

Bantu Languages and the Typology of Focus Prosody

Laura J. Downing, ZAS

1 Introduction

Linguists often joke that they don't like to be asked, "How many languages do you speak?"

- A better question would be, "How many languages do you know something about?"

Linguists tend to know something about several languages, because

- Linguists of all stripes are interested in investigating, "What is a possible human Language?"
- Linguistic frameworks of all kinds propose universal constraints or parameters in response to this question.
- To test the validity of these proposals, we need to study as many individual languages as possible, taken from as broad a sample as possible.
- Linguists who work on understudied languages – like we Bantuists – have a particular role to play in broadening the sample.

In this talk, I take up one universalist typological claim, namely:

There is a necessary correlation between focus and sentence-level stress/prominence:

(1) Prominence-Focus Hypothesis

"Focus needs to be maximally [prosodically] prominent" (Büring 2010: 178).

I test the claim by presenting a survey of focus marking strategies in selected Bantu languages.

The talk is structured as follows:

- First, I briefly review current typologies of focus, and show they lead us to expect to find some prosodic expression of focus in all languages.
 - I illustrate this section with examples of focus contexts, and show that, in Germanic languages like English, this expectation is mostly met.
- Then I present a survey of focus prosody in selected Bantu languages.
 - In this section, I use the same focus contexts, illustrated with data mainly from Chewa, Tumbuka and Zulu, based on my own research,
 - with comparative reference to other Bantu (and non-Bantu) languages.
- As we shall see, this section is a story of the absence of focus prosody.
 - Instead, we find that focus is marked using other strategies or that focus often is not marked at all.
- I conclude with some remarks on the implications of these findings for focus typology.

2 Typologies of focus prosody

2.1 *What is focus?*

One finds a number of definitions of focus in the literature. I adopt the following working definition, adapted from e.g., Güldemann (2003), Krifka (2007), Nurse (2008):

- Focus is the part of an utterance which introduces changes in the Common Ground shared by Speaker and Addressee.

Many researchers on focus (e.g., Krifka 2007, Rooth 1992) point out that the focused part of an utterance provides a congruent answer to an implicit or explicit question.

- For this reason, question/answer pairs are a common technique for eliciting focus.

2.2 *Focus prosody typologies: how is focus realized?*

Base on studies of focus in, mainly, European languages, two main typologies of focus are found in the current literature:

Typology I: defined by the Prominence-Focus hypothesis in (1), restated more formally below:

(2) PROMINENCE-FOCUS (Samek-Lodovici 2005: 697):

For any XP_f and YP in the focus domain of XP_f , XP_f is prosodically more prominent than YP,

That is, focussed words must bear a sentence-level stress or pitch accent.

(Other references for this claim include Büring and other papers in Zimmermann & Féry (2010), plus Frota (2000), Gundel (1988), Jackendoff (1972), Roberts (1998), Rooth (1992, 1996), Reinhart (1995), Selkirk (1995, 2004), Szendrői (2003), and Truckenbrodt (1995, 2005).)

The schema in (3) formalizes how focus and stress/prominence get together: either indirectly, via syntax (Route A), or directly (Route B):

(3) Split Focus hypothesis (Frota 2000: 374)

Route A: Focus \rightarrow Syntax \rightarrow Phrasing $\leftarrow \rightarrow$ Prominence

OR Route B: Focus \rightarrow Prominence $\leftarrow \rightarrow$ Phrasing

Typology II: Focus phrasing hypothesis (Ladd 2008; Hayes & Lahiri 1991; Kanerva 1990):

Prosodic phrasing is the basic (universal) prosodic correlate of focus. Sentence-level prominence is one potential, but not obligatory, correlate of focus phrasing.

(4) Focus \rightarrow Phrasing (\rightarrow Prominence) cf. Route B

- Both of these typologies share the assumption that focus should be marked prosodically in all languages, with prominence at some level being a primary cue to focus.
- We shall see that Bantu languages challenge this assumption.

