ‘he/she really drinks!’ (he/she is a drinker)’  
 3sg -drink- Part.  
 ò dí ǒ                                 ‘he/she is greedy’  
 3sg -eat-Part.  
 ò nàtì nêdǎ́ ǒ                    ‘he/she can really walk very fast’  
 3sg -walk-fast-Part.

This particle neutralizes the distinction between Low and High tone, as shown with the words *mlà* ‘Wednesday’ and *mlá* ‘sponge’ in (15).

- (15) ké à kòlé, fà mlá                    ‘as you go, choose a sponge’  
 if -2sg -go-there-, take -sponge  
 ké à kòlé, fà mlá ó                    ‘as you go, choose just a sponge’  
 if -2sg -go-there-, take -sponge-Part.  
 ké à kòlé, fà mlà                    ‘as you go, choose Wednesday’  
 if -2sg -go-there-, take -Wednesday  
 ké à kòlé, fà mlá ó                    ‘as you go, choose Wednesday only,  
 if -2sg -go-there-, take -Wednesday-  
 Part. nothing else!’

2.2.3. *The emphatic particle dǎ́.* In Baule, the particle *dǎ́* serves to mean ‘actually.’ In contrast to the particle ǒ, which raises only the preceding syllable to Super-High, before *dǎ́* both the verb and the following negative particle *mǎ́* raise to Super-High. This is as expected, since as noted above in (10) the negative particle *mǎ́* raises the verb to High.

- (16) ò kǒ mǎ́ dǎ́                    ‘he/she doesn’t (actually) go!’  
 3sg -go-Neg-Part.  
 ò bá mǎ́ dǎ́                    ‘he/she doesn’t (actually) come!’  
 3sg -come-Neg-Part.  
 ò dí mǎ́ dǎ́                    ‘he/she doesn’t (actually) eat!’  
 3sg -eat-Neg-Part.

Particles in another Baule dialect, Kode, and in other very closely related Kwa languages serve similar functions. A few examples are given below. We are not

sufficiently familiar with the tonal and intonational systems of these languages to know whether the tonal register is raised as in the Baule cases we have described above.

*Kode:*

- |      |           |                  |              |                         |
|------|-----------|------------------|--------------|-------------------------|
| (17) | n̄ bǎ     | ‘I’m coming’     | n̄ bǎ ǒ      | ‘I’m coming, already!’  |
|      | ē fī dǎ   | ‘it’s big’       | ē fī dǎ ǒ    | ‘is it ever big!’       |
|      | fīē n̄ɪsǎ | ‘call N’guessan’ | fīē n̄ɪsǎ kē | ‘please call N’guessan’ |
|      | kǒ        | ‘leave’          | kǒ ēè        | ‘leave, already!’       |

*Adioukrou:*

- |      |      |                    |          |                            |
|------|------|--------------------|----------|----------------------------|
| (18) | lòtú | ‘he/she is strong’ | lòtú gbé | ‘he/she is really strong!’ |
|      | òw   | ‘come!’            | òw ò     | ‘please come’              |
|      | òw   | ‘come!’            | òw ɔ     | ‘come, already!’           |

*Akye:*

- |      |          |                  |            |                                  |
|------|----------|------------------|------------|----------------------------------|
| (19) | mǎ lʻ zē | ‘don’t go there’ | mǎ lʻ zē ǒ | ‘don’t go there (warning)’       |
|      |          |                  | mǎ lʻ zē ā | ‘please, don’t go’               |
|      | àpō      | ‘Apo’ (name)     | àpō ē      | ‘Apo! (calling with insistence)’ |

In Eotile, the emphatic final particle is an unspecified vowel that merely copies the tone and the vowel quality of the last vowel of the adjectives or the emphasized word:

*Eotile:*

- |      |              |                 |                |                          |
|------|--------------|-----------------|----------------|--------------------------|
| (20) | wó gbà       | ‘he/she’s good’ | wó gbà ǎ       | ‘he/she is <i>good</i> ’ |
|      | 3sg -good    |                 |                |                          |
|      | wó pl(ò) àmí | ‘he/she’s ugly’ | wó pl(ò) àmí ì | ‘he/she’s <i>ugly</i> ’  |
|      | 3sg- ugly    |                 |                |                          |

In Aboure, the emphatic marking is expressed by *kúwé bá* or only the first item, or optionally with the particle *ó*:



#### 4. Emphasis on Verbs

To emphasize a verb, the main verb with its complements is repeated at the very beginning of the sentence. The verb changes to a nominal, e.g., from *di* to *dilè*, by adding the nominalizing suffix *-lè*. For a serial verb, only the second verb form is repeated. Compare the unemphasized (a) cases below with the (b) cases in which the verb is emphasized.:

- |      |                           |                            |                            |
|------|---------------------------|----------------------------|----------------------------|
| (23) | a. ò dĩ nàní              | [ ò dĩ nàní ]              | ‘he/she eats beef’         |
|      | b. nàní dílè jè ò dí á ó  | [ nàní dĩlè jè ò dí á ó ]  | ‘he/she eats only beef’    |
| (24) | a. ò dĩ                   | [ ò dĩ ]                   | ‘he/she eats (it)’         |
|      | b. dílè jè ò dí á ó       | [ dĩlè jè dí á ó ]         | ‘he/she only keeps eating’ |
| (25) | a. ò kùní mì              | [ ò kùní mì ]              | ‘he/she killed me’         |
|      | b. kùnlè jè ò kùní mì á ó | [ kùnlè jè ò kùní mì á ó ] | ‘he/she only killed me’    |

Comparing the underlying forms in the (b) examples above with the realizations in phonetic brackets to their right, we see the effects of topic position on tone. For example, in (23), the underlying high tone of the verb in *dilè* is realized with Super-High as *dĩlè*. Furthermore, Low Spreading is blocked in this position.

Some other languages of this group emphasize verbs in a similar way. In Eotilé, the emphasized verb appears in topic position in nominalized form, followed by the topic marker *cé* and the full sentence, including the verb. Another emphasis marker *è* is added to the right. In the example below, *àbá* is the nominalization of *bà* ‘come.’

- |      |                   |                                     |
|------|-------------------|-------------------------------------|
| (26) | a. wó bà lè       | b. àbá cé wó bà lè è                |
|      | 3sg come-Past’    | Prefix-come-Rel-3sg-come-Past Emph. |
|      | ‘he/she has come’ | ‘he/she has (actually) come’        |

## 5. Register Raising

In Baule, the gradual raising of High tones for upsweep discussed in section 1.2 is distinct from the Super-High tone of emphasis. Tones that undergo upsweep are raised even higher for emphasis. And indeed we have noted that the two effects can occur together: Super-High tones in sequence exhibit upsweep. Thus, in (4), repeated here, both of the High tones of *bólí*, when emphasized in (4b), are higher than the corresponding tones in (4a), and the second syllable of the emphasized word is higher than the first.

- (4) a. / ákíssí bólí / [ ákísí bólí ] ‘Akissi Boli’ (proper name)  
 b. / ákíssí | bólí / [ ákísí bólí́ ] ‘Akissi *Boli*’

This is different from the situation in Hausa, as described by Inkelas and Leben (1990), where emphasizing a tone that is already Super-High does not raise this tone any higher. The fact that emphatic raising applies in this way leads us to suggest that emphasis creates a new, raised, tonal register. This view is supported by the fact that emphatic raising applies not just to High tones but also to Low tones. This is informally illustrated by the F0 pitch track below in figure 3. Here the all-Low tone utterance, *gbàflè gbògbò kèklè* ‘the solid bread basket of the young man,’ is spoken first normally, then emphatically. As one can see, there is an overall falling pitch contour in both cases. However, there is a difference in register: the emphatic sentence is realized with higher tones.

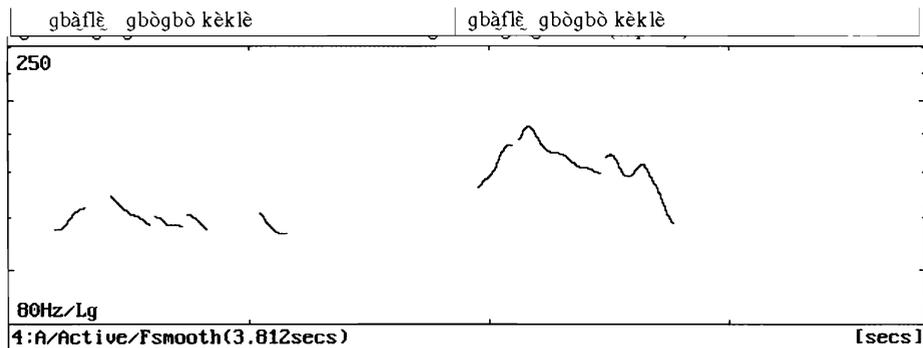


Figure 3: Normal vs. emphatic intonation.

The same holds true for upsweep. As can be seen in Figure 4, the upsweep observed on the left in the non-emphatic version of the utterance *bé bǒlí ní blú* (every syllable bearing a High tone) ‘the goats, their ten mothers’ is preserved but at a raised level, in the emphatic version on the right.

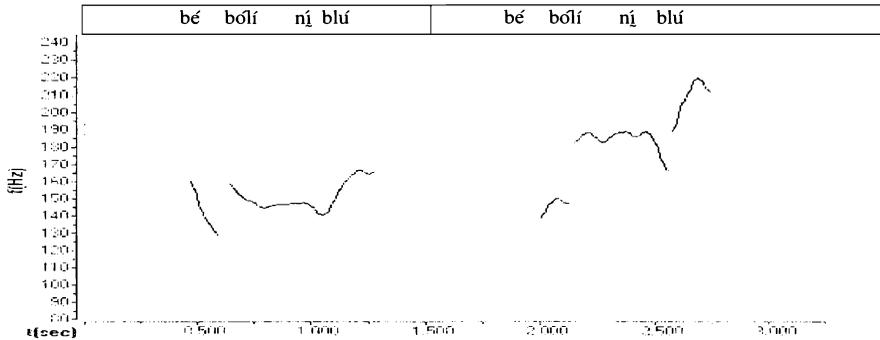


Figure 4: Upsweep in normal and in emphatic intonation.

A final sign that emphasis uses a new, raised register is that syllables following an emphasized word in the same phrase also must have their tone raised.

## 6. Conclusion

In this paper we have surveyed emphasis marking in several Kwa languages, collecting phonological reflexes of emphasis that go beyond the emphatic particles and raised intonations that are most frequently cited. Among the devices that signal or accompany emphasis are new boundary formation, blocking of phonological rules, and neutralization of phonological or semantic contrasts. We have also seen some signs of interactions with sequence structures, in which a non-emphasized tone in the same phrase will be raised to the same register level as the emphasized tone itself. Finally, this paper has shown that the raising of the register for emphasis co-exists with other intonational phenomena including downdrift and upsweep.

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