

# On pure focus movement in Syntax – Observations from Limbum

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## Overview:

- Limbum (Grassfields Bantu) shows a very extensive focus marking system, involving particles as well as syntactic re-ordering
- one focus strategy seems to instantiate pure focus movement in narrow syntax
  - it requires fronting of the focused phrase to the beginning of the clause
  - is mostly used in answers to questions
- the two focus marker strategies Limbum has at its disposal show the exact opposite picture of what is cross-linguistically attested:
  - new information focus requires a particle and leftward movement
  - contrastive focus can be left in-situ
- in this talk, we will take a closer look at the focus strategies in Limbum and address the two puzzles presented above

## 1 Why we need to look at Limbum

There are two established principles in the literature on focus marking for which Limbum provides problematic counter-examples.

### **Strong Modularity**

- the *Strong Modularity Hypothesis* (Horvath 2010) bans formal features representing informational structural notions such as focus from narrow syntax (see also Reinhart 1995, 2006)
- one way to reanalyze apparent “focus movement” structures is by attributing the movement trigger to an independently motivated semantic feature which happens to be focus sensitive

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- exhaustivity for Hungarian (Horvath 2007, 2013) and Awing (Fominyam and Šimík 2017)
  - Q for Japanese (Hagstrom 1998), Sinhala (Kishimoto 2005), and Tlingit (Cable 2010)
  - Limbum exhibits two focus particle strategies, one of them seems to encode new information focus: the strategy requires the particle *á* and fronting of the focused phrase
- (1) **Context:** Tata and Ndi are talking on the phone, the connection is really bad. Ndi was telling Tata that he was going to meet someone, but Tata could not understand the person's name. Tata asks Ndi to repeat whom he is going to meet.

Ndi: ?m bí kōnī **Ngàlá**  
 I FUT1 meet **Ngala**  
 'I will meet NGALA.'

Ndi': **á** **Ngàlá** (cí) m bí kōnī  
 FOC **Ngala** (COMP) I FUT1 meet  
 'I will meet NGALA.'

Ndi'': #m bí kōnī **bá** **Ngàlá**  
 I FUT1 meet FOC **Ngala**  
 'It is Ngala whom I will meet.'

⇒ **the *á* strategy can be used in an answer to a question, i.e. focus fronting can encode new information focus**

## Markedness

- focus signals the presence of alternatives (Rooth 1992, Krifka 2008)
  1. information focus signals the presence of contextual alternatives, often introduces new information, e.g. as answers to questions
  2. contrastive focus adds semantic and/or pragmatic conditions on the alternatives
    - contrast* explicit alternative present (often within the same utterance)
    - correction* explicit alternative in a previous utterance rejected
    - selection* explicit alternative set present
    - exhaustivity* non-selected alternatives are false (Szabolcsi 1981, Kiss 1998, Vallduví and Vilkuna 1998, Horvath 2010, 2013)
    - exclusivity* at least one non-selected alternative is false (van der Wal 2011, 2014), or only stronger alternatives on some scale are false (Beaver and Clark 2008, Orenstein and Greenberg 2013)
    - unexpectedness, emphasis* selected alternative stands out (Zimmermann 2008, Hartmann 2008, Skopeteas and Fanselow 2009, 2011, Frey 2010, Zimmermann and Onea 2011)
- observation: contrastive focus tends to be more marked than new information focus:
  - in-situ vs. ex-situ (Fiedler et al. 2010, Hartmann and Zimmermann 2007)
  - different levels of prosodic prominence (Bolinger 1961, Alter et al. 2001, Katz and Selkirk 2009)
  - prosodic prominence vs. reordering/clefting (Skopeteas and Fanselow 2009)

pragmatic explanation: contrastive information often comes with an unexpectedness flavour, which, thus, requires the more marked focus strategy in order to facilitate common ground update (Skopeteas and Fanselow 2009, Zimmermann 2008, 2011, Zimmermann and Onea 2011, Destruel and Velleman 2014)

- Limbum’s second focus particle strategy encodes a kind of contrastive focus: it exhaustifies over focus alternatives and conveys a mirative inference

(2) **Context:** Ndi bought a pair of shoes. Yaah does not remember correctly and tells someone that Ndi bought a dress. Ndi corrects her saying that she bought shoes (instead).

Yaah:í bá yū bcè?  
 she PST2 buy dresses  
 ‘She bought dresses.’

Ndi: #mè bá yū blábá?  
 I PST2 buy shoes  
 ‘I bought SHOES.’

Ndi': #á blábá? (cí) mè bā yú  
 FOC shoes (COMP) I PST2 buy  
 ‘I bought SHOES.’

Ndi'': mè bá yū bá blábá?  
 I PST2 buy FOC shoes  
 ‘It is shoes that I bought.’

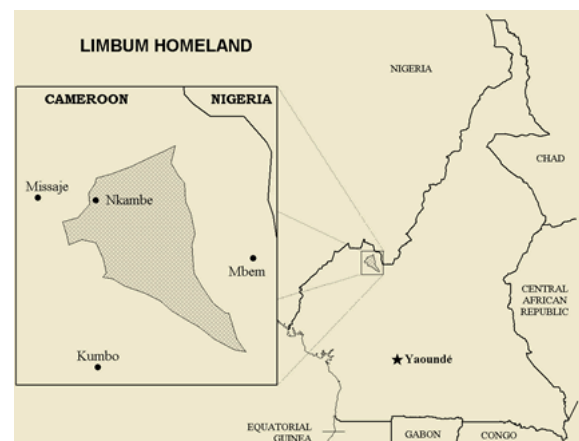
- the two focus strategies come with different levels of complexity:
  - á is compatible with new information focus and is accompanied by fronting
  - bá shows signs of contrastive focus (i.e. exhaustivity and unexpectedness) and is left in situ

⇒ Limbum shows the mirror image to the standard markedness dichotomy

## 2 Some notes on Limbum

- Grassfields Bantu, Cameroon
- lexical tone: level and contour tones
- basic word order: SVO
- TAM marking auxiliaries precede the verb

(3) ηwè f̄ àm tíh ηgū  
 man DET PST3 cut wood  
 The man cut the wood.’



## 3 The á strategy

### 3.1 A cleft structure – an alternative?

- one way to save the strong modularity hypothesis is by analyzing the á strategy as an underlying cleft

- one potential counter-argument can be given with respect to (2): exhaustive contexts such as correction often pattern with cleft structures (Horn 1981, Percus 1997)
- we give 3 syntactic arguments against an underlying cleft structure:

1. based on sentences like (4) in which *á* seems to act like an expletive, Fransen (1995: 301) concludes that the high focus marker strategy constitutes a cleft, where the copula seems to be silent

(4) *á rtēē*  
 ? palm.tree  
 ‘It is a palm tree.’

prediction: copulas show up as soon as they have to act as hosts for negation and/or tense affixes

(5) (\**mū*) *á* (\**mū*) *bāā* (*cí*) *Nfò à bā zhē*  
 PST2 ? PST2 fufu COMP Nfor 3SG PST1 eat  
 ‘Nfor ate FUFU.’

(6) *à mū bā bāā Nfò à mū zhē*  
 EXPL PST2 COP fufu Nfor 3SG PST2 eat  
 ‘It was a fufu that Nfor ate.’

2. cleft structure approaches uncontroversially take clefts to contain a relative clause (Akmajian 1970, Gundel 1977, Percus 1997, Svenious 1998, Hedberg 2000, Reeve 2011) – however, relative clauses in Limbum are introduced by a relative pronoun, see (7), which is missing in sentences using the *á* strategy

(7) *mū zhǐ/\*cí í mū zhéé mṅgòmbé*  
 child REL/COMP 3SG PST2 eat plantains  
 ‘the child who ate plantains’

3. relative clauses can optionally co-occur with the right-headed demonstrative marker *nà* (Fransen 1995, Mpoche 1993), shown in (8) → demonstrative is prohibited in the *á* strategy, see (9)

(8) *mū zhǐ í mū zhéé mṅgòmbé (nà)*  
 child REL 3SG PST2 eat plantains DEM  
 ‘the child who ate plantains’

(9) *á ṅkfúú (cí) mē bí kōnī (\*nà)*  
 FOC chief COMP 1SG FUT1 meet DEM  
 ‘I will meet the CHIEF.’

⇒ the *á* strategy does not constitute a cleft structure

### 3.2 Is *á* instantiating a left peripheral head?

- we do not think *á* spells out a left peripheral head for several reasons:
  1. *á* always precedes the focused constituent: in order to derive the right surface order, an additional movement step, possibly to an empty FORCE head, has to be postulated

2. embedded clauses show an overt complementizer which does not seem to block this ad-hoc movement step

(10) í bā lá nè á rkár fō (cí) ndū zhì à ìn yú  
 3SG PST1 say COMP FOC **car** DET COMP husband her 3SG PST3 buy  
 ‘She said that her husband bought the CAR.’

3. the *á* strategy is also licit in question formation, questions can be marked with a head final sentence particle (Gjersøe et al. 2016), likely to be the instantiation of a FORCE head → *á* does not seem to be able to move to FORCEP

(11) á kēē (cí) wè bā yéé à  
 FOC **what** COMP 2SG PST1 see Q  
 ‘What did you see?’

4. not only does the particle *á* optionally co-occur with an overt C head *cí* → this head can only occur in clauses realizing the *á* strategy
5. fronted focused phrases can pied-pipe non-focused material, e.g. non-focused prepositions cannot be stranded (Becker et al. to appear) and focused possessors cannot be extracted, for the latter see (12)

(12) **Context:** Yaah heard Ndi telling someone on the phone that he would pick up someone’s brother from the bus station. Yaah couldn’t properly understand whose brother Ndi will pick up.


Yaah: á ndúr ndā (cí) à bí lōrī  
 FOC brother **who** COMP 2SG FUT1 pick.up  
 ‘Whose brother will you pick up?’

Ndi’: á ndúr Tánkó (cí) mē bí lōrī  
 FOC brother **Tanko** COMP 1SG FUT1 pick.up  
 ‘I will pick up TANKO’s brother.’

Ndi’’: \*á Tánkó (cí) mē bí lōrī ndúr  
 FOC **Tanko** COMP 1SG FUT1 pick.up brother  
 ‘I will pick up TANKO’s brother.’

if *á* were instantiating a head of a left peripheral focus phrase, it would be able to attract focused constituents only:

(13) \*[… á<sub>1</sub> [<sub>FOCP</sub> [DP Tánkó<sub>F</sub>]<sub>2</sub> [<sub>FOC</sub> t<sub>1</sub>] [TP … [DP [D’ [NP ndúr] Ø<sub>D</sub>] t<sub>2</sub>]]…]]



extractions of the type shown in (13) can potentially be ruled out by general constraints on movement since they seem to be marked cross-linguistically (Corver 1990, Bošković 2005); however, **possessor extraction is not banned per se**, since it is allowed in topic configurations, shown in (14)

(14) à mbò Tánkó, mē mū yē nfī zhì  
 as for Tanko 1SG PST2 see brother his  
 ‘As for Tanko, I met his brother.’

against topicalization as base-generation:

- topicalization is less acceptable out of islands, shown e.g. in (15), while topicalization itself is not clause-bound, see (16)

(15) ?à mbò Tánkó, mè rìŋ ɲwe zhǐ mū kóní nḥr zhì  
 as for Tanko 1SG know man REL PST2 meet brother his  
 ‘As for Tanko, I know a man who met his brother.’

(16) à mbò Tánkó, mè kwàshì nɛ í mū kóní nḥr zhì  
 as for Tanko 1SG think that 3SG PST2 meet brother his  
 As for Tanko, I think he met his brother.

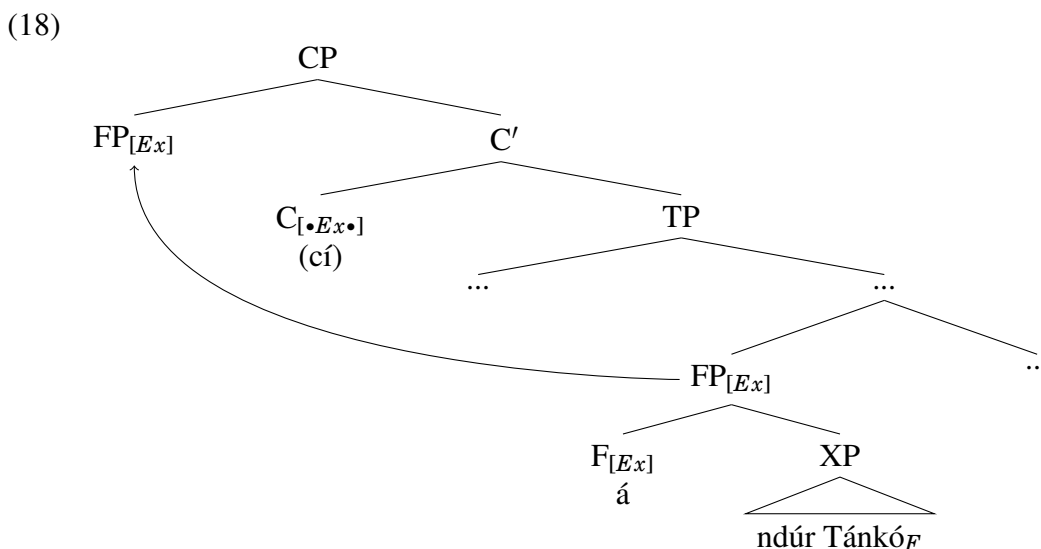
- topicalized phrase also have to reconstruct for binding:<sup>1</sup>

(17) à mbò bzhì ví; ɲwe [rla nsìp]; zhé ví  
 as for food POSS.PL person cook every eat POSS.PL  
 ‘As for his food, every cook eats his own food.’

⇒ **á does not spell out a left peripheral head that attracts focused constituents**

- in line with what has been argued for question particles in Japanese (Hagstrom 1998), Sinhala (Kishimoto 2005), and Tlingit (Cable 2010) on the one hand and focus fronting in Hungarian (Horvath 2007, 2010, 2013) on the other, we propose that:

- the focus particle *á* merges with a constituent that is focused
- the particle heads its own projection FP and bears an  $[Ex]$  feature
- this feature projects up to FP
- a higher functional head, optionally spelled out as *cí*, probes for  $[Ex]$ , finds it on FP and, as a consequence, attracts FP (and everything contained in it) to its specifier



<sup>1</sup>Principle A cannot be tested since Limbum does not exhibit reflexives or reciprocals:

- (i) à mbò ml̩ŋshé m̩ zhì; nyor, Tanko; kong mo'o ká'  
 as for pictures of 3SG.POSS body Tanko like one not  
 ‘As for pictures of himself, Tanko does not like any.’

- we follow Cable (2010) by adopting the *QP-Intervention Condition*, reformulated for FPs in (19) to explain the pied-piping properties:

(19) *FP-Intervention Condition:*

An FP cannot intervene between a functional head  $\alpha$  and a phrase selected by  $\alpha$ . (Such an intervening FP blocks the selectional relation between  $\alpha$  and the lower phrase.)

*adapted from Cable (2010: 57)*

- by assumption, functional heads *c-select* for their arguments, while lexical heads *s-select* for their arguments (Cable 2010: 62)
- FP can intervene between a lexical head and the phrase selected by that head because the F particle does not change the semantic type of the phrase it merges with
- FP cannot, however, intervene between a functional head and the phrase it selects for since the F particle indeed changes the category of the phrase it merges with
- hence, *á* cannot merge directly with a possessor because the functional element D *c-selects* its possessor and *á* would act as an intervener

### 3.3 Focus can be unmarked

1. observation: focus can be left unmarked

(20) Shey: wè bí kōnī **ndā**  
 you.SG FUT1 meet **who**  
 ‘Who will you meet?’  
 Yaah: mè bí kōnī **Ngàlá**  
 I FUT1 meet **Ngala**  
 ‘I will meet NGALA.’

– note that *wh*-words behave completely parallel to focused constituents, supporting the hypothesis that they are intrinsically focused (Beck 2006, Haida 2007)

2. observation: whether to use unmarked focus or the particle *á* seems to depend on whether the proposition is true for at least one alternative of the focused phrase:

(21) **Context A:** Tata comes across a dead animal in the backyard. He shows it to Ndi and asks:

Tata: (á) **ndā** à zhvū nyà  
 FOC **who** 3SG kill animal  
 ‘Who killed the animal?’

Ndi: **Nfò** à zhvū nyà  
**Nfor** 3SG kill animal  
 ‘NFOR killed the animal.’

Ndi': á **Nfò** à zhvū nyà  
 FOC **Nfor** 3SG kill animal  
 ‘NFOR killed the animal.’

Ndi'': #à zhvū **bá Nfò** nyà  
 EXPL kill FOC **Nfo** animal  
 ‘It is Nfor who killed the animal.’

- (22) **Context B:** Tata comes across a dead animal in the backyard. The animal appears to have been killed by someone since it shows multiple knife wounds. He shows it to Ndi and asks:

Tata: (á)# **ndā** à zhvū nyà  
 FOC **who** 3SG kill animal  
 ‘Who is it that killed the animal?’

Ndi: #**Nfò** à zhvū nyà  
**Nfor** 3SG kill animal  
 ‘NFOR killed the animal.’

Ndi': á **Nfò** à zhvū nyà  
 FOC **Nfor** 3SG kill animal  
 ‘NFOR killed the animal.’

Ndi'': #à zhvū **bá** **Nfò** nyà  
 EXPL kill FOC **Nfo** animal  
 ‘It is Nfor who killed the animal.’

### 3.4 The á strategy encodes an existence presupposition

- focus existence presupposition for intonational languages is still under debate (Dryer 1996, Rooth 1999, Geurts and van der Sandt 2004, Büring 2004).
- (23) suggests that focus on its own cannot introduce an existence presupposition: since the context assures that Peter doesn't know if somebody saw John, an existence presupposition would not be satisfied, nevertheless intonational focus is felicitous
- control structure is a cleft which uncontroversially introduce an existence presupposition (Per-cus 1997, Velleman et al. 2012) and is, thus, infelicitous.

(23) Did anyone see John? (Dryer 1996: 490)

Peter: I don't know. I know MARY didn't see him.

Peter': I don't know. # I know it wasn't MARY that saw him.

- Limbum seems to make a clear distinction in that the á strategy patterns like a cleft.

(24) *Working hypotheses I:*

- (i) Focus is not marked morphologically
- (ii) Focus marker á associates with focus alternatives and introduces an existence presupposition that operates on those alternatives

*Alternative semantics* (Rooth 1985, 1992):

$$\llbracket \acute{a} \phi \rrbracket^o = \lambda w : \exists p [p \in \llbracket \phi \rrbracket^f \wedge p(w) = 1]. \llbracket \phi \rrbracket^o(w) = 1^a$$

<sup>a</sup>Another way to introduce an existence presupposition is by forming the disjunction of the propositions in the alternative set:  $\llbracket \acute{a} \phi \rrbracket^o = \lambda w : \cup \llbracket \phi \rrbracket^f = 1. \llbracket \phi \rrbracket^o(w) = 1$

1. no scope over nobody: questions formed without á can be answered with a constituent that denotes the empty set, this answer is impossible with á questions

(25) Shey: wè mū yē **ndá**  
 2SG PST2 see **who**  
 ‘Who did you see?’



Yaah: mɛ mū yē ŋwè ká?  
 1SG PST2 see **person** NEG  
 ‘I saw nobody’

(26) Shey: á ndá wè mū yē  
 FOC **who** 2SG PST2 see  
 ‘Who is it that you saw?’

Yaah: #á ŋwè mɛ mū yē ká?  
 FOC **person** 1SG PST2 see NEG  
 ‘I saw nobody’

In fact, Yaah’s answer in (26) is infelicitous in all contexts:

(27) \*á ŋwè mɛ mū yē ká?  
 FOC **person** 1SG PST2 see NEG  
 ‘I saw nobody’

## 2. projection: the existence presupposition is stable under negation

(28) Shey: mɛ shī yō? yū mō?. ŋwè mō? shī bō? ncùh à  
 1SG PROG hear thing one person one PROG play drum Q  
 ‘I heard something. Is somebody playing the drums?’

Yaah: mɛ rɛŋ ká? mɛ shī kwà?shī nē (#á) **Nfò** í shì bō? ncùh  
 1SG know NEG 1SG PROG think that FOC **Nfor** 3SG PROG play drum  
 kâ?  
 NEG  
 ‘I don’t know. But I don’t think NFOR is playing the drums.’

Yaah’s answer is infelicitous if focus marker *á* is present because the existence presupposition contradicts the fact that Yaah answers the question if someone is playing the drums with *I don’t know*.

The same test can be applied to a modal operator:

(29) Shey: ŋwè mō? à mū lō yá sà? á  
 person one 3SG PST2 borrow 1SG.POSS cutlass Q  
 ‘Did someone borrow my cutlass?’

Yaah: mɛ rɛŋ ká? kàdé? bā nē (#á) **Nfò** à mū lō  
 1SG know NEG can be that FOC **Nfor** 3SG PST2 borrow  
 ‘I don’t know. It is possible that NFOR borrowed it.’

## 4 Focus marker *bá*

### 4.1 FP-intervention with *bá*

- the condition in (19) states that a focus marker cannot occur between a functional head and the argument it c-selects
- we can test this hypothesis for the *bá* strategy, using correction contexts

(30) *bá* cannot intervene between D and possessor:  $[_{DP} [_{D'} [_{NP} ndúr] \emptyset_D] [_{DP} Tánkó_F]]$

- Yaah: Ndi bí l̀r ndúr Shey  
 Ndi FUT1 pick.up brother Shey  
 ‘Ndi will pick up Shey’s brother.’
- Ndi’: mè bí l̀r **bá** ndúr **Tánkó**  
 1SG FUT1 pick.up FOC brother **Tanko**  
 ‘I will pick up TANKO’s brother.’
- Ndi’’: \*mè bí l̀r ndúr **bá** **Tánkó**  
 1SG FUT1 pick.up brother FOC **Tanko**  
 ‘I will pick up TANKO’s brother.’

(31) *bá* cannot intervene between P and argument:  $[_{PP} [P ǹ] [_{DP} \eta gār_F]]$

- Yaah: Ndi mū tā nyà ǹ rk̀̀j  
 Ndi PST2 shoot animal with arrow  
 ‘Ndi shot the animal with an ARROW.’
- Ndi’: mè mū tā nyà **bá** ǹ **\eta gār**  
 1SG PST2 shoot animal FOC with **gun**  
 ‘I shot the animal with a GUN.’
- Ndi’’: \*mè mū tā nyà ǹ **bá** **\eta gār**  
 1SG PST2 shoot animal with FOC **gun**  
 ‘I shot the animal with a GUN.’

- more evidence comes from alternative questions: *bá* has to merge with the complete disjunction, it cannot occur adjacent to one individual disjunct

(32) **Context:** Shey is about to cook dinner. Shey knows that Yaah loves yams and assumes she will prefer it over fufu, but he asks her nevertheless.

- Shey: à bí zhē **bá** **mbr̀̀?** k̀̀ **bāā** à  
 you FUT2 eat FOC **yams** or **fufu** Q  
 ‘Will you eat fufu or yams?’
- Shey’’: \*à bí zhē **mbr̀̀?** k̀̀ **bá** **bāā** à  
 you FUT2 eat **yams** or FOC **fufu** Q  
 ‘Will you eat fufu or yams?’

## 4.2 Exhaustivity, unexpectedness, and existence

1. correction contexts: as shown in (2), a correction statement requires *bá* to occur with the focused constituent
2. Q-A congruence: compare (33) to (21) and (22), both the *wh*-word and the focused alternative in the answer denote unexpected alternatives

(33) **Context C:** Tata comes across a dead animal in the backyard. He immediately suspects Ndi to have killed the animal but it turns out that Ndi is not the culprit. Ndi knows that Tata suspected him although it was Nfor who killed the animal. Tata shows the animal to Ndi and asks:

- Tata: à zhvū **bá** **ndā** nyà  
 EXPL kill FOC **who** animal  
 ‘Who (if not you) killed the animal?’

Ndi: #**Nfò** à zhvū nyà  
**Nfor** 3SG kill animal  
 ‘NFOR killed the animal.’

Ndi': # **á** **Nfò** à zhvū nyà  
 FOC **Nfor** 3SG kill animal  
 ‘NFOR killed the animal.’

Ndi'': à zhvū **bá** **Nfò** nyà  
 EXPL kill FOC **Nfo** animal  
 ‘It is Nfor who killed the animal.’

3. contrast: unexpectedness also shows up in contrastive contexts

(34) Tánkó kí nō **mndzīp**, Ngàlá cí nō **(bá) mbrò?mbvú**  
 Tanko HAB drink **water** Ngala but drink FOC **palm.wine**  
 ‘Tanko drinks water but Ngala drinks palm wine.’

(35) Tánkó kí nō **mndzīp**, Ngàlá cí nō **\*(bá) blēē**  
 Tanko HAB drink **water** Ngala but drink FOC **blood**  
 ‘Tanko drinks water but Ngala drinks blood.’

4. additives: exhaustivity blocks *bá* co-occurring with additive adverbs like *fóŋ* ‘also’

(36) Shey: Nfò à mū yū rkār.  
 Nfor 3SG PST2 buy car  
 ‘Nfor bought a car.’

Ndi: í mū yū **ntùmntùm** fóŋ.  
 Nfor PST2 buy **motorbike** also  
 ‘He bought a motorbike also.’

Ndi': **á** **ntùmntùm** fóŋ í mū yū.  
 FOC **motorbike** also 3SG PST2 buy  
 ‘He bought a MOTORBIKE also.’

Ndi'': #í mū yū **bá** **ntùmntùm** fóŋ.  
 3SG PST2 buy FOC **motorbike** also  
 ‘He bought a motorbike also.’

5. alternative questions: an answer to an alternative question can be marked with *bá* (thus excluding other alternatives presented in the question):

(37) **Context**: Shey is about to cook dinner and asks Ndi whether he wants to eat fufu or yams.

Shey: à bí zhē **bāā** kè **mbrè?** à  
 you FUT2 eat **fufu** or **yams** Q  
 ‘Will you eat fufu or yams?’

Ndi: mē bí zhē **mbrè?**  
 1SG FUT2 eat **yams**  
 ‘I will eat YAMS.’

Ndi': # **á** **mbrè?** (cí) mē bí zhē  
 FOC **yams** (COMP) I FUT2 eat  
 ‘I will eat YAMS.’

Ndi'': mē bí zhē **bá** **mbrè?**  
 I FUT2 eat FOC **yams**  
 ‘It is yams I will eat.’

*bá* becomes obligatory if the focused constituent expresses an unexpected alternative.

- (38) **Context:** She is about to cook dinner. She knows that Ndi loves yams and assumes he will prefer it over fufu, but he asks him nevertheless.

Shey: à bí zhē **bá mbrè?** kè **bāā** à  
 you FUT2 eat FOC **yams** or **fufu** Q  
 ‘Will you eat fufu or yams?’

**A.** Shey was right: Ndi prefers yams.

Ndi: m̀è bí zhē **mbrè?**  
 I FUT2 eat **yams**  
 ‘I will eat YAMS.’

Ndi': # **á mbrè?** (cí) m̀è bí zhē  
 FOC **yams** (COMP) I FUT2 eat  
 ‘I will eat YAMS.’

Ndi'': m̀è bí zhē **bá mbrè?**  
 I FUT2 eat FOC **yams**  
 ‘It is yams I will eat.’

**B.** Shey was wrong: Ndi wants to eat fufu.

Ndi: m̀è bí zhē **bāā**  
 I FUT2 eat **fufu**  
 ‘I will eat FUFU.’

Ndi': # **á bāā** (cí) m̀è bí zhē  
 FOC **fufu** (COMP) I FUT2 eat  
 ‘I will eat FUFU.’

Ndi'': m̀è bí zhē **bá bāā**  
 I FUT2 eat FOC **fufu**  
 ‘It is fufu I will eat.’

**C.** Shey was wrong: Ndi wants to eat fufu. And Ndi knows that Shey knows what Ndi prefers.

Ndi: #m̀è bí zhē **bāā**  
 I FUT2 eat **fufu**  
 ‘I will eat FUFU.’

6. exclusives: that unexpectedness operates independent of exhaustivity is also shown by contexts using exhaustive adverbs like *cà?cà?* ‘only’

- (39) **Context:** Shey is looking for Ngala and Tanko who are supposed to be at the market. Shey tells Ndi to go find Ngala and Tanko and bring them back.

**A.** Ndi comes back with Ngala.

Ndi: m̀è ∅ kóní **Ngàlá** cà?cà?  
 I PERF find **Ngala** only  
 ‘I only found Ngala.’

Ndi': **á Ngàlá** cà?cà? (cí) m̀è ∅  
 FOC **Ngala** only COMP I PERF  
 kóní  
 find  
 ‘I found Ngala only.’

Ndi'': #m̀è ∅ kóní **bá Ngàlá** cà?cà?  
 I PERF find FOC **Ngala** only  
 ‘I only found Ngala.’

**B.** Ndi comes back with Njobe.

Ndi: m̀è ∅ kóní **Njobe** cà?cà?  
 I PERF find **Njobe** only  
 ‘I only found Njobe.’

Ndi': # **á Njobe** cà?cà? (cí) m̀è ∅  
 FOC **Njobe** only COMP I PERF  
 kóní  
 find  
 ‘I found Njobe only.’

Ndi'': m̀è ∅ kóní **bá Njobe** cà?cà?  
 I PERF find FOC **Njobe** only  
 ‘I only found Njobe.’

7. no scope over *nothing*: *bá* cannot focus over a constituent that denotes the empty set → existence is also presupposed for *bá* focus, similar to *á* focus

- (40) Tanko à mū yū bflǎwà Ngàlá à yu (\*bà) yū kǎ?  
 Tanko 3SG PST2 buy flowers Ngala 3SG buy FOC thing NEG  
 ‘Tanko bought flowers but Ngala bought nothing.’

### 4.3 Analysis of *bá*

Since we would like to model exhaustivity as a presupposition while also adopting an existing presupposition, we run into the problem of making the entailed content look trivial. Velleman et al. (2012) discuss this problem for the English cleft:

- (41) It was Mary who laughed.
- |   |                                   |
|---|-----------------------------------|
| a. $\exists x[\textit{laughed}(x)]$                     | <i>existential presupposition</i> |
| b. $\forall x[\textit{laughed}(x) \rightarrow (x = m)]$ | <i>exhaustive presupposition</i>  |
| c. $\textit{laughed}(m)$                                | <i>entailed prejacent</i>         |

Another problem is that the exhaustive presupposition does not project through negation. This is true for clefts (Velleman et al. 2012, Büring and Križ 2013), and, as we will see later on, can also be shown for *bá*.

- (42) It wasn't Mary who laughed; it was Bill.

We would like to follow Büring and Križ (2013) who offer a solution towards these problems by making the exhaustive presupposition dependent on the assertion: (41-b) → *If Mary laughed, then nobody else did.*

Büring and Križ (2013) make reference to mereological parthood in their exhaustivity presupposition. Here is how they derive the exhaustivity from a positive cleft:

- (43) It was Fred she invited.
- |  |  |
|--|--|
| a. ASS: She invited Fred.                                      |  |
| b. PRES: Fred is not a proper part of the sum of all invitees. |  |
| ↙  | ↘                                      |
| Fred is the sole invitee                                       | <del>Fred was not invited at all</del> |

The negative cleft does not presuppose exhaustivity because that particular consequence of the presupposition is blocked by the assertion:

- (44) It wasn't Fred she invited.
- |  |                             |
|--|-----------------------------|
| a. ASS: She didn't invite Fred.                                |                             |
| b. PRES: Fred is not a proper part of the sum of all invitees. |                             |
| ↙  | ↘                           |
| <del>Fred is the sole invitee</del>                            | Fred was not invited at all |

The sum of all invitees are derived by a *max* operator, given that all predicates are always closed under fusion and therefore each have a maximal element.

- (45)  $\textit{max}(P) = \{ x \in P \mid \neg \exists y \in P[x \sqsubset y] \}$

(46) CLEFT:=  $\lambda z.\lambda P : \forall x \in \max(P) [z \not\sqsubset x].P(z)$

We will adopt this analysis for *bá*, make it focus sensitive and add an existence presupposition and a scalar component.

(47) *Working hypotheses II:*

- (i) Focus marker *bá* associates with focus alternatives and introduces an exhaustivity as well as an existence presupposition
- (ii) *bá* is also also scalar in that it requires the selected alternative to be unexpected in order to show up obligatorily

$$\begin{aligned} \llbracket [b\acute{a} \alpha_F] P \rrbracket^o &= \exists x [x \in \llbracket \alpha \rrbracket^f \wedge \llbracket P \rrbracket^o(x)] \wedge \\ &\quad \forall y \in \llbracket \alpha \rrbracket^f [y \in \max(\llbracket P \rrbracket^o) \rightarrow \llbracket \alpha \rrbracket^o \not\sqsubset y] \wedge \\ &\quad \forall z \in \llbracket \alpha \rrbracket^f [z \neq \llbracket \alpha \rrbracket^o \rightarrow \llbracket P \rrbracket^o(z) \geq_{\text{likely}} \llbracket P \rrbracket^o(\llbracket \alpha \rrbracket^o)]. \\ &\quad \llbracket P \rrbracket^o(\llbracket \alpha \rrbracket^o) \end{aligned}$$

(where for any  $P \in D_{et}, \max(P) = \{x \in P \mid \neg \exists y \in P[x \sqsubset y]\}$ )

1. existence projection: the existence component can project through the antecedent of a conditional, see (48), and through negation, compare (49) and (50), since it clashes with the *nobody* continuation

(48) à mbā mū só (\*bá) Tata mbǎŋ fō í bā shī zhē zhī mà ndāp  
 EXPL if PST2 win FOC Tata game DET 3SG should PROG eat 3SG in house  
 mbrò? ɲwè mò? à ká? só kā?  
 drink person one 3SG but win NEG  
 ‘If it were Tata who won the game, she would be celebrating in the pub, but nobody won.’

(49) #à mū sō bá Tata mbǎŋ ká? àndzò? ɲwè mò? à mū sō kā?  
 EXPL PST2 win FOC Tata game NEG because person one 3SG PST2 win NEG  
 ‘It is not Tata who won the game because nobody won.’

(50) Tata à mū sō mbǎŋ ká? àndzò? ɲwè mò? à mū sō kā?  
 Tata 3SG PST2 win game NEG because person one 3SG PST2 win NEG  
 ‘It is not Tata who won the game because nobody won.’

2. exhaustivity not at-issue: for the continuation of (51) to be informative (and thus felicitous), the exhaustive component must be at-issue, this is true for *cà?cà?* ‘only’ but not for *bá*

(51) mē rìŋ nē Tata à mū zhē mŋgòmbé káp kū yō? nē ...  
 1SG know that Tata 3SG PST2 eat **plantain** but just hear that  
 ‘I know Tata ate plantain but I’ve just heard that...’

(i) *bá*: exhaustivity not at-issue

... #í mū zhē bá mŋgòmbé  
 3SG PST2 eat FOC **plantain**  
 ‘it was plantain she ate.’

(ii) *cà?cà?*: exhaustivity at-issue

... í mū zhē mŋgòmbé cà?cà?  
 3SG PST2 eat **plantain** only  
 ‘she only ate plantain.’

3. exhaustivity projection: the exhaustivity presupposition of *bá* seems to be affected by a negative operator, this contrast with *cà?cà?* ‘only’ for which the exhaustive inference clearly disappears under negation but the prejacent survives

- *cà?cà?* ‘only’  $\left[ \begin{array}{l} \text{presupposition:} \quad \text{prejacent} \\ \text{assertion:} \quad \quad \quad \text{exhaustivity} \end{array} \right]$

(52) **á** **Ngàlá** *cà?cà?* (cí) m̀è bí k̀ōnī ká  
 FOC **Ngala** only (COMP) 1SG FUT1 meet NEG  
 ‘I will meet not only Ngala.’

(i) exhaustivity canceled

... **á** **Nfò** f̀ɔŋ (cí) m̀è bí k̀ōnī  
 FOC **Nfor** also (COMP) 1SG FUT1 meet  
 ‘I will meet NFOR as well.’

(ii) prejacent not canceled

... #m̀è bí k̀ōnī **bá** **Nfò**  
 1SG FUT1 meet FOC **Nfor**  
 ‘It is Nfor that I will meet.’

- focus marker *bá*  $\left[ \begin{array}{l} \text{presupposition:} \quad \text{exhaustivity} \\ \text{assertion:} \quad \quad \quad \text{prejacent} \end{array} \right]$

(53) m̀è bí k̀ōnī **bá** **Ngàlá** ká  
 1SG FUT1 meet FOC **Ngala** NEG  
 ‘It is not Ngala I will meet.’

(i) exhaustivity canceled

... #**bá** m̀è bí k̀ōnī ŋwè m̀ò? cāā  
 and 1SG FUT1 meet person one than  
**Ngàlá** kà?  
**Ngala** NEG  
 ‘and I will meet no one else than Ngala.’

(ii) prejacent canceled

... m̀è bí k̀ōnī **bá** **Nfò**  
 1SG FUT1 meet FOC **Nfor**  
 ‘It is Nfor that I will meet.’

4. mirativity projection: the likelihood component of a *bá* alternative, embedded in the antecedent of a conditional, cannot be canceled in the consequent

(54) k̄ā? b̄ā n̄ē í m̄ū n̄ō **bá** bl̄ēē m̀è l̄ē? k̄ā?  
 if to.be that 3SG PST2 drink FOC blood 1SG surprise NEG  
 ‘If it is blood that he drank, I’m not surprised.’

Comment: The lack of surprise can only be directed at the person, given that this person does unusual things all the time. It cannot not be directed at blood.

(55) k̄ā? b̄ā n̄ē í m̄ū n̄ō mbr̄ò? m̀è l̄ē? k̄ā?  
 if to.be that 3SG PST2 drink wine 1SG surprise NEG  
 ‘If it is wine that he drank, I’m not surprised.’

Comment: The lack of surprise can be directed at the choice of beverage.

#### 4.4 Focus marker á vs. focus marker bá

- alternative questions, contrast, and correction contexts seem to block *á*, while *bá* is felicitous
- this is so far unpredicted for *á* since these contexts are not per se incapable of satisfying an existence presupposition
- we would like to propose that the blocking of *á* is an effect of *Maximize Presupposition* (Heim 1991, Percus 2006, Sauerland 2008)

(56) *Maximize Presupposition*:

Do not use  $\phi$  if a member of its Alternative-Family  $\psi$  is felicitous and contextually equivalent to  $\phi$ .

- Lexical alternatives: Alternatives are only defined for lexical items. For any lexical item, the alternatives consist of all “presuppositionally stronger” items of the same syntactic category.
- Alternative-Family: Let the Alternative-Family of a sentence  $\phi$  be the set of sentences that you get by replacing at least one alternative-associated expression in  $\phi$  with an alternative.

(Percus 2006)

- pairs of expressions for which MP has been proposed:

(57)  $\langle the, a \rangle, \langle both, every \rangle, \langle know, believe \rangle, \langle SING, PLUR \rangle, \langle PAST, PRES \rangle, \dots$

- we would like to add  $\langle bá, á \rangle$  to the list
- aside: the no marker strategy is not blocked because MP is only defined for competing lexical items, see (56-a)

#### 4.5 Open question: subject asymmetry

- ideally, the *bá* strategy receives the same syntax as the *á* strategy, minus the left peripheral head *cí* that attracts focused phrases
- this seems to be objects and adverbials, but not for subjects.

(58) *Object focus*:

- m̀ bí kōnī bá Ngàlá  
I FUT1 meet FOC Ngala  
'It is Ngala whom I will meet.'
- m̀ bí fā rfaa fɔ bá nì Ngàlá  
I FUT1 give gift DET FOC to Ngala  
'It is Ngala whom I will give the present to.'

(59) *Adverbial focus*:

sì bífū yé Shey bá àyànsè  
we.INCL FUT2 see Shey FOC tomorrow  
'It is tomorrow that we will see Shey.'



(60) *Subject focus:*

à bā zhē **bá** **Nfò** bāā  
 EXPL PST1 eat FOC **Nfor** fufu  
 ‘It is Nfor who has eaten fufu.’

- glossing à as EXPL is only one option and might not be the most convincing one, since typical expressions involving expletives such as weather verbs, locative inversions, or existential constructions do not occur with à

(61) bcee vi yo mí ŋká’  
 tress 3.PL are in garden  
 ‘There are flowers in the garden.’

(62) mbéŋ ci gwe ntini  
 rain PROG fall today  
 ‘It is raining today.’

- alternatively, à could be a default marker since it is identical to the 3SG subject marker, which can be observed e.g. in (6), (10), (21), and (22)
- the special status of the subject has been noticed for other (Grassfields) Bantu languages such as *Aghem* (Aboh 2007, Hyman and Polinsky 2010), *Awing* (Fominyam and Šimík 2017), *Zulu* (Zeller 2015), and *Kirundi* (Ndayiragije 1999); see also Marten and van der Wal (2014) for a cross-linguistic study within Bantu

## 5 What we can learn from Limbum

### Modularity

The *Strong Modularity Hypothesis* (Horvath 2010) can be upheld!

We reanalyze focus movement as triggered by an existence requirement, introduced by the particle *á* and an optionally spelled out high functional head *cí*.

At least for Limbum, it can be shown that existence is not triggered solely by a focus/background structure, contrary to has been claimed for intonation focus languages like English (Geurts and van der Sandt 2004).

### Markedness

The pragmatic explanation for the cross-linguistic observation that contrastive focus has to be more marked than new information focus does not carry over to Limbum.

Hence, we hard-wire mirativity into the semantics of *bá*, unexpectedness as a pragmatic concept is not reflected by the opposition of an unmarked and a marked structure.

This is why the *á* strategy can be more marked (particle + fronting) but impose less semantic restrictions (only existence) while the *bá* strategy is less marked (only particle) and imposes more semantic restrictions (existence + exhaustivity).

Tests and main points are summarized below:

diagnostics	∅	á	bá	
new information	✓	✓	✗	• focus does not need to be morphologically marked in Limbum
correction	✗	✗	✓	• “focus markers” require focus (i.e. a set of alternatives) and add presuppositions that operate on them:
contrast	✓	✗	✓	
contrast + unexpectedness	✗	✗	✓	
selection	✓	✗	✓	
selection + unexpectedness	✗	✗	✓	– á involves an existence presupposition operating on the focus alternatives
universal quantifiers <sup>2</sup>	✓	✓	✗	
nobody/nothing	✓	✗	✗	– bá introduces an exhaustivity as well as an existence presupposition
co-occurrence with <i>only</i>	✓	✓	✓	
co-occurrence with <i>even</i> <sup>3</sup>	✗	✗	✗	
co-occurrence with <i>also</i>	✓	✓	✗	– bá in addition introduces a scalar component

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<sup>2</sup>See Becker et al. (to appear) and Driemel and Nformi (to appear) for discussion.

<sup>3</sup>The scalar additive *ká?* ‘even’ seems to be restricted to topics rather than foci, see the appendix for more information.

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## Appendix A: *even*

The scalar additive *ká?* ‘even’ seems to associate with topics rather than with foci since it cannot co-occur with *á* or *bá*. This restriction is not uncommon for additives, see Krifka (1998) for German stressed *auch* ‘also’ and Grubic (2015) for Ngamo *ke’(e)* ‘also’ for example.

- (63) (\**á*) *ká?* (\**á*) **Ngàlá** *mè bí kōnī*  
 FOC even FOC **Ngala** I FUT1 meet  
 ‘I will meet even NGALA.’
- (64) \**mè bí kōnī* (\**bá*) *ká?* (\**bá*) **Ngàlá**  
 I FUT1 meet FOC even FOC **Ngala**  
 ‘It is even Ngala whom I will meet.’

In Limbum, topics need to be fronted and can optionally leave a resumptive pronoun, both of which is true for constituents under the scope of *ká?*.

- (65) *mbă fō, wōyè ó ∅ fā (zhí) nì yē wéé*  
 money DET they 3PL PERF give it.RES PREP 3SG already  
 ‘The money, they already gave it to him/her.’
- (66) *ká? Ngàlá mè bí kōnī (yē)*  
 even **Ngala** I FUT1 meet 3SG.RES  
 ‘I will meet even NGALA.’
- (67) \**mè bí kōnī ká? Ngàlá*  
 I FUT1 meet even **Ngala**  
 ‘It is even Ngala whom I will meet.’

Focused constituents marked with *á* require fronting as well. A resumptive pronoun, however, is not allowed to show up.

- (68) *á Ngàlá mè bí kōnī (\*yē)*  
 FOC **Ngala** I FUT1 meet 3SG.RES  
 ‘I will meet NGALA.’