Theory and description in African Linguistics

Selected papers from the 47th Annual Conference on African Linguistics

Edited by

Emily Clem

Peter Jenks

Hannah Sande

Contemporary African Linguistics

language
science
press

Contemporary African Linguistics

Editors: Akinbiyi Akinlabi, Laura J. Downing

In this series:

1. Payne, Doris L., Sara Pacchiarotti & Mokaya Bosire (eds.). Diversity in African languages: Selected papers from the 46th Annual Conference on African Linguistics.

2. Persohn, Bastian. The verb in Nyakyusa: A focus on tense, aspect and modality.

3. Kandybowicz, Jason, Travis Major & Harold Torrence (eds.). African linguistics on the prairie. Selected papers from the 45th Annual Conference on African Linguistics.

Theory and description in African Linguistics

Selected papers from the 47th Annual Conference on African Linguistics

Edited by

Emily Clem

Peter Jenks

Hannah Sande

language
science
press

Emily Clem, Peter Jenks & Hannah Sande (ed.). 2018. *Theory and description in African Linguistics*: *Selected papers from the 47th Annual Conference on African Linguistics* (Contemporary African Linguistics). Berlin: Language Science Press.

Freie Universität Berlin

Contents

Part I

Phonetics and phonology

Chapter 1

A featural analysis of mid and downstepped high tone in Babanki

Pius W. Akumbu

University of Buea, Cameroon

In this study, I examine the occurrence of the surface Mid (M) and downstepped High (↓H) tone in Babanki, a Central Ring Grassfields Bantu language of Cameroon. **Hyman1979babanki** has demonstrated that Babanki has two underlying tones, namely, High (H) and Low (L), and that on the surface, it contrasts three level tones, H, M, L, plus a downstepped High (↓H). There is also contrast between a falling (L) and a level low (Lo) tone before pause in the language. I demonstrate in this paper that the M tone is from two different phonological sources and derived by the regressive spread of the high register feature of a following H tone while ↓H is caused by the progressive spread of the low register feature of a preceding floating L tone. The M and ↓H tone are phonetically identical in the language but differ in that ↓H establishes a ceiling for following H tones within the same tonal phrase.

1 Introduction

Part of the complexity of tone in Grassfields Bantu (GB) languages of Northwest Cameroon such as Babanki (a Central Ring GB language) is the lack of correspondence between underlying and surface tones as well as the presence of many floating tones. There is no underlying M tone in Babanki, yet it occurs on the surface with the constraint that it must be followed by a H tone. **Hyman1979babanki** has given a historical account of this M tone which is unnecessarily abstract as a synchronic analysis. I demonstrate in this paper that M tone results from the regressive spread of the [+R] feature of high tones which is blocked only by a nasal in NC initial roots. Downstep on its part results from the progressive spread of the [−R] feature of a floating L tone. The synchronic reanalysis of Babanki surface tones in this paper addresses the following issues: 1) What are the underlying

sources of the M tone? 2) How should the M tone be represented, as opposed to the downstepped H? I begin by illustrating in §2 that the lexical tones of Babanki are H and L even though a number of other tonal distinctions are found on the surface. I then proceed to examine the sources of M tone in the language in §3 before turning to discuss how the M tone is derived in §4. In §5, I provide evidence that both M and ↓H are phonetically identical and differ only in that the register is reset to high after M tone but not after ↓H which establishes a ceiling for future H tones within the same tonal phrase.

2 Babanki lexical tone

Babanki has two underlying tones, namely H and L, illustrated in (??). As a native speaker, I have provided most of the data but have also taken some from prior literature, particularly **Hyman1979babanki** and a lexical database of 2,005 Babanki entries in Filemaker Pro™.[1]

(1)

ndɔ̀ŋ	'potato'	ndɔ́ŋ	'cup'
k�ə̀-bwìn	'witchcraft'	kə̀-bwín	'ridge'
ə̀-sè	'grave'	ə̀-sé	'profit(n)'
kə̀-mbò	'bag'	kə̀-mbó	'madness'

On the surface, however, several tonal realizations are possible. As noted by **Hyman1979babanki** there is a distinction between falling low (L) and level low (Lo) tones before pause as in (??):

(2)

L		L^o		
kə̀-ntò	'cross (n)'	kə̀-mbò^o	'bag'	/kə̀-mbò´/
nyàm	'animal'	*dzə̀m^o*	'back'	/dzə̀m´/
tàn	'five'	wàn^o	'child'	/wàn´/
ə̀-sè	'grave'	dzè^o	'kind of fruit'	/dzè´/

The level low tone is considered an effect of a floating high tone that follows the low tone and prevents it from falling. A mid (M) tone also occurs even though with an unusual constraint that it must be followed by a H tone:

---

[1]The IPA symbols for the following orthographic symbols used in this paper are given in square brackets: ny [ɲ], sh [ʃ], zh [ʒ], gh [gh], ch [tʃ], j [dʒ], y [j].

