

Prosodic marking of post-verbal focus in Bantu: in-situ, IAV and final focus

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Goal

- The prosodic manifestation of focus is not derived in syntax
- Syntax does not encode focus as a primitive
- The prosodic marking of focus is not consonant with prosodic prominence
- Focus of post-verbal constituents in Bantu is indicated by phonological phrasing
- Investigating a correlation between post-verbal focus and the so-called *conjoint-disjoint distinction* in Bantu

Outline of the talk

- background
- focus positions in Bantu
- conjoint-disjoint & post-verbal focus
- prosodic account of IAV (in-situ and final focus)
- emerging model of the phonology-syntax interface
- conclusions

Background

- Null-subject Romance languages allow subject-verb inversion where the subject is focused.

Two competing analysis:

- (i) Costa (1996), Zubizarreta (1998): the subject is in Spec VP
- (ii) Belletti (2001/2): the subject sits in the spec of a low focus related functional projection

(1) [TP V [FocP Subj [tsubj tV ...

Background

- Some Bantu languages exhibit subject-object reversal where the logical subject is focused.

- (2) a. abâna ba-á-ra-nyôye amatá
children 3p-pst-af-drink:perf milk
'Children drank milk'
- b. amatá y-á-nyôye abâna
milk 3s-pst-drink: perf children
'CHILDREN drank milk'
Lit: 'Milk drank children'

Ndayiragidje (1999) analysis: subj in spec of focus P

Background

- (3) a. abâna ba-á-*ra*-nyôye amatá
children 3p-pst-af-drink:perf milk
'Children drank milk'
- b. abâna ba-á-(**ra*)-nyôye amatá
children 3p-pst (af)-drink:perf milk
'Children drank milk (not water)'
- c. abâna ba-á-(**ra*)-nyo[^]ye iki?
children 3p-pst-(af)-drink:perf what
'What did children drink?'

Background

- focus: non-pre-supposed information that is not recoverable from the previous discourse.
- topic: pre-supposed information.
- topic and focus constituents usually appear in non-canonical clausal positions.

focus positions in Bantu

- **in-situ**: Chichewa, Bemba, Nguni
- **post-verbal position (IAV)**: Aghem, Tswana, Makhuwa, Bemba
- **initial**: Tumbuka, Kitharaka, Kikuyu, SiSwati
- **final**: Siswati, Swahili, Northern Sotho, Kirundi

in-situ focus

Chichewa: prosodically marked focus (Kanerva 1990)

Prosodic Hierarchy: PhonologicalP » IntonationalP » Utterance

(4) a. (a-na-ményá nyumbá ndí mwáála)
 sm-tns-hit 9house prep rock

‘She/he hit the house with a rock’

b. (a-na-méenya) (nyuúmba) (ndí mwáála)

c. (a-na-ményá nyuúmba) (ndí mwáála)

d. (a-na-ményá nyumbá ndí mwáála)

post-verbal focus (IAV)

Bemba

- (5) a. (tù-kà-byáálà ínỳànjé mwííbala màílò)PH/I
1plsm-fut-plant 9maize 16garden tomorrow
'We will plant maize in the garden tomorrow'
- b. (tùkàbyáálá)PH (ínỳànjé mwííbàlà màílò)PH
- c. (tùkàbyáálà ínỳànjè)PH (mwííbàlà màílò)PH
- d. (tùkàbyáálà mwííbàlà)PH (ínỳànjé màílò)PH
- e. (tùkàbyáálà màílò)PH (ínỳànjé mwííbàlà)PH

post-verbal focus (IAV)

Bemba subjects

(6) Who is reading the book?

a. u-uléé-béléngá ícitábo ni Chisanga

b. ni Chisanga u-uléé-béléngá ícitábo

(7) What has happened to my book?

a. (a-léé-béléngà Chisanga) (icitabo)

(8) What is Chisanga reading?

b. (a-léé-béléngà ícitábo) (Chisanga)

post-verbal or final

- Tumbuka: (Downing 2006: 62ff)

(9) a. (pa-mu-páanda) (zi-ka-dúka mbuuzi)

loc-3-wall 10-tam-jump 10goat
'THE GOATS jumped over THE WALL'

(10)a. (ba-ka-pása báana) (mabuuku)

'CHILDREN, (not elders) got books'

b. (ba-ka-pása ma-buuku) (báana)

'They gave BOOKS (not something else) to
the children'

final focus

Swahili: Ashton (1942), Krifka (1985)

(11) a. zi-jaz-e ma-ji ndoo
 10om-fill-subj 6water 10bucket

‘Fill the BUSKETS with water’

b. zi-jaz-e ndoo maji
 10om-fill-subj 10bucket 6water

‘Fill the buckets with WATER (not milk)’

focus position distribution

Tumbuka: initial, IAV, final/post-verbal (in-situ)

Bemba: IAV, in-situ

conjoint-disjoint forms

- A tonal (or segmental) distinction in verbs of certain tenses (Meeussen 1959)
- Conjoint verb forms are tonally marked to indicate that a following constituent is within the same ‘clause’ as the verb.
- Disjoint verbs are on the other hand marked to indicate that they are final in their ‘clause’ and any following constituent is ‘post-clausal’.
- The conjoint-disjoint forms are usually associated with term focus.

conjoint-disjoint forms

Conjoint-disjoint forms are found in the Savannah languages of Bantu zones D60, M40, M50, M60, P20-30, K21, S20-30 and S40-50 (Nurse 2006: 193)

conjoint-disjoint forms

Tswana (Criessels 1996, McCormack 2006)

(12)a. kè tlàà bíná lí nná *disjoint*

1sg.tns dance and 1sg

‘I too am dancing’

b. kè tlàà bínà lé èné *conjoint*

1sg. tns dance and 3sg

‘I dance with him’

conjoint-disjoint forms

Tswana: segmental marking

(13)a. kè à mó-rátà *disjoint*

sm1sg disj om1-like

‘I like him’

b. ké rátà Mphó *conjoint*

sm1sg like M.

‘I like Mphó’

c. kè à mó-rátà Mphó *disjoint*

‘I like him, Mphó’

conjoint-disjoint forms

Bemba: disjoint forms are marked by the spread of the last high tone of the verb to the last syllable of the verb.

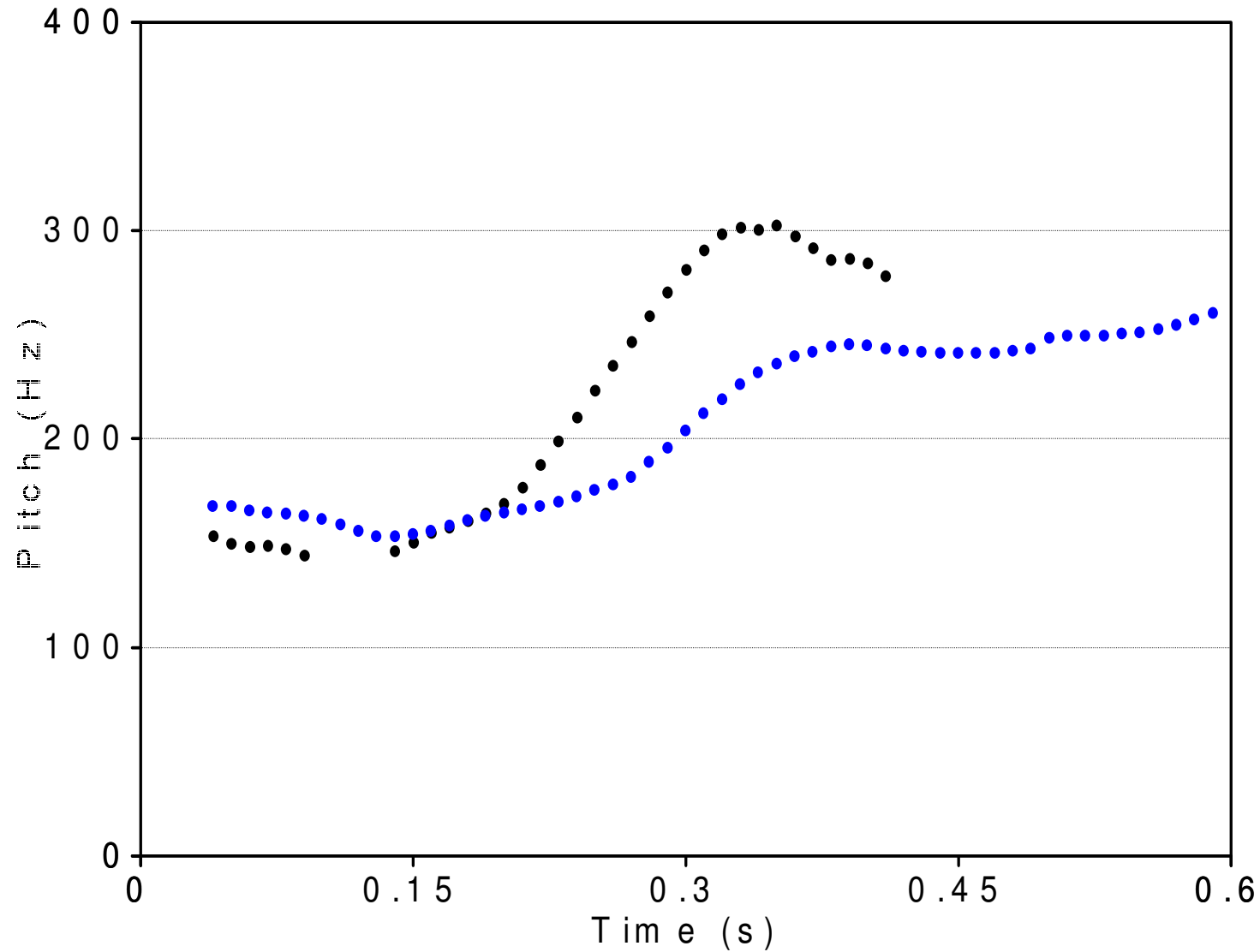
(14) a. (Chisanga a-léé-ba-pángúlwíílá) (abáàna...)

‘C. is unmaking the house for the children’

b. (Chisanga a-léé-pángúlwìilà abáàna inganda)

‘C. is unmaking the house for the children’

acoustic information



tùkàbyáálà = conjoint

tùkàbyáálá = disjoint

to recap...

- constituents can be focused in in-situ, IAV or final position in different Bantu languages.
- different languages can use more than one of these strategies.
- conjoint forms tonally mark verbs to indicate if a following constituent is within the same 'clause' as the the verb.
- the conjoint-disjoint distinction can also be segmentally marked.

Phonology (Kaye 1989)

- Phonology acts as a parsing device that aids hearers in parsing continuous input strings of noise into manageable chunks that aid lexical access.
- Phonology has the primary goal of providing the hearer with parsing cues that aid processing.
- Phonological processes are in this sense indicators of domains of different sizes aiding processing at different levels.

Phonology in cj-dj

- conjoint verb forms are tonally marked to indicate that a following constituent is within the same ‘clause’ as the verb.
- ‘clause’ here is not syntactic but phonological: the tonal prosody indicates the end of a phonological domain.

Proposal

- Phonological phrasing (derived from the conjoint-disjoint marking) indicates what information is salient/relevant for a hearer to interpret the intended discourse functions of the sentence constituents.
- The focused status of an IAV constituent is accessible from prosody and does not require to be syntactically marked.
- In fact there is no ‘IAV position’ per-se but phonology determines where focus falls.

Proposal

- Rather, syntax blindly generates all the possible word orders permitted and these are filtered out at PF (Costa & Kula, in press).
- Phonological phrasing motivated by discourse functions acts as this filter from which particular positions emerge as focused.
- Prosody is thus invoked with no correlation to prominence.

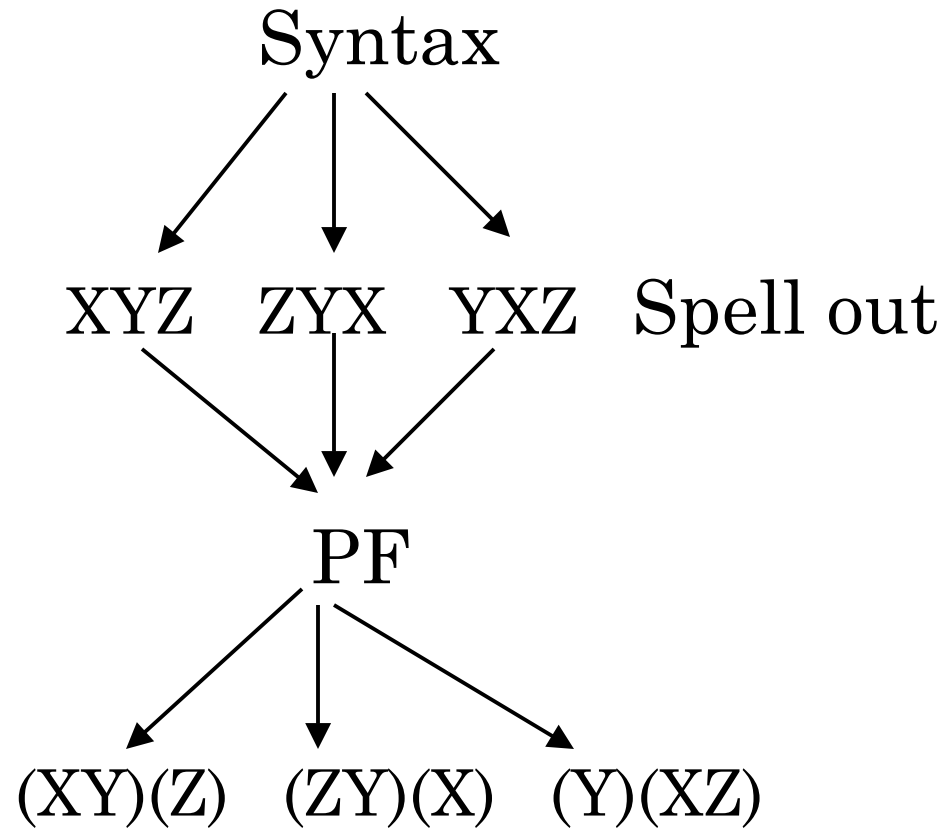
Bantu partial discourse- configurationality

(15) Chichewa (Bresnan & Mchombo 1987)

- a. *Njûchi zi-ná-wá-lum-a* *a-lenje* (SVO)
10.bees SM10-PAST-OM2-bite-FV 2-hunters
'The bees bit the hunters'
- b. *Zináwáluma alenje njûchi* (VOS)
- c. *Alenje zináwáluma njûchi* (OVS)
- d. *Zináwáluma njûchi alenje* (VSO)
- e. *Njûchi alenje zináwáluma* (SOV)
- f. *Alenje njûchi zináwáluma* (OSV)

at PF

(16)



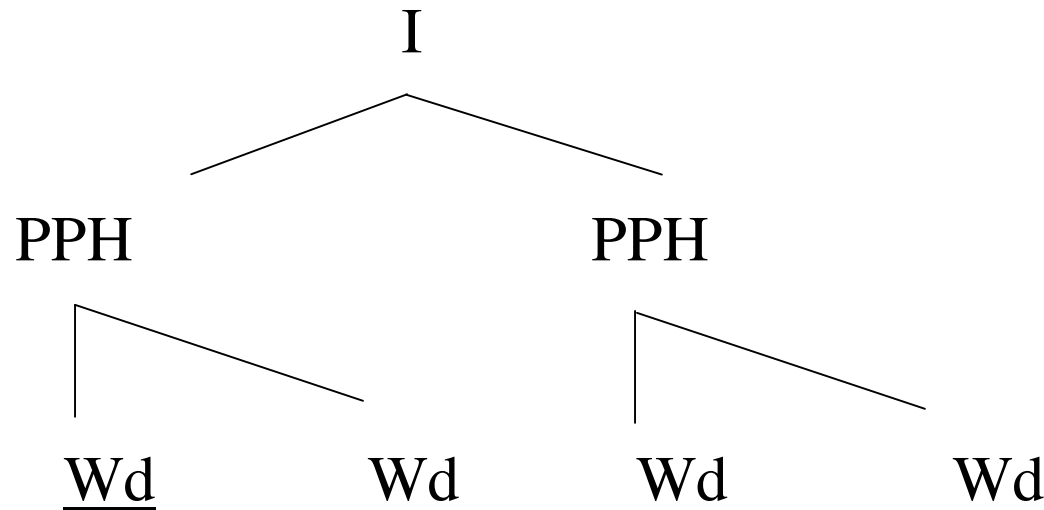
phonological algorithm

- A constituent that is final in a phonological phrase is focused.
- Conjoint and disjoint forms restructure phonological phrases to achieve this.
- A disjoint form indicates a phonological phrase boundary after the verb, while
- a conjoint form indicates the absence of a phonological phrase boundary after the verb.

phonological algorithm

- (14) Phonological constraints on domains in cj-dj forms:
- a. the verb is the phonological head of the intonational phrase/utterance
 - b. conjoint verbs may not be final in a phonological domain
 - c. The rightmost element in the phonological phrase that bears the head is focused

prosodic structure in IAV



(tùkàbyáálà ínyànjè) (mwííbàlà màílò)

‘We will plant **maize** in the garden tomorrow’

Verb focus: (tùkàbyáálà) (ínyànjé mwííbàlà màílò)

‘We will **PLANT** maize in the garden tomorrow’

Chichewa in-situ

(15) a. (a-na-ményá nyumbá ndí mwáála)
sm-tns-hit 9house prep rock

‘She/he hit the house with a rock’

b. (a-na-méénnya) (nyuúmba) (ndí mwáála)

c. (a-na-ményá nyuúmba) (ndí mwáála)

d. (a-na-ményá nyumbá ndí mwáála)

Tumbuka: initial post-verbal

(16) a. (pa-mu-páanda) (zi-ka-dúka mbuuzi)
loc-3-wall 10-tam-jump 10goat
'THE GOATS jumped over THE WALL'

(17) a. (ba-ka-pása báana) (mabuuku)
'CHILDREN, (not elders) got books'

b. ba-ka-pása ma-buuku báana

'They gave BOOKS (not something else) to
the children'

in sum...

- Conjoint verb forms indicate that a following constituent is within the same phonological phrase as the verb.
- The relatively free word order of Bantu allows different constituents to occur in IAV.
- Such constituents are indicated as focused by their position in a phonological phrase.
- This analysis follows under a view of phonology as providing salient information for processing.

emerging prosody-syntax model

- The current model has the redundancy of producing all possible word orders, only later filtered out at PF.
- Phases (Chomsky 2001) don't provide much of a leeway although the focus can be treated as falling in the v phase.

emerging prosody-syntax model

- By contrast, in an on-line parsing based model this redundancy may be avoided by generating only the desired word-order and structure.
- In this case phonology would feed the generation of the syntactic representation acting not only as an aid to phonological domains but also to the construction of a discourse relevant semantic representation as formalised in Dynamic Syntax (Cann et al 2005), for example.

Conclusions

- IAV focus in Bantu is best accounted for as derived from prosody via the tonal changes of the cj-dj that determines phonological phrasing.
- A low focus related functional projection is obviated by this analysis.
- Phonological phrasing rather than prominence emerges as the sole factor determining the position of focus constituents.
- The analysis extends easily to other focus positions in Bantu (in-situ, final, initial).

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