

Focus and verb doubling in Limbum

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Abstract

In this paper, we propose an account for capturing two distinct focus constructions and verb doubling in Limbum. We assume two distinct FocPs in the clause, namely a higher one in the CP domain and a lower one above TP. The high FocP marks information focus involving movement, while the low FocP expresses identificational focus on the constituent with an [exh] feature immediately c-commanded by the low Foc⁰. Verb focus, encoded by the doubling of the verb, features the rather unexpected order of SVOV for identificational focus. Our analysis predicts this pattern: the bare verb moves to the low Foc⁰, leaving the VP as immediate constituent in its scope. Since the VP does not bear an [exh] feature, it is forced to move out of the scope into a higher position.

1. Introduction

The present paper presents a somewhat tentative account of two different focus constructions in Limbum (Grassfields Bantu; Cameroon), which helps us understand verb doubling in verb focus constructions. Our aim is two-fold: we provide a structural account of the two focus constructions, which at the same time provides the basis for an analysis of syntactic verb doubling in the language.

As for the focus constructions, we follow Belletti (2004) and Aboh (2007) in arguing for a structural low focus phrase within TP. In contrast to other Bantu languages (e.g. Aghem) previously addressed with respect to a low focus phrase, Limbum does not only feature low focus but also a structural high focus phrase within the CP, as has been argued for in Rizzi (1997). Consequently, one could speak of a very abstract type of replication: structure in the clause, i.e. the focus projection and the function of syntactic focus itself.

Examples of both high and low focus, respectively, are given in (1).¹

*We want to thank Andrew Murphy for his helpful comments.

- (1) a. á ndúr wà (cí) m bí l̄rī
 FOC brother my (COMP) I FUT1 pick.up
 ‘I will pick up *my brother*.’
- b. m bí l̄r bá ndúr wà
 I FUT1 pick.up FOC brother my
 ‘It is my brother whom I will pick up.’

The constructions will be addressed in detail in section 3. Along the lines of É. Kiss (1998), we argue for a functional difference between the two focus phrases in Limbum: The high FocP (Foc_HP) will be shown to express information focus, while the low FocP (Foc_LP) involves identificational focus.

With the structure of focus established, we then turn to verb doubling in Limbum (section 4), which exhibits two interesting patterns both being compatible with the two focus phrases in Limbum. In verb doubling, the reduplicated verb can appear in either focus position with a corresponding difference in meaning, as is illustrated in (2a) and (2b):

- (2) a. á r-l̄r m bí l̄r ndúr wà
 FOC INF-pick.up I FUT1 pick.up brother my
 ‘I will *pick up* my brother.’
- b. m bí l̄r ndúr wà l̄rī
 I FUT1 pick.up brother my pick.up
 ‘It is picking up that I will do to my brother.’

In addition, verb doubling involving copying of phonetic material will serve as second and more concrete example of replication in Limbum.

2. Preliminary remarks on the structure of Limbum

Like many other Bantu languages, Limbum shows a strict SVO word order. TAM-marking auxiliaries always occur pre-verbally as shown in (3).

- (3) ɲwè f̄ àm tí ɲgū
 man DET PST3 cut wood
 ‘The man cut the wood’

abbreviations used are: PST1 – today’s past, PST2 – near past, PST3 – remote past, FUT1 – today’s future, FUT2 – tomorrow’s future, FOC – focus marker, DET – determiner.

The verb usually occurs as a root; it does not feature agreement. Nevertheless, Limbum has certain free markers occurring immediately before the verb, which seem to show agreement between the verb and the subject, as they can co-occur with a subject NP within the same clause. However, somewhat similar to pronominal clitics in Romance or some resumptive pronouns, these markers do not occur in all clauses (they depend on the realization of the subject and on tense).²

As for information structure, both topic and focus (the latter not exclusively) are expressed in the left periphery in Limbum. We will see in the next section that focused elements are preceded by a focus marker; topics on the other hand have no such marker. Since topics will not be addressed in the remainder of the paper, we will make some brief remarks about topics here. Example (4) shows an object that is topicalized in the left periphery of the clause:

- (4) *mbǎ fɔ̄, wōyè ó ∅ fā zhí nì yē wéé*
 money DET they 3PL PERF give it PREP him/her already
 ‘The money, they already gave it to him/her.’

Although focused elements also surface in the left periphery, they cannot co-occur with topics (5a); only low focus and topic are felicitous within the same clause (5b):

- (5) a. **mbǎ fɔ̄, á nì yē wōyè ó ∅ fā zhí*
 money DET FOC PREP him/her they 3PL PERF give it
 ‘As for the money, they gave it to him/her.’
 b. *mbǎ fɔ̄, wōyè ó ∅ fā zhí bá nì yē*
 money DET they 3PL PERF give it FOC PREP him/her
 ‘As for the money, it is to him/her that they gave it.’