2.3 *Illustrating with English*

I use the following contexts to illustrate focus in this section and the next:

- wh-Q/As (stress plus word order);
- choice Q/As (including clefts);
- association with focus particles (*also*).

We can see they meet the definition of focus in 2.1, above: question/answer pairs and focus particles introduce changes into the Common Ground shared by Speaker and Addressee.

As shown by the data in (5), English clearly confirms the PROMINENCE-FOCUS hypothesis:

- Focus has a limited influence on syntax: clefts; movement of focused words/phrases to sentence-final stressed position.
- Focused words (except for fronted wh-words) consistently bear sentence-level stress.

(5) The focused words are underlined; words with sentence-level stress are bolded:

(a) Wh-Q/A

Q Who did you give the **book** to?

Ai I gave the book to Mary. - non-canonical word order

Aii I gave Mary the book.

(b) Choice/Polar Q/A

Q Did **Tracy** or **Chris** go to pick up the drinks for the party?

Ai **Chris** went to pick them up.

Aii It's Chris who went to pick them up. - cleft

(c) Focus morpheme *also*

Q Have you tried the Italian restaurant yet?

A Yes, and we've also tried the Vietnamese restaurant.

In the next section, we will see that these same focus contexts have different effects in the grammars of Bantu languages.

3 Testing the typologies on selected Bantu languages: Chewa, Tumbuka, Zulu

There are some 500 Bantu languages (Nurse & Philippson 2003), and the prosody of focus has not been investigated for very many. In this section, I present data from 3 languages I have done elicitation work on:¹

- Chewa (N30) and Tumbuka (N20), both major languages of Malawi;
- Zulu (S40), the variety spoken in Durban, South Africa.

Note that in all three languages, the canonical word order is: S V IO DO Adjunct. (This is common cross-Bantu; see Bearth 2003, Heine 1976.) The data in (6) illustrate:

(6) Canonical word order, neutral focus context

(a) Chewa – S V IO DO

mwaná wa-patsa bambo tambaala
1.child 1SUBJ.PERF-give 1.father 5.rooster
'The child has given father the rooster.'

(b) Tumbuka – S V DO Adjunct

ŵa-máama ŵa-ku-chapa vya-kuvwara vya ŵ-áana ku-máaji
2P-woman 2P.SUBJ -TAM-wash 8-clothes 8.of 2-child LOC-6.water
'The woman washes clothes for the children in the river.'

(c) Zulu – S V IO DO

ú-Síph' ú-phékél' ú-Thánd' in-kúukhu
1-Sipho 1SUBJ-cooked 1-Thandi 9-chicken
'Sipho cooked chicken for Thandi.'

¹ I would like to thank my language consultants and collaborators for their patience and help with elicitation work on their languages: Al Mtenje, Jessie Chirwa, Peter Kishindo (Chewa); Tionge Kalua, Jean Chavula and Francis Njaya (Tumbuka); Meritta Xaba (Zulu). I am grateful to the Centre for Language Studies at the University of Malawi, for their hospitality during several research visits, and to Lisa Cheng and Leston Buell, who formed a research team with me in working with Meritta Xaba on Zulu.

The data in this section comes from this elicitation work. Some has been analyzed in published papers: Cheng & Downing (2007, 2009, to appear) and Downing (2008).

Note that in all three languages, vowel length is not contrastive, and acute accents indicate High tones.

The long penult vowels we see in the data are correlates of phrasal stress; the utterance penult vowel (**bolded**) is longer than utterance-medial penults. (Penult lengthening is a common correlate of stress cross-Bantu; see Downing (in press).)

In focus contexts, then, the typologies in (3) and (4) predict that the longest penult vowel (**bolded**) will occur on a word in focus (underlined), or that it will at least have focus-conditioned phrasal stress.

The next sections present what we actually find.

3.1 *Wh-questions and answers: non-subjects and subjects*

3.1.1 *Non-subjects*

Correlates of focus:

Tumbuka and Zulu: Immediately after the Verb (IAV) position of wh-questions and answers, **where they receive phrasal stress**. (Words repeated from the question tend to be left- or right-dislocated.)

(7) Tumbuka – cf. (6b)

Q wa-máama wa-ku-chapira nkhúu vya-kuvwara vya w-ána
 2P-woman 2P.SUBJ-TAM-wash where 8-clothes 8.of 2-child
 ‘Where is the woman washing clothes for the children?’

A vya-kuvwara vya w-ána wa-máama wa-ku-chapa ku-máaji
 8-clothes 8.of 2-child 2P-woman 2P.SUBJ-TAM-wash LOC-6.water
 ‘The woman washes clothes for the children in the river.’

(8) Zulu

Q u-wa-thwéle ngáan’ amá-thaanga
 You.SUBJ-6OBJ-carry how 6-pumpkin
 ‘How are you carrying the pumpkins?’

Ai si-wa-thwéle ngó-bhasikíid’ amá-thaanga
 We.SUBJ-6OBJ-carry with1a-basket 6-pumpkin
 ‘We are carrying the pumpkins with a basket.’

N.B.: the canonical word order is not acceptable as answer to the wh-question, even though sentence-level stress would be on the word in focus:

Aii #si-thwéle amá-thaanga ngó-bhasikíidi
 We.SUBJ-carry 6-pumpkin with1a-basket
 ‘We are carrying the pumpkins with a basket.’

Chewa: IAV position is not required; optional phrasal stress on the wh-word, but no obligatory prosody for the answer.

(Note, this finding about the prosody of Chewa in situ focus contradicts Kanerva (1990) and Downing et al. (2004). More on this in section 3.4.)

(9)

(a) IAV for non-subject wh-words NOT obligatory in Chewa – cf. (6a)

Q wa-patsa chiyáani baambo ‘What has s/he given to father?’ -IAV
 1SUBJ.PERF-give what 1.father

OR wa-patsa bambo chiyáani ‘What has s/he given to father?’ -canonical
 1SUBJ.PERF-give 1.father what

A wa-patsa bambo tambaala
 1SUBJ.PERF-give 1.father 5.rooster
 ‘S/he has given father a rooster.’

(b) apparent IAV here is the canonical position for the DO (preceding Adjunct)

Q a-na-ményá chiyáani ndí mwáálá
 1SUBJ-PAST-hit what with 3.rock
 ‘What did s/he hit with the rock?’

A a-na-ményá nyumbá ndí mwáálá
 1SUBJ-PAST-hit 9.house with 3.rock
 ‘S/he hit the house with the rock.’

3.1.2 Subjects

Correlate of focus:

All 3 languages: questioned subjects and answers are clefted; clefted word has phrasal stress.

As discussed in detail in Zerbian (2006: ch. 4),

- this special requirement for questioning subjects is most plausibly explained by the inherently topic-like properties of preverbal subjects, making this position incompatible with focus. (See, too, Morimoto (2000) and van der Wal (2009) for discussion of topic-like preverbal subjects in Bantu languages.)

(10) Chewa

Q ndi ndááni a-méné á-ná-gulá nyama y-ówóola
 COP 1.who 1-REL 1SUBJ-TAM-buy 9.meat 9.of-spoiled
 ‘It’s who, the one who bought spoiled meat?’

A ndi m-fúmú yá í-ng’óono i-méné í-ná-gulá nyama y-ówóola
 COP 9-chief 1.of young 9-REL 9 SUBJ-TAM-buy 9.meat 9.of-spoiled
 ‘It’s the junior chief who bought the spoiled meat.’

(11) Tumbuka

Q ni njáani uyo wa-ku-chapa vya-kuvwara vya w-ána ku-máaji
 COP1.who 1.Rel 1SUBJ-TAM-wash 8-clothes 8.of 2-child LOC-6.water
 ‘It is who who is washing clothes for the children in the river?’

A m-ba-máama awo wa-ku-chapa vya-kuvwara vya w-ána ku-máaji
 COP2.mother 2.REL 1SUBJ-TAM-wash 8-clothes 8.of 2-child LOC-6.water
 ‘It’s mother who is washing clothes for the children in the river.’

(12) Zulu

Q `ó-báan' ábá-dlal' é-sí-kólee-ni
COP.2A-who REL2SUBJ -play LOC-7-school-LOC
'It is who (pl.) who is playing at school?'

A ábá-ntwaan' ábá-dlal' é-sí-kólee-ni
COP.2-child REL.2SUBJ -play LOC-7- school-LOC
'It is the children who are playing at school. '

3.2 Choice/Polar questions

3.2.1 Subjects and non-subjects

All 3 languages: we find no consistent prosody or position dedicated to this kind of focus.

To illustrate with Tumbuka,

- notice that the IAV position is possible but not required for the focused words in either the question or the answer:

(13) Tumbuka

Q wá-máama wá-ku-chapa vya-kuvwara vya wá-ána ku-máají
2P-woman 2SUBJ-TAM-wash 8-clothes 8.of 2-child LOC-6.water

OR vya-kuvwara vya wá-â:na wá-mâ:ma wá-ku-chapa ku-máají

IAV 8-clothes 8.of 2-child 2P-woman 2SUBJ-TAM-wash LOC-6.water

'Is your mother washing the children's clothes *in the river*?''

A wá-ku-chapa vya-kuvwara vya wá-ána ku-máaji yáayi
2P.SUBJ-TAM-wash 8-clothes 8.of 2-child LOC-6.water not

wá-ku-chapira ku-nyúumba

2P.SUBJ-TAM-wash.at LOC-9.house

'She's not washing the children's clothes *in the river*. She's washing them *at home*.'

3.2.2 Verbs, prepositions, modified nouns when not syntactic phrase final

Chewa and Tumbuka: we find that verbs, prepositions and modified nouns do not receive phrasal stress when focused (unless they are final in their syntactic phrase).

That is, we find no correlate of focus in this context.

(14) Chewa

(a)

Q Mw-aná a-ná-méenya kapena ku-géndá nyumbá ndí mwáálá
1-child 1SUBJ-TAM-pound or INF-hit 9.house with 3.rock
'Did the child *hit (by pounding)* or *hit (by throwing)* the house with a rock?'

A Mw-aáná a-ná-ménya nyumbá ndí mwáálá
1-child 1SUBJ-TAM-pound 9.house with 3.rock

'The child *hit* the house with a rock.'

- (b)
- Q Mw-aáná a-ná-nyámulira dengú bambo wókálaamba
 1-child 1SUBJ-TAM-carry for 5.basket 1.man 1.old
 kapená máí wókálaamba
 or 1.woman 1.old
 ‘Did the child carry the basket for the old *man* or the old *woman*?’
- A a-ná-nyámulira dengú bambo wókálaamba
 1SUBJ-TAM-carry for 5.basket 1.man 1.old
 ósatí máí wókálaamba
 not 1.woman 1.old
 ‘She carried the basket for the old *man*, not the old *woman*.’

(15) Tumbuka

- (a)
- Q Káasi, ch-úuvu chi-ka-khosomoleska ntchéêwée
 Q 7-dust 7SUBJ-TAM-make.cough 9.dog
 ‘Did the dust make the dog *cough*?’
- A Yáayi ch-úuvu chi-ka-yethyemuliska ntchéêwée
 no 7-dust 7SUBJ-TAM-make.sneeze 9.dog
 ‘No, the dust made the dog *sneeze*.’

- (b)
- Q mw-áaná wa-ka-gheghera chi-téete dada mu-chekúúruu
 1-child 1SUBJ-TAM-carry.for 7-basket 1.man 1-old
 panyákhe mw-anakazi mu-chekúúru
 or 1-woman 1-old
 ‘Did the child carry the basket for an old *man* or an old *woman*?’
- A mw-áana wa-ka-mu-gheghera chi-téete dada mu-chekúúru.
 1-child 1SUBJ-TAM-1OBJ-carry.for 7-basket 1.man 1-old
 ‘The child carried the basket for an old *man*.’

Zulu: disjoint verb morphology allows the verb to be focused – see (16).

However, as in Chewa and Tumbuka, modified nouns and prepositions cannot be focused unless they are final in their syntactic phrase – see (17).

(16) DJ verb focus in Zulu

Ú-ya-síínda ló-bhasikéédi.
 1a-DJ-be.heavy this.1a-basket
 ‘This is a heavy basket.’ [lit., ‘It is heavy, this basket.’]

(17) Zulu – no phrasal stress on non-final preposition/locative

- Q ín-dúúna izíí-ndlu) í-z-akhé: é-sí-gódi-ni seethu
 9-chief 10-house 9SUBJ-10OBJ-build LOC-7-village-LOC 7.our
 nomá nga-phááindle
 or LOC-outside
 ‘Did the chief build houses *inside* our village or *outside*?’
- A ín-dúúna izíí-ndlu í-z-akhé: é-sí-gódi-ni seethu
 9-chief 10-house 9SUBJ-10OBJ-build LOC-7-village-LOC 7.our
 hháyí nga-phááindle
 not LOC-outside
 ‘The chief built houses *inside* our village, not *outside*.’

3.3 Focus morpheme -so 'also' in Tumbuka

-so is realized as an enclitic on the verb, no matter what word it places in focus.

Correlate of focus:

No consistent prosody marks either -so or the word it places in focus (though -so often has phrasal stress), as shown in (18):

(18) Tumbuka

- (a) ŵ-ana ŵa sukulu náaŵo ŵa-ku-ŵa-temwá-so yáayi ŵa-fúumu
 2-student and.2 2SUBJ-TAM-2P.OBJ-like-also not 2P-chief
 na ŵa-papi ŵa-nyáakhe na ŵóo-so ŵa-ka-ŵa-temwa yáayi
 and 2-parent 2-some and.2-also 2SUBJ-TAM-2P.OBJ-like not
 'The students also don't like the chief. Even some parents don't like him.'

- (b) n-khu-limilirá ma-púuno (b) Ku-limiliráa-so ngóomáa
 I-TAM-weed 6-tomatoes You.TAM-weed-also 9.maize
 'I am weeding tomatoes.' 'Are you also weeding the maize?'

3.4 Taking a closer look at Chewa in situ focus (Downing & Pompino-Marschall 2010)

I noted in presenting the data in (10) that it contradicted earlier work on Chewa focus prosody, as does the data in (14a). Let's take a closer look now at this problem.

Based on Kanerva's (1990) pioneering study, Chewa is regularly cited in the focus intonation literature as **the** example of a language where the prosodic correlate of in situ focus is:

- phrasal stress=penult lengthening – illustrated in (19), below:

(See, e.g., Hayes & Lahiri 1991, Hyman 1999, Gussenhoven 2004, Ladd 2008.)

(19) Focus phrasing in Chichewa (Downing et al. 2004)

(a) *Broad focus* [Context: 'What happened?']

Malúme a-ná-lémbera mkázi kálaata
 1.uncle 1SUBJ-past-write 1.woman 5.letter
 'Uncle wrote a letter to the woman.'

(b) *Narrow focus on first verbal complement*

Q Who did uncle write a letter to?

Malúme a-ná-lémbera ndaání kálaata
 1.uncle 1SUBJ-past-write who 5.letter

A Uncle wrote a letter to the woman.

Malúme a-ná-lémbera mkáazi kálaata
 1.uncle 1SUBJ-past-write 1.woman 5.letter

Surprisingly, no thorough follow-up phonetic study of Chewa has systematically investigated the effect of focus on prosody (Downing et al. (2004) reports on a pilot study with one speaker),

so my colleague Bernd Pompino-Marschall and I recently carried out a study with the cooperation of Al Mtenje and his students and colleagues at the University of Malawi.

Method

We elicited focus prosody by means of Q/A pairs, targeting broad focus, subject focus, verb focus and (non-final) post-verbal object focus. (The motivation for adopting this technique was discussed in section 2.)

A sample set of Q/A pairs, with English translation, is given in (20). Some of them have already been presented in the data above.

(20) Sample Q-A pairs to elicit focus

(a)=broad focus; (b)=subject focus; (c)=object focus; (d)=verb focus

- (a)Q What happened? Chí-ná-chit-íká ndi chi-yáni?
A The child hit the house with a rock. Mwaná a-ná-ménya nyumbá ndí mwálá.
- (b)Q Who hit the house with a rock? Ndaní á-ná-menyá nyumbá ndí mwálá?
A The child hit the house with a rock. Mwaná a-ná-ménya nyumbá ndí mwálá.
- (c)Q What did the child hit with a rock? Mwaná a-ná-ménya chi-yáni ndí mwálá?
A The child hit the house with a rock. Mwaná a-ná-ménya nyumbá ndí mwálá.
- (d)Q Did the child hit (by pounding) or hit (by throwing) the house with a rock?
Mwaná anáménya kapena kugénda nyumbá ndí mwálá?
A The child hit the house with a rock. Mwaná a-ná-ménya nyumbá ndí mwálá.

The 7 subjects analyzed, all undergraduates at the University of Malawi and native speakers of Chewa, read a set of Q/A pairs (24 in all) a total of 10 times, randomly presented using Praat. They were instructed to read the statements in the way that sounded most natural as answer to the paired question. Two Chewa native speaker linguist observers sat in on the recordings and agreed the readings were natural.

Expected results

List of positions where penult lengthening=phrasal stress is expected, based on (Kanerva 1990 and Downing et al. 2004):

- variably, the subject (if topicalized);
- sentence-final/pre-pausal word (culminative lengthening);
- words in narrow focus.

Figure (21) illustrates these expected positions of penult lengthening for data in (20); words in narrow focus are underlined:

(21) (a)=broad focus; (b)=subject focus; (c)=object focus; (d)=verb focus

- (a)Q What happened? Chí-ná-chit-íká ndi chi-yáni?
A The child hit the house with a rock. Mwaáná a-ná-ménya nyumbá ndí mwáálá.
- (b)Q Who hit the house with a rock? Ndaáni á-ná-menyá nyumbá ndí mwáálá?
A The child hit the house with a rock. Mwaáná a-ná-ménya nyumbá ndí mwáálá.
- (c)Q What did the child hit with a rock? Mwaáná a-ná-ménya chi-yáni ndí mwáálá?
A The child hit the house with a rock. Mwaáná a-ná-ménya nyuumbá ndí mwáálá.
- (d)Q Did the child hit (by pounding) or hit (by throwing) the house with a rock?
Mwaná anáménya kapena kugénda nyuumbá ndí mwáálá?
A The child hit the house with a rock. Mwaáná a-ná-ménya nyuumbá ndí mwáálá.

Actual results

As shown in the Table in (22), the results we got are different from what we expected in sentences with in situ narrow focus:

(22) Table showing penult vowel durations under different focus conditions for statements: mean (sd) [in ms], lengthening ratio in respect to final vowels (significantly longer vowels per sentence type marked in bold italics; penults of focused words are underlined)

subject	focus	mwaáná	a-ná-ménya	nyumbá	ndí mwáálá
EN	broad	96.401 (11.175) 2.102	38.005 (9.018) 0.487	65.501 (8.696) 0.984	<i>127.591 (16.080)</i> 1.518
EN	verb	108.124 (10.462) 2.252	37.162 (15.932) 0.486	57.322 (7.132) 0.790	<i>130.360 (21.270)</i> 1.871
EN	object	92.898 (17.277) 2.228	37.689 (9.973) 0.493	59.371 (5.645) 0.916	<i>117.048 (16.123)</i> 1.529
GN	broad	<i>103.762 (21.924)</i> 1.988	32.590 (5.858) 0.530	57.940 (7.914) 0.561	<i>102.041 (15.267)</i> 1.181
GN	verb	<i>110.051 (20.975)</i> 2.075	31.103 (7.762) 0.593	45.775 (6.694) 0.580	<i>109.078 (15.451)</i> 1.802
GN	object	<i>118.285 (22.675)</i> 2.222	36.733 (12.588) 0.588	45.124 (9.543) 0.508	<i>112.110 (13.002)</i> 1.424
HC	broad	<i>159.332 (50.731)</i> 1.459	87.696 (15.802) 0.908	70.754 (23.791) 0.813	<i>149.637 (25.300)</i> 1.877
HC	verb	<i>143.267 (45.511)</i> 1.617	88.964 (23.344) 1.121	75.374 (9.017) 0.876	<i>145.976 (21.847)</i> 1.389
HC	object	<i>139.832 (36.693)</i> 1.503	76.798 (11.136) 0.951	72.298 (8.822) 0.810	<i>162.107 (26.361)</i> 1.768
IN	broad	108.691 (11.291) 2.380	67.321 (6.969) 0.916	100.365 (13.122) 1.268	<i>125.405 (11.545)</i> 1.401
IN	verb	101.210 (14.904) 2.142	60.721 (8.354) 0.986	64.702 (6.307) 0.956	<i>133.823 (13.004)</i> 2.840
IN	object	<i>109.991 (17.009)</i> 2.213	61.792 (9.896) 0.816	70.176 (9.128) 0.816	<i>128.850 (26.822)</i> 1.692
LM	broad	<i>127.708 (5.921)</i> 1.665	96.453 (17.434) 1.237	77.332 (15.986) 0.549	<i>137.523 (15.507)</i> 0.799
LM	verb	106.981 (13.322) 1.259	98.658 (18.352) 1.440	47.266 (4.094) 0.495	<i>139.534 (10.653)</i> 0.646
LM	object	<i>131.393 (14.671)</i> 1.488	99.513 (22.235) 1.437	62.189 (19.710) 0.467	<i>140.033 (19.702)</i> 0.788
PM	broad	<i>135.822 (10.953)</i> 1.545	74.411 (9.079) 0.898	79.769 (15.599) 1.165	<i>145.732 (15.614)</i> 2.426
PM	verb	<i>135.578 (11.392)</i> 1.430	75.637 (4.131) 0.838	79.587 (17.780) 1.044	<i>127.685 (24.386)</i> 1.841
PM	object	<i>143.821 (8.720)</i> 1.392	74.263 (8.653) 0.789	91.591 (13.162) 1.224	<i>139.338 (9.853)</i> 2.086
SY	broad	87.050 (15.998) 1.982	52.805 (12.281) 0.839	55.920 (13.319) 0.686	<i>121.714 (18.084)</i> 1.561
SY	verb	94.697 (16.028) 3.108	52.271 (7.845) 1.029	40.003 (8.559) 0.539	<i>143.142 (15.124)</i> 1.998
SY	object	86.681 (10.426) 2.595	56.453 (12.607) 1.119	43.124 (8.476) 0.622	<i>139.028 (16.095)</i> 2.003

(a) in statements with broad focus, long penult vowels are clearly seen for the first and last phonological word (pw). Compared to the word final vowels, the length ratio for the first pw varies between ca. 1.5 and 2.5. Due to the extra lengthening of the utterance final vowel, this length ratio is generally less for the last pw (again ranging between 1.5 and 2.0 for most subjects).

(b) in situ focus on the verb (pw 2) or object (pw 3) does not result in consistent penult lengthening in the focused word. Within one sentence type, the last pw in general shows the longest penult vowel. While it sometimes does not differ significantly from the penult of pw 1, it does differ significantly from pw 2 and pw 3 whether they are focused or not.

To sum up, we find the following matches and mismatch between expected positions of penult lengthening and actual results:

Position	Result	Matches expectation?
subject	variable penult lengthening	expectation matched
sentence-final word	consistent penult lengthening	expectation matched
word in narrow focus	no consistent penult lengthening	EXPECTATION FAILS

Our conclusion:

- Chewa does not have obligatory focus prosody.
- The phrasal stress that Kanerva (1990) found on words with in situ focus is best explained as non-grammatical emphasis prosody.

4 Summarizing the focus marking strategies

Prosody?

- Focus has no consistent, direct effect on prosody in these Bantu languages.
 - Hyman's (1999) and Nurse's (2008) surveys of focus in Bantu languages also conclude that focus does not directly affect tone (and other prosody).
- Rather, focus mainly has an effect on the morphology and/or syntax (and this sometimes has prosodic consequences).

Morphology:

- Disjoint prefix marking verb focus in Zulu (see (16), above) – and other Southern Bantu languages. (See Doke (1961), Buell (2006), Creissels (1996), Güldemann (2003), Nurse (2008), van der Wal (2009), Zerbian (2007) for further examples and discussion.)
- Focus particles like *-so* in Tumbuka (see (18), above).

Syntax:

- IAV position for some kinds of focus in Tumbuka and Zulu.
 - This is found in other Bantu languages: Aghem (Hyman 1979, 1999; Hyman & Polinsky 2010; Watters 1979), Tswana (Creissels 2004); Makhua (van der Wal 2006, 2009); Kimatuumbi (Odden 1984); Bàsàà (Hamlaoui & Makasso 2010),
 - and in other African languages: Mambila (Güldemann 2007); Chadic (Tuller 1992).
 - Interestingly, Immediately BEFORE the Verb position is a common focus position in non-African languages, like Basque (Ortiz de Urbina 1999), German verb-final clauses (Kratzer & Selkirk 2009), Hungarian (Szendroi 2003), Mayan (Aissen 1992; Kügler et al. 2007) and Turkish (Kornfilt 1997).²
- Clefts to question or focus subject in all 3 languages.
 - This requirement is found in other Bantu languages: Dzamba (Bokamba 1976), Makhuwa (van der Wal 2009), Kivunjo Chaga (Moshi 1988), N. Sotho (Zerbian 2006), Kitharaka (Muriungi 2003), Kinyarwanda (Maxwell 1981);
 - and in other African languages: e.g., Bijogo (Seeger 2000), Byali (Reineke 2007), Hausa (Jaggar 2001: 496), Somali (Orwin 2008).

No focus marking:

- In situ focus is not marked in Chewa (section 3.4, above).
 - N. Sotho also has in situ focus with no focus prosody (Zerbian 2006).
- A verb, preposition or noun which is non-final in its syntactic phrase cannot be focused in Chewa and Tumbuka; prepositions and nouns cannot be focused when non-final in Zulu.
 - This same restriction is found in Bantu languages like: Swahili (Geitlinger & Waldburger 1999)
 - and has parallels in: Italian (Ladd 2008, Swerts et al. 2002), NB Basque (Hualde et al. 2002: 551), Egyptian Arabic (Hellmuth 2006: 123-129) and other languages surveyed in Cruttenden (2006) and Ladd (2008).

² As Güldemann (2007) argues, it is expected that Immediately Before the Verb would be the position of focus for SOV languages.

5 Conclusion

What, then, do Bantu languages tell us about the typology of focus prosody? Are they typologically unusual in having no focus prosody?

- Yes, according to current typologies discussed in section 2.2.
- No, according to very recent research: Chen et al. (2009) and Xu (2010) propose that focus prosody is an areal feature confined to some northern Asian and European languages.

Indeed, there is a growing body of work on focus prosody showing that the Prominence-Focus correlation is not a universal:

- Some languages do not have any prosodic marking of focus (see Zerbian et al. (2010) for an overview): No. Sotho (Zerbian 2006); Hausa (Hartmann & Zimmermann (2007)); Wolof (Rialland & Robert (2001), Buli and related Gur languages (Schwarz 2009); Yucatec Mayan (Gussenhoven & Teeuw 2008, Kügler et al. 2007);
- or do not mark focus with sentence stress: Bengali (Hayes & Lahiri 1991); Egyptian Arabic (Hellmuth);
- or mark focus prosodically in some contexts but not others, as noted above.

Work on Bantu languages contributes to the development of this new view of how universal focus prosody is.

To conclude, I hope this study has provided an interesting example of the linguistic contribution of research on Bantu languages:

- It broadens our sense of the possibilities of human Language.
- This insures that universalist typological claims, in whatever theory, rest on data from a broad and representative language sample.

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