(3) a. káŋ fə̄sɛ́s[2]
         káŋ ´   fə̀-sɛ́s
         fry IMP c19-pepper
         'fry pepper'

     b. kùmə́ kə̄kɨ́
         kùm ´   kə̀-kɨ́
         touch IMP c7-chair
         'touch a chair'

     c. ghá? kə̄vú
         ghá? ´   kə̀-vú
         hold IMP c7-hand
         'hold a hand'

The data show that the M <mark>tone</mark> is derived from a L <mark>tone</mark> found between two H tones as illustrated in §3.1 and discussed elaborately in §4. Finally, there is a downstepped H <mark>tone</mark> as in (??):

(4) a. kə̀-fóˋ ↓kə́ nyàm
         kə̀-fóˋ   kə́ nyàm
         c7-thing AM c9-animal
         'thing of animal'

     b. kə̀mbó ↓kə́ wì?
         kə̀-mbóˋ   kə́ wì?
         c7-madness AM c1.person
         'madness of person'

     c. kə̀káŋ ↓kə́ byí shɔ́m
         kə̀-káŋˋ kə́ byí   shɔ́m
         c7-dish AM goat.c10 mine.c10
         'dish of my goats'

The data in (??) illustrate that the H <mark>tone</mark> of the associative marrker (AM) is produced at a lower level than that of the preceding noun root because of the intervening floating L <mark>tone</mark>. This is discussed further and formalized in §5. The presence of both M and ↓H in the same language is of interest for two reasons. First, <mark>Babanki</mark> is unique in that <mark>Grassfields</mark> <mark>Bantu</mark> <mark>Ring</mark> languages are typically said to have either M or ↓H. As Hyman puts it:

---

[2]There is a change in the root vowel because in <mark>Babanki</mark>, /e/ and /o/ are realized as [ɛ] and [ɔ] respectively in closed syllables (**Mutaka2006**).

For example, it is known that the western <mark>Ring</mark> languages and <mark>Babanki</mark> (of the central <mark>Ring</mark> group) have similar downstep systems. The remaining languages of the central group (<mark>Kom</mark>, Bum, Bafmeng, Oku, Mbizinaku) all have systems with M <mark>tone</mark> instead of ↓H, a system which **Grebe1975** have also documented for <mark>Lamnsoq</mark> of the eastern group (**Hyman1979babanki**).

Second, although phonologically distinct, the M and ↓H tones are phonetically identical, as I shall show below, which is of particular interest to the study of <mark>tone</mark> in general. It is therefore necessary to examine how the M <mark>tone</mark> is derived and how it should be formally represented.

It is important to note that contour tones are rare in the language, allowed mainly in a few borrowed words. In the lexical database of 2,005 <mark>Babanki</mark> entries in Filemaker Pro™, only eight monosyllabic nouns with low-Rising (LH) and four with high-falling (HL) tones were found.[3]

3 Sources of Babanki M tone

The M <mark>tone</mark> is derived in <mark>Babanki</mark> from L via two separate processes which I will refer to as prefix L-Raising and stem L-Raising.

3.1 Prefix L-Raising: H # L-H → H # M-H

The L <mark>tone</mark> of a prefix is raised to M if it appears between two H tones as in the following examples.

(5) a. tə̀tɔ́ʔ tə̄tá ʔ
         tə̀-tó ʔ   tə̀-tá ʔ
         c13-bush c13-three
         'three bushes'

     b. kə̀kɪ́m kɔ́ və̄tsɔ́ŋ
         kə̀-kɪ́m kɔ́   və̀-tsɔ́ŋ
         c7-crab AM c2-thief
         'crab of thieves'

---

[3]LH: *àŋkǔɲàm* 'pig', *bə̀lə̀ŋ* 'groundnut', *fə̀ndzǒndzò* 'type of bird', *kə̀ŋgǔ* 'fool (n)', *mbwǐ* 'nail', *ŋgǔ* 'rake (n)', *sǒ* 'saw (n)', *tə̌lə̀m* 'cobra'.
HL: *bîbì* 'deaf', *bôbó* 'Lord', *byâ* 'pear', *lâm* 'lamp', *kî* 'key', *chôs* 'church', *wâs* 'watch'.
The presence of words like *sǒ* 'saw (n)', *lâm* 'lamp', etc. suggests that many of the <mark>Babanki</mark> words with contour tones are borrowings.

    c. tə̀tɔ́ʔ tə̀bò
         tə̀-tóʔ   tə̀-bò
         c13-bush c13-two
         'two bushes'

    d. kə̀kɨ́m kə́ və̀lə̀mə̀
         kə̀-kɨ́m kə́   və̀-lə̀mə̀
         c7-crab AM c2-sibling
         'crab of siblings'

Raising applies in (5a) where the L is flanked by Hs but not in (5b) where it is followed by a L tone. I return to the issue in §4 to provide a featural analysis of the raising.

3.2 Stem L-Raising: L-L # H → L-M # H

In Babanki, the L tone of certain noun roots that also have a L prefix is realized as M if it is followed by a H tone. The following sets of data show stem L-Raising when the noun is in N1 position in an associative N1 of N2 construction (6a), when the noun is followed by a modifier (6b), and in verb phrases (6c). Forms without raising (i.e. with surface L tone) are given in (6d):

(6)   a. kə̀kō̄s kə́ wìʔ
         kə̀-kòs kə́ wìʔ
         c7-slave AM c1.person
         'slave of person'

        b. fə̀kɔ̄ʔ fə́ nyàm
           fə̀-kòʔ   fə́ nyàm
           c19-wood AM c9.animal
           'wood of person'

        c. fə̀sō fə́↓wɛ́n
           fə̀-sò   fə́ wɛ́n
           c19-abscess AM him
           'his abscess'

        d. kə̀kyē lá kə̀mùʔ
           kə̀-kyè   lá kə̀-mùʔ
           c7-basket just c7-one
           'just one basket'

e. wyé kə̀zhwī tsú
   wyé kə̀-zhwì tsú
   put c7-air there
   'inflate it'

f. kú kə̀lāŋ lúwèn
   kú kə̀-làŋ   lúwèn
   give c7-cocoyam now
   'give cocoyam now'

g. nyàm ə̀ wìʔ
   nyàm   ə̀ wìʔ
   c9.animal AM c1.person
   'animal of person'

h. kə̀kɔ̀s kə̀ mùʔ
   kə̀-kòs   kə̀-mùʔ
   c7-slave c7-one
   'one slave'

i. ɔ́shù kə̀làŋ nə̀ mú↓ú
   ɔ́-shù   kə̀-làŋ   nə̀ múú
   INF-wash c7-cocoyam PREP c6a.water
   'to wash cocoyam with water'

To account for the raising in (6a-c), **Hyman1979babanki** offers a synchronic analysis which mirrors the historical developments, as in (7):

(7)   kə́kɔ̀s kə́ → kə́kɔ̂s kə́ → kə̀kɔ̂s kə́ → kə̀kɔ̄s kə́ …

As seen, the prefix originally had a H tone which spreads onto the L tone stem.[4] After spreading, the prefix H changes to L and then the resulting L-HL # H sequence becomes L-M # H by contour simplification. While this historical account derives the correct output, it appears to be unnecessarily abstract as a synchronic analysis. Instead, the H tone on the prefix can rather be analyzed as L (**Akumbu2011**) and the change from L to M can be accounted for as a raising rule (see §4). There is, however, a complication that either analysis must deal with: L-L nouns that have a nasal as part of the root initial NC do not become L-M before H as illustrated in (8):

---

[4]Hyman's pre-autosegmental analysis also posits a floating L after the L stem, i.e., /-kòs'/ 'slave'. This is ignored here because it is unnecessary and also an OCP violation.

(8) a. kə̀ndɔ̀ŋ kə́ nyàm
       kə̀-ndɔ̀ŋ kə́   nyàm
       c7-neck AM c9.animal
       'neck of animal'

    b. tə̀ŋkə̀ŋ tə́ ŋkə̀ʔ
       tə̀-ŋkə̀ŋ   tə́   ŋkə̀ʔ
       c13-comb AM c1.rooster
       'combs of rooster'

    c. fə̀ŋgə̀m fə́ wìʔ
       fə̀-ŋgə̀m fə́   wìʔ
       c19-gong AM c1.person
       'gong of person'

To account for this, **Hyman1979babanki** distinguished two classes of nouns based on whether the stem syllable has an oral (O) or nasal (N) onset and observed that "a noun in the O class changes from L-L to L-M when in the N1 position before a H tone associative marker. A noun in the N class ...remains L-L." He illustrates that L-Raising is blocked when the N1 is from a nasal class and posits that "in N1 position, N L-L nouns and L-Lo nouns have an underlying L prefix, rather than the underlying H proposed for other noun prefixes" (Hyman 1979: 169). Since HTS does not occur, there is no L-HL # H sequence to become L-M # H. While that analysis is historically plausible, we can again propose a more concrete analysis by which L-Raising is simply blocked when a L tone root has an NC onset. As argued in **Akumbu2011** there is a L tone linked to the N in NC sequences that blocks the raising. This is because in these cases, the nasal forms part of the root and bears the same L like the root vowel because of the OCP (**Snider1999**) that is enforced morpheme-internally in Babanki. The multiple linking of the L (to the nasal and root vowel) violates the condition for raising, namely, that the tone that precedes the target L must be singly-linked (**Akumbu2011**). L-Raising will automatically not apply to L-L° nouns since they have a floating H after them that prevents raising from occurring. The fact that the roots in (8) all end with a nasal could be relevant in providing a possibility of tying the failure of L-Raising to apply to some phonetic motivation. A possibility might be that the extra nasal, an extra mora, gives the L tone more of a chance to manifest itself. If so, then we might expect the same if the stem has a long vowel (another manifestation of an extra mora). Unfortunately, Babanki does not have long vowels and two other problems exist: there are stems, e.g. *fə̀ŋgùʔ fə́ wìʔ* 'small stone of person', without final nasal that do not also become

M, as well as stems with final nasal, e.g. *kə̀būm kə́ wìʔ* 'mucus of person', that do in fact become M. So far, the two sources of M tone have been presented: prefix L becomes M between Hs and stem L becomes M when preceded by a L prefix and followed by a H. It should be noted that this occurs over a word boundary although it is still unclear what the influence of the boundary is. In addition, there is another context in which a stem L becomes M. This arises when a coda consonant is deleted intervocalically (see **akumbu2016** and references cited therein for more information on coda deletion in Babanki). As seen in (9), when the CVC stem is H and the following prefix vowel is L, the H+L sequence resulting from coda deletion is realized M:

(9) a. kə̀bā: kɔ́m
     kə̀-bán   ə̀-kóm
     c7-corn.fufu c7-my
     'my corn fufu'

   b. kə̀ŋkɨ̄: kɔ́m
     kə̀-ŋkón ə̀-kóm
     c7-fool   c7-my
     'my fool'

   c. kə̀bɨ̄: kɔ́m
     kə̀-bə́ŋ   ə̀-kóm
     c7-home c7-my
     'my home'

I propose to account for this by invoking the prefix raising rule. Thus, in (9a) for example, the input /kə̀-bán ə̀-kóm/ first undergoes prefix L-Raising to become *kə̀-bán ə̄-kóm*. Next, the coda consonant (alveolar or velar nasal) is deleted in intervocalic position, creating the structure *kə̀-bá ə̄-kóm*. This is followed by vowel (schwa) deletion which allows its M tone to float: *kə̀-bá⁻-kó*. The floating M tone docks leftwards and causes the deletion of the H tone, since HM contour tones are not permitted in the language. The vowel that causes vowel deletion then undergoes compensatory lengthening, resulting to the surface structure [kə̀bā: kɔ́m].

4 Featural analysis of Babanki M tone

In this section I show that the M tone can be insightfully accounted for using tonal features which spread. Various proposals for the use of features in the rep-

resentation and analysis of tone have been addressed by **Yip1980 clements1983 Pulleyblank1986 Odden1995 Snider1999 Hyman2011** and others. Following the tone features introduced by **Yip1980** and modified by **Pulleyblank1986** I assume the feature system in (10) for the two underlying Babank tones:

(10)

	H	L
Upper	+	–
Raised	+	–

I propose that Babanki M tone be represented as [–U, +R] which can be derived directly from the leftwards spreading of the [+R] feature of a H tone to a preceding L tone, whose [–R] feature automatically delinks. I formulate the process in (11) where I link features directly to the TBUs even though there are arguments in the literature to link features to tonal nodes, e.g. **Yip1989** and **Hyman2011** This implies that linking features directly to TBUs is merely for expository convenience.

(11)   Leftwards [+R] spread
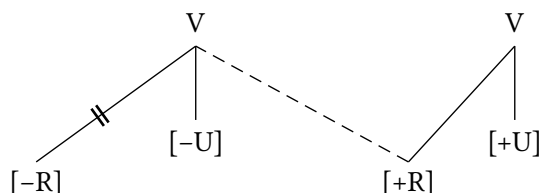
It should be recalled that there are two different morphological restrictions on the application of this rule: the L tone that is raised must either be that of a prefix found between two H tones (§3.1) or of a stem preceded by a prefix L tone and followed by a H tone (§3.2). The first is an instance of register plateau where [–R] becomes [+R] between [+R] specifications. In both cases, the application of the rule results in a M tone with the features [–U, +R], as illustrated in the following derivations:

(12) UR   Leftwards [+R] spread   PR

(13) UR   Leftwards [+R] spread   PR

    kə̀- kòs kə́ wìʔ   kə̀- kòs kə́ wìʔ   [kə̀-kɔ̄s kə́ wìʔ]

    | | | | → | ╪╲ | |

    [−R] [−R] [+R] [−R]   [−R] [−R] [+R] [−R]

To summarize this section, the resulting feature system of Babanki is as follows:

(14)   H   M   L

     Upper   +   −   −

     Raised   +   +   −

The use of features allows for a unified account of the Babanki derived M tone using one tone rule (albeit with constraints) thereby avoiding Hyman's abstract intermediate contour tones which are not realized on the surface. In the next section, I address the analysis of the ↓H downstep tone.

5 Babanki downstepped high tone

While the different sources of the M tone have been discussed above and its realization shown, nothing has been said about the ↓H tone which, like M is also a derived tone in the language. Downstep is commonly used to describe successive lowering of H tones in an utterance. The two kinds of downstep commonly mentioned in the literature are non-automatic downstep, phonologically conditioned by a floating L tone (**Clements1979**; **Pulleyblank1986**) or by one that had been lost historically, and automatic downstep, caused by an associated low tone (**Stewart1965**; **Odden82**; **Snider1999**; **connell2001**). Downstep has been described as a downward shift in register (**Snider1990**; **snidervan1993**; **Snider1999**; **connell2001**). Automatic downstep occurs in Babanki but the focus in this study is on non-automatic downstep which has been noted in the Babanki nominal system (**Hyman1979babanki**; **Akumbu2011**) as well as in the verb system (**Akumbu2015**). As seen in the following data, the floating low tone that causes downstep in Babanki may be underlying:

(15)   a.   ɔ́ˋ-sé   →   ɔ́↓sé   'to sharpen'

             ɔ́ˋ-sám   →   ɔ́↓sám   'to migrate'

   b.   ɔ́ˋ-bùm   →   ɔ́bùm   'to meet'

             ɔ́ˋ-sɨ̀m   →   ɔ́sɨ̀m   'to tighten'

As shown in (15a), a H verb stem is realized as a downstepped H after the infinitive prefix. Downstep can be accounted for by assuming that the H tone schwa of the infinitive prefix is followed by a floating L. The presence of this floating L tone is justified by the fact that the H tone of the verb root is realized on a lower register than the preceding H tone. When the H tone prefix is followed by a L tone verb, the verb tone does not change (15b). These data are analyzed as involving ↓H as opposed to the previous cases analyzed as involving M specifically because it is shown, subsequently (see Figure 1), that ↓H sets a new ceiling for subsequent Hs producing a terracing effect as opposed to M which results from the local raising of L and is obligatorily followed by H.

In the noun system, certain H tone stems have a following floating L tone in their underlying representation. Evidence has been presented that in Babanki, "class 7 nouns fall into three subclasses, A, B, C [corresponding to (16a, b, c)] which behave differently in context" (**Hyman1979babanki**).[5] Hyman illustrates the distinction between the three using noun-plus-noun (N1 of N2) associative constructions (AM). When H tone roots are in N1 position and are followed by the H tone of the AM, the latter is lowered to ↓H after A and B, but not C. Secondly, when in N2 position after a L toned AM, A and C become L-Lo, while B remains L-H. Finally, when in N2 positon after the H toned AM, A becomes H-Lo, while B and C become H-↓H.