3. The two focus constructions in Limbum

This section discusses the two possible focus constructions in Limbum. We argue for two different focus phrases in the clause, which represent identificational and information focus, respectively (see sections 3.2 and 3.3). Section 3.4 follows

²Since a more detailed account of those markers goes beyond the scope of the present paper, it will not be discussed further here. A more detailed description can be found in Fransén (1995: sec. 9.1). In the glosses, we indicate these agreement markers by their ϕ -features, whereas pronouns are given in their English counterparts.

with a brief discussion of supporting evidence for two distinct FocPs from *wh*-questions.

3.1. The data

The two constructions relevant here involve a focused element being marked as such by a preceding focus marker, *á* or *bá*. The two markers are dedicated to distinct positions within a clause: *á* occurs clause initially (in what we call the ‘high focus phrase’ Foc_HP), while *bá* appears after the verb in the low focus phrase (Foc_LP). The focused element surfaces in one of those two positions following the focus marker.

Let us consider the examples in (6) and (7) below.

(6) *Subject focus*

- a. *á Nfò* (cí) í *bā zhē bāā*
 FOC Nfor (COMP) 3SG PST1 eat fufu
 ‘Nfor ate fufu.’
- b. *à bā zhē bá Nfò bāā*
 EXPL PST1 eat FOC Nfor fufu
 ‘It is Nfor who has eaten fufu.’

(7) *Object focus*

- a. *á Ngàlá* (cí) *mè bí kōnī*
 FOC Ngala (COMP) I FUT1 meet
 ‘I will meet Ngala.’
- b. *mè bí kōnī bá Ngàlá*
 I FUT1 meet FOC Ngala
 ‘It is Ngala whom I will meet.’

The constructions in (6) and (7) illustrate instances of high and low focus for subject and object DPs, respectively. In both (6a) and (7a), the focused element is preceded by the focus marker *á* in the left periphery of the clause.

As for the focused object in (7a), it is obvious that it no longer occurs in its base position but has moved higher. However, as the complementizer can be optionally spelled out in both (6a) and (7a) below the focused constituent, we can assume that also the focused subject in (6a) must be in a higher position.

Example (6b) illustrates that the subject can occur in the postverbal position as well. Note that in this case, an expletive must fill the higher subject position

in SpecTP in order to check the EPP feature. This way, the subject can stay in the lower focus position (we will come back to a structural analysis later in this section).

Apart from arguments and DPs, adverbs and adjuncts can also be focused in these same patterns from (6) and (7). Example (8) below illustrates this for adverbs:

- (8) a. á àyàɲsè (cí) sì bifū yé Shey
 FOC tomorrow (COMP) we.INCL FUT2 see Shey
 ‘We will see Shey *tomorrow*.’
 b. sì bifū yé Shey bá àyàɲsè
 we.INCL FUT2 see Shey FOC tomorrow
 ‘It is tomorrow that we will see Shey.’

By analogy, example (9) shows a focused locative adjunct, headed by a preposition:

- (9) a. á mà ntāā (cí) yà táā à m̀̀ dò
 FOC PREP market (COMP) my father 3SG PST3 go
 ‘My father went *to the market*.’
 b. yà táā à m̀̀ dò bá mà ntāā
 my father 3SG PST3 go FOC PREP market
 ‘It is to the market that my father went.’

Since we assume that the two focus positions represented form part of the basic clause structure of Limbum, they should equally be available in embedded clauses. The next example shows that, indeed, embedded clauses allow for the same focus constructions as matrix clauses:

- (10) a. í bā lá nè á ndū zhì à m̀̀ yú rkár f̄
 she PST1 say COMP FOC husband her 3SG PST3 buy car DET
 ‘She said that *her husband* bought the car.’
 b. í bā lá nè à m̀̀ yú bá ndū zhì rkár f̄
 she PST1 say COMP EXPL PST3 buy FOC husband her car DET
 ‘She said that it was her husband who bought the car.’

Another piece of evidence for two distinct focus phrases comes from multiple focus constructions, which allow both focus positions (headed by the respective focus marker) to be filled at the same time:

- (11) a. á mɪkɸɪ (cí) wó mū nō bá mbrò?
 FOC chiefs COMP 3PL PST2 drink FOC wine
 ‘It is wine that *the chiefs* drank.’
- b. á mbrò? (cí) à mū nō bá mɪkɸɪ
 FOC wine COMP 3SG PST2 drink FOC chiefs
 ‘It is the chiefs who drank *wine*.’

3.2. Information vs. identificational focus

The two focus constructions seen in the previous section provide evidence for the structural distinction between information (presentational) focus and identificational (exhaustive) focus as has been argued for in É. Kiss (1998). The author defines the two focus types as follows:

(12) *Information focus*

Information focus merely conveys non-presupposed information.

(13) *Identificational focus*

Identificational focus represents a subset of the set of contextually or situationally given elements for which the predicate phrase can potentially hold; it is identified as exhaustