

The prosody of focus in Bantu languages and the primacy of phrasing*

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1. Introduction

I think it is fair to say that

- most research on the interaction of focus and prosody has been carried out on European stress languages, where the main prosodic correlate of focus investigated is
 - sentential accent: rhythmic prominence on the focused element, generally made salient by an intonational pitch contour. (e.g. Gussenhoven (1986, 1996, 1999), Selkirk (1984, 1995))

Frota (2000: 375) nicely summarizes the two main ways that focus is mapped to accent:

- either *directly* (RouteB) OR *indirectly* (Route A)

(1)

(a) Route A: Focus → Syntax → Prosodic Phrasing (→ Accent)
(Hungarian, Basque)

(b) Route B: Focus → Prominence (Accent) → Prosodic Phrasing
(English, European Portuguese)

Notice that the typology in (1) claims that:

- Focus cannot *directly* condition prosodic phrasing (it can only directly condition either syntactic phrasing or accent assignment);
- Focused elements are made prosodically salient through accent assignment (no other correlate is mentioned).

In this paper, I present data from two Bantu languages spoken in Malawi

- Chichewa and Chitumbuka

which show that our repertoire of focus-prosody interactions must be expanded:

- In Chichewa, ‘boundary narrowing’ (Hyman 1999) is a common correlate of focus,
 - showing that focus can directly condition prosodic phrasing.
- In both Chichewa and Chitumbuka, focused elements are placed in syntactic positions that lead to ‘anti-accent’ prosody on non-focused elements,
 - showing that accent assignment is not the only way focused elements can be made intonationally prominent in the utterance.

Talk is organized as follows:

- Section 2 sketches the tone and intonation systems of the two languages.
- Section 3 illustrates the interaction of focus and prosody.

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2. Tone and Intonation in Chichewa and Chitumbuka

The goal of this section is to present enough information on tone and intonation to show that it is, in fact, surprising that neither Chichewa nor Chitumbuka use sentential accent to indicate focus as:

- the tone systems of both languages have accentual properties;
- intonation is used to indicate other pragmatic functions.

2.1 Accentual tone system

Work like McCawley (1970, 1978), Clements & Goldsmith (1984), Odden (1999), Downing (to appear, in press) has shown that the tone systems of many Bantu languages have properties which are characteristic of stress systems, namely:

(2)¹

- *culminativity*: every word has one and only one High tone;
- *positional restrictions*: the High tone is realized on an edgemoat syllable;
- *tone-stress interaction*: the High tone aligns with the stressed penult.

Chitumbuka has all of the characteristics of an accentual tone system listed in (2):

- the penult of every word is lengthened and bears a falling tone (Downing 2004):

(3) Chitumbuka

(a) Nouns

<i>Singular</i>	<i>Gloss</i>	<i>Plural</i>
mû:-nthu	person	wâ:-nthu
m-lî:mi	farmer	wâ-lî:mi
m-zî:nga	bee hive	mi-zî:nga

(b) Verbs

ti-ku-zê:nga	we build
nyû:mba yi-ku-zengê:ka	the house is being built
wâ-ka-zê:nga	they built
wâ-ka-ku-zengê:ra	they built for you sg.

Chichewa has a more complex tonal system, but it still has accentual properties:

- input tonal contrasts in verb stems often neutralized because of tonal processes that have the effect of optimizing realizing verbal H tone on the lengthened penult:
 - that is, we find *positional restrictions* (penult); *tone-stress interaction* (penult bears stress); but *limited culminativity*.

These points are illustrated by the data in (4):

¹ See Hyman (1977), for example, for further discussion of these properties in stress systems.

(4) Chichewa verbs (adapted Hyman & Mtenje 1999: 98; Kanerva 1990: 23)²

(a) *Low-toned verb stems*

<u>Distant Past</u>		<u>Imperative</u>	
(tí-náa-) [méenya	‘we hit’	meenya	‘hit!’
(tí-náa-) [thandiiza	‘we helped’	thandiiza	‘help!’
(tí-náa-) [vundikiira	‘we covered’	vundikiira	‘cover!’

(b) *High-toned verb stems*

(tí-náa-) [péeza	‘we found’	peéza	‘find!’
(tí-náa-) [namiiza	‘we deceived’	namiiza	‘deceive!’
(tí-náa-) [khululukiira	‘we pardoned’	khululukiira	‘pardon!’

2.2 Yes/No Question Intonation

- In both Chichewa and Chitumbuka, Yes-No Qs have rise-fall over final two syllables; overall pitch is higher:

(5) Yes-No Questions in Chitumbuka (Downing 2004)

(a) Kási, mbû:zi zi-ka-duka pa-chi-phùúphâ?

Q, goats jump over wall

Did the goats jump over the wall?