As said above, A and B cause the following H tone of the AM to be realized at a lower level than the preceding root H tone (16a,b):

(16) a. kə̀fó ↓kə́ wì?
          kə̀-fó`   kə́ wì?
          c7-thing AM c1.person
          'thing of person'

      b. kə̀káŋ ↓kə́ ndɔ̀ŋ
          kə̀-káŋ` kə́ ndɔ̀ŋ
          c7-tin   AM c1.potato
          'tin of potato'

      c. kə̀fʉ́ ↓kə́ wì?
          kə̀-fʉ́`   kə́ wì?
          c7-medicine AM c1.person
          'medicine of person'

---

[5]The historical origins of the different classes adopted synchronically by **Hyman1979babanki** were: A = *LH, B = *HL, C = *HH.

    d. kə̀tyɨ́ ↓kə́ nyàm
        kə̀-tyɨ́ˋ kə́   nyàm
        c7-stick AM c9.animal
        'stick of animal'

    e. kə̀kɨ́m kɔ́ kɔ́↓kú
       kə̀-kɨ́m kɔ́   kə̀-kú
       c7-crab AM c7-gift
       'crab of gift'

    f. kə̀shí kɔ́ kɔ́↓tə́ŋ
       kə̀-shí   kɔ́ kə̀-tə́ŋ
       c7-place AM c7-belt
       'place of belt'

Downstep of the AM H tone is best explained by the presence of a floating L tone on N1 noun roots. Hyman's class C nouns (16c) do not cause downstep of the following H tone of the associative marker because they do not have a floating tone in their underlying representation. The forms in (16c) further show that the H tone of the AM spreads rightwards and delinks the L tone of the prefix of N2 nouns. It is this floating L tone that causes downstep of the H tone of N2 noun roots. Its [−R] feature spreads rightwards and delinks the [+R] feature of the following H tone as follows:

(17)   Rightwards [−R] spread (Downstep)
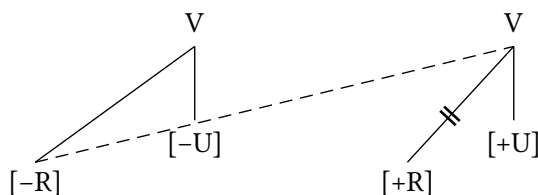
The application of this rule yields a ↓H tone with the features [+U, −R], as illustrated in the following derivations:

(18) UR ... Rightwards [−R] spread & stray erasure ... PR

(19) UR ... High tone spread[6] & low tone delinking

---

[6]I have shown only the spread of [+R] here but it must be said that it is the entire tone root node that spreads both [+U,+R] and delinks [−U,−R] of the L tone.

Rightwards [−R] spread, stray erasure, merger   PR

kə̀-   shí   ká   kə́-   tə́ŋ   [kə̀shí ká ká↓tə́ŋ]

[−R] [+R] [+R] [+R] [−R] [+R]
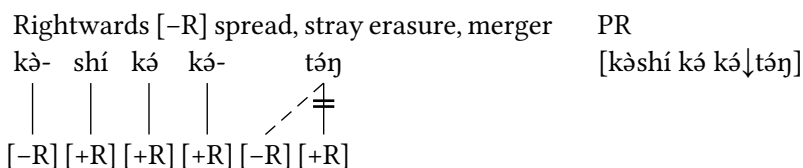
Each [+U, −R], i.e., ↓H, sets a new ceiling for subsequent Hs such that H tones after the one downstepped in the same tonal phrase do not rise above it as seen in (20), where italics have been used to indicate downstep of all Hs following H:

(20)   kə̀káŋ *↓ká byí shɔ́m*   'dish of my goats'
       nyám *↓sɔ́ wén shí sɔ́*   'those animals of his'

The pitch traces in Figure 1 show lower F0 values (120Hz-125Hz) for all the H tones after ↓H compared to the F0 value of the H tone before ↓H which is approximately 138Hz (In this and subsequent Figures, vowels are demarcated by vertical lines and marked by tone labels (L, H, M, ↓H) on the second tier.)[7]
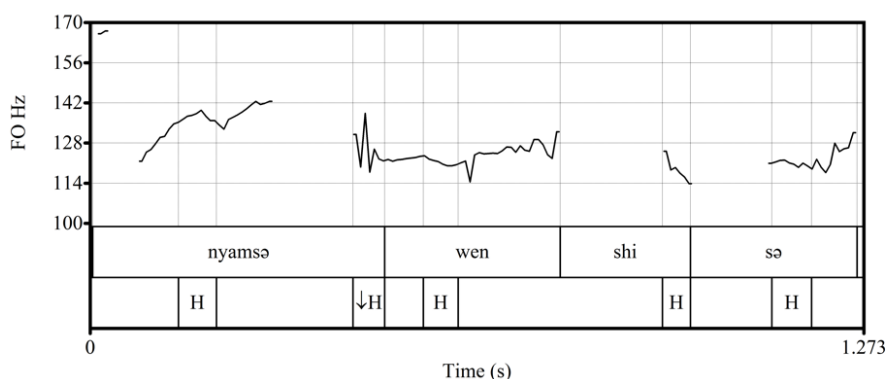
Figure 1: Downstep

We are now in a position to complete the tonal feature matrix to accommodate the downstepped high tone.[8]

---

[7]The pitch traces used in this paper were obtained from recordings of the author's speech at the Phonology Laboratory at UC Berkeley and analyzed in Praat (**Boersma2016**).

[8]The matrix is said to be complete because although Babanki has two contrastive underlying tone heights but five in derived forms, I do not treat the fifth - the prepausal level low tone as separate phonological tone features because I analyze it as the late phonetic effect of a floating high tone that follows the low tone and prevents it from falling.

(21)   H   ↓H   M   L
     Upper   +   +   −   −
     Raised +   −   +   −

An issue this raises is whether the M tone [−U, +R] and the ↓H tone [+U, −R] are phonetically distinguishable from one another. **Hyman1979babanki** has observed that "…the sequence H-M is identical, phonetically, to the sequence H-↓H." He further states that "the two are distinguishable, however, since ↓H establishes a ceiling for future H tones within the same tonal phrase, while M does not." The two tones therefore differ only in that they come from separate sources as well as on the effect they have on subsequent H tones. The pitchtracks in Figure 2 show that M and ↓H are not phonetically distinguishable.
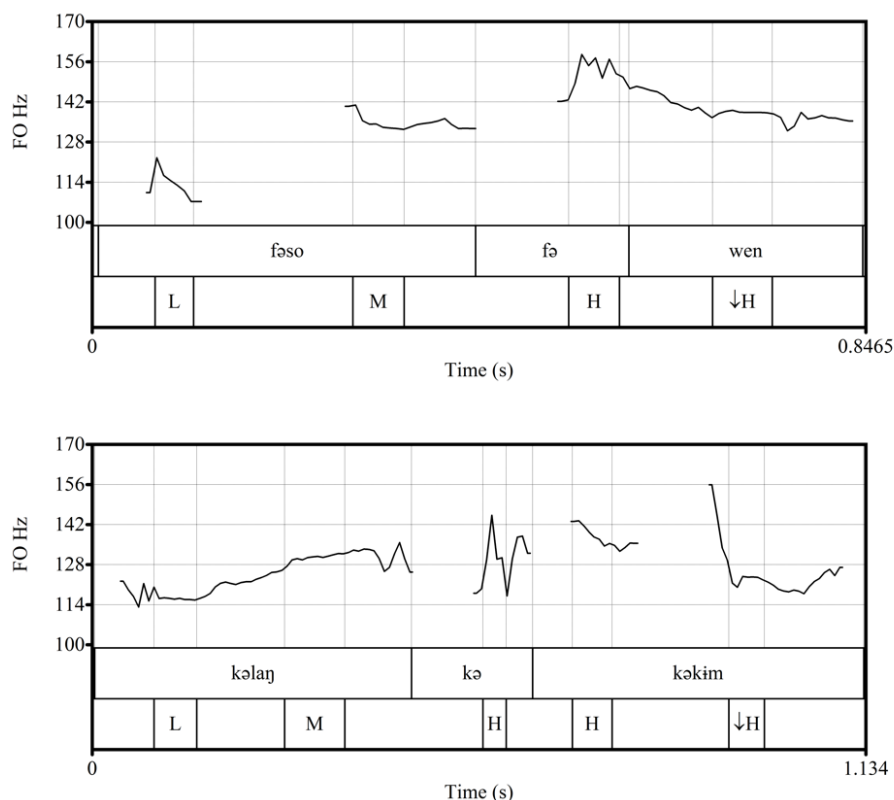
Figure 2: Comparison between M and ↓H

In both phrases, the F0 of vowels with M and ↓H tones are around 120 Hz while the intervening H tone has an F0 of about 135 Hz, confirming that M and ↓H are phonetically very similar, particularly if all other factors surrounding the utterance are the same. It is not likely that the two tones are discriminable if they typically exhibit this small F0 difference. The phonetic sameness of Mid and downstepped H is not unique to Babanki as it has been reported in other languages e.g. Bimoba (**Snider1998**).

Figure 3 and Figure 4 show that the phonetic pitch levels of H tones differ slightly depending on whether the preceding tone is M or ↓H. These pitchtracks show that a M tone may be followed by a H tone whereas the H tones following ↓H, are pronounced at the same level as the ↓H. Figure 3 shows that the F0 of vowels with H tone is about 126 Hz, slightly higher than the F0 of vowels with ↓H in Figure 4 which is about 120 Hz.
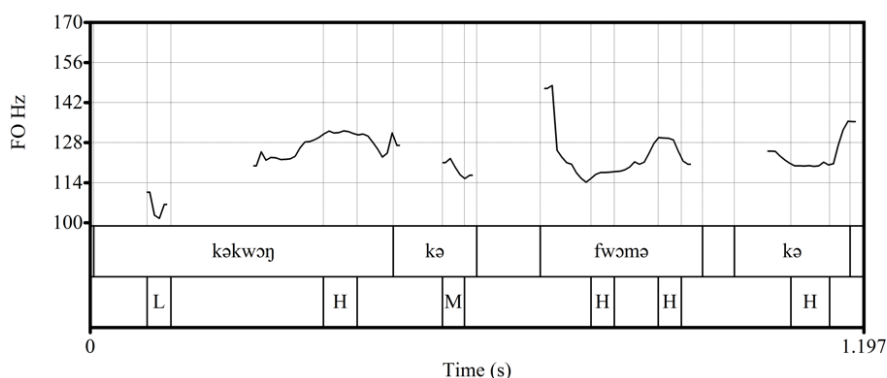
Figure 3: Comparison of H tone following M

6 Conclusion

Although there is no underlying M tone in Babanki, it appears on the surface when a prefix or stem L tone is raised in two separate conditions: prefix L-Raising takes place if it is found between two H tones while stem-Raising takes place if preceded by a L prefix and followed by a H tone. I have given a synchronic account of the processes that derive the M tone, arguing that it results from the regressive spreading of the [+R] feature of high tones which is blocked only by a nasal in NC initial roots. Downstep on its part results from the progressive spread of [−R] feature of a floating L tone. Simple acoustic analyses have confirmed that
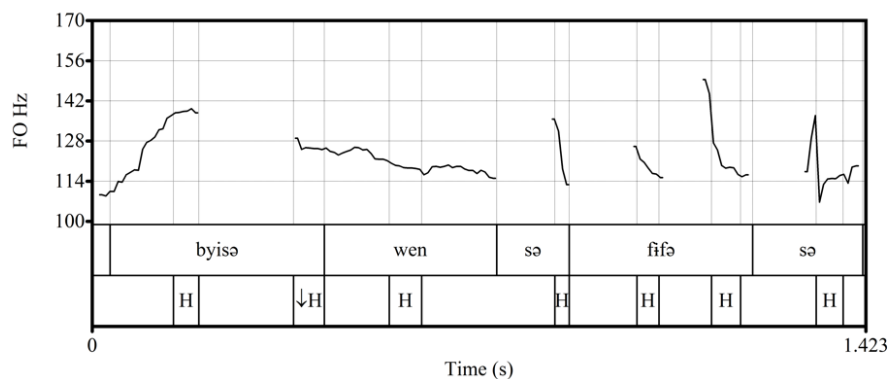
Figure 4: Comparison of H tone following ↓H

both M and ↓H are realized with similar F0 levels.

It was stated above that the other Central Ring languages such as Kom have a much more general M tone (see **hyman2005**), while Western Grassfields Bantu languages instead have a downstepped ↓H. Babanki is unusual in having both M and ↓H. However, whereas the source of the M in other Central Ring languages is from an underlying /H/ that is lowered after a L, we have seen that Babanki creates output Ms from underlying /L/. Although **Hyman1979babanki**'s (**Hyman1979babanki** 166-168) account is unnecessarily abstract as a synchronic analysis, it clearly shows that M tone originates to avoid tonal ups and downs (**hyman2010**). In particular, it is meant to avoid tonal contours surrounded by the opposite tone. As we have seen, unlike most other Ring languages, Babanki has rid itself of nearly all contours, but has developed a M tone level that is phonetically identical to ↓H, but phonologically distinct.

Acknowledgements

Abbreviations

AM	associative (possessive) marker	INF	infinitive
c1-19	class Marker	n	noun
IMP	imperative	PREP	preposition

Part II

Syntax and semantics

Part III

Areal features and linguistic reconstruction

Did you like this book?

This book was brought to you for free

Theory and description in African Linguistics

change your blurb in localmetadata.tex