(b) Kási, mbwê:ngu wa-ka-lilisya mwàánâ?

Q, monkey make cry child

Did the monkey make the child cry?

(c) Ku-limilirá-so ngòómâ?

Are you weeding also the maize?

(6) Yes-No Questions in Chichewa (Downing field notes)

(a) Kódí, gaálu anáseketsa mwàánâ?

Q dog make laugh child?

Did the dog make the child laugh?

(b) Kódí, anyamáàta akudyétsa nkhùúmbâ?

Q boys feed pigs

Are the boys feeding the pigs?

(c) Kódí mphunziitsi ámalíma chíamáángâ?

Q teacher farms maize

Does the teacher farm maize?

- These intonations are found elsewhere in Bantu: Swahili (Ashton 1947) for rise-fall; overall raised pitch in Northern Sotho (Zerbian 2004), Jita (Downing 1996).
- Indeed, as Yip (2002) shows, it is fairly common for tone languages to use boundary tones or an overall raising of pitch register to mark questions: lexical tone does not preclude the intonational use of pitch.

² Kanerva (1990) argues that the Distant Past prefix (-naa-) assigns a High tone to the preceding vowel as well as to the penult syllable. The initial High tone is realized over the first two moras of the word due to a process of High Tone Doubling. See Hyman & Mtenje (1999) and Kanerva (1990) for further discussion.

To sum up this section, Chichewa and Chitumbuka might be expected to indicate focus by use of sentential accent as,

- The tone system is accentual at the word level, and
- Tone and register are manipulated to distinguish statements from questions.
- Further, other Bantu languages use overall raise in pitch to indicate focus (Möhlig et al. 2002)

However, I found no clear evidence for sentential accent as a prosodic marker of focus. As next section shows, focused words are prosodically distinguished through:

- Boundary narrowing and
- Anti-accent use of downstep

3. The prosody of focus in Chichewa and Chitumbuka

3.1 Boundary narrowing in Chichewa

It is surprising that the typology in (1) does not permit focus to directly condition prosodic phrasing, as it is fairly well known, from Kanerva's (1990) study, that this possibility exists in Chichewa (see e.g., Hyman (1999), Gussenhoven (2002), Truckenbrodt (1995, 1999)).

Effect on prosodic phrasing is 'boundary narrowing' (Hyman 1999):

- phonological phrase boundary must follow the focused element,
- remaining elements of the sentences are parsed into separate phonological phrases:
 - resulting in more, smaller phonological phrases under narrow focus.
- No prosodic equivalent of accent is reported on the focus phrase.

(7) Focus and phrasing in Nkhotakota Chichewa (Kanerva, 1990: 98, fig. (101))

- (a) anaménya nyumbá ndí mwáála 'He hit the house with a rock.'
 he hit house with rock
- (b) What did he do? (VP focus)
 (anaményá nyumbá ndí mwáála)
- (c) What did he hit the house with? (Oblique PP focus)
 (anaményá nyumbá ndí mwáála)
- (d) What did he hit with the rock? (Object NP focus)
 (anaményá nyuúmba) (ndí mwáála)
- (e) What did he do to the house with the rock? (V focus)
 (anaménya) (nyuúmba) (ndí mwáála)

Other Bantu languages illustrating boundary narrowing include:

- Haya (Byarushengo, Hyman & Tenenbaum 1976; Kanerva 1990: sec. 4.9)

(8) '%' indicates a phrase break conditioning tone alternations on the preceding word

- (a) ni-ba-juná Kakúlu mbwéènu
 'They are helping Kakulu today.'
- (b) ni-ba-juná Kakûlu % mbwéènu
 'They are helping KAKULU today.'
- (c) ni-ba-mu-júná % mbwéènu % Kakûlu
 'They are HELPING him (mu) today, Kakulu. ('Kakulu' is postposed object NP.)

- IsiXhosa (Jokweni 1995)

(9) IsiXhosa Verb focus (Jokweni 1995: 65, fig. (6b); 94, fig. (39b))

(bá-zaku-liima) (nge-záándla)

They are going to *plow* by hand.

(cf. (bá-zaku-lima nge-záándla) ‘They are going to plow by hand.’)

As Ladd (1996) and Gussenhoven (2002) note,

- prosodic rephrasing is also a primary cue to focus in Korean (Jun 1996, 1998), Bengali (Hayes & Lahiri 1991), and Japanese (Venditti, Jun & Beckman 1996).

Féry (2001) argues phrasing is also the primary cue to focus in French.

In sum,

- Chichewa is one of many languages showing that focus can directly condition prosodic phrasing.

3.2 ‘Anti-accent’ and downstep in Chichewa and Chitumbuka

Word order in Bantu languages is canonically (S) V (O):

- The inflected Verb is the only obligatory element of an utterance.
- When Subject and Object NPs are present, the subject (agent) canonically precedes the verb, while the object NP(s) and/or other complement follow the verb.
- This basic word order is flexible,
 - with focus one factor favoring alternative word orders.

Favored positions for focus are: sentence-initial (10) and post-verbal (11).

(10) Sentence initial

Chitumbuka (Downing 2004)

(a) ma-bû:ku wâ-ka- pasa !wâ:na

BOOKS they gave children

They gave the children BOOKS. [Answers: ‘What did they give to the children?’]

(b) Pa-mu-pâ:nda zi-ka-duka mb!û:zi.

OVER THE WALL jumped goats.

The goats jumped OVER THE WALL. [And something else jumped over something else.]

Chichewa (Downing & Mtenje, work in progress³)

(c) mbúzi iizi || !i-ná-zí-saaka !mikáango

GOATS THESE hunted lions

The lions hunted THESE GOATS [and not those].

(d) kwa mfùumu || !a-na-péréka mpháátso

TO CHIEF they gave gift

To the CHIEF they gave a gift. [And other things (or nothing) given to other people.]

³ The intonation and focus information for Chichewa comes from collaborative work with Al Mtenje. See Mchombo (in press) for more discussion of the syntactic consequences of variable word order in Chichewa, and see Kanerva (1990) for discussion of intonation phrasing and downstep in Sam Mchombo’s dialect of Chichewa. ‘!’ indicates downstep; ‘||’ indicates pause.

(11) Post-verbal

Chitumbuka (Downing 2004)

- (a) *wâ-ka- pasa wâ:na ma-b!û:ku*
They gave CHILDREN books.
[That is, CHILDREN, not someone else, got books.]

OR

- (b) *wâ-ka-wâ-pasa ma-bû:ku !wâ:na*
They gave BOOKS children
[That is, many presents distributed, but only BOOKS given to the children.]

Chichewa (Downing & Mtenje, work in progress)

- (c) *a-na-pátsá mwàáná !zóóváàla.*
s/he gave CHILD clothes
S/he gave THE CHILD clothes.

vs.

- a-na-pátsá zóóváàla. !mwàáná*
s/he gave CLOTHES child
S/he gave CLOTHES to the child.

- (d) *mpháátso !a-na-péreká kwá mfùùmu.*
gift s/he gave TO CHIEF
S/he gave the gift to the CHIEF [not anyone else].

This is not too surprising:

- work like Morimoto (2000) shows that sentence-initial and post-verbal positions are, cross-linguistically, typical positions for focus.

From (10) and (11), we clearly see that both languages follow Route A (1a): focus directly conditions syntax. What are the prosodic consequences?

- Downstep and other pitch reduction processes create a sort of ‘anti-accent’ and interacts with syntax to indirectly highlight focused elements.

Sentence-initial focus (10):

- Downstep after each High tone (*Chitumbuka*) or each phonological phrase (*Chichewa*):
 - sentence initial word/phrase has the highest pitch of the utterance.

Post-verbal focus:

- High tone reduction within the VP (*Chitumbuka* – (11a,b)):
 - often only rightmost element of the VP – typically the focused element – has a Falling tone.

- Downstep (Chitumbuka and Chichewa (11a,b,c)):
 - Downstep on a following non-focussed element makes the focused element prominent through an ‘anti-accent’ effect. The focused element is not actively raised in pitch: this is what we mean by ‘accent’. Rather the non-focused element following the focused is actively lowered, indirectly increasing the prominence of the focused: this is what I mean by ‘anti-accent’. (See Hock (1998) for discussion of final reduction as a factor motivating pre-final focus position in other languages.)

Anti-accent might seem to resemble deaccenting of non-focussed elements, like in West Germanic (Ladd 1996), or the movement of a focused element to position of sentence stress, like in Romance languages (see Dominguez (2004) and Samek-Ludovici (to appear) for recent discussion).

However,

- not deaccenting, because downstep only lowers the pitch of following High tones, it does not eliminate them, nor is penult lengthening (phrasal stress) affected;
- sentence-initial focus conflicts, in fact, with utterance-penult lengthening which is the equivalent of phrasal stress.

4. Conclusion

Bantu languages like Chichewa and Chitumbuka are of typological importance because they illustrate the primacy of phrasing in the focus-prosody interaction:

- focus directly conditions ‘boundary narrowing’:
- (12) Route B2: Focus □ Prosodic Phrasing (□ Accent)
- focused elements occur in syntactic positions which tend to have higher pitch than surrounding non-focused elements as downstep leads to an ‘anti-accent’:
- (13) Route A2: Focus □ Syntax (□ Anti-Accent use of downstep)

More research is necessary to see whether anti-accent plays a role in creating a pitch asymmetry between focused and non-focused elements in other prosodic systems.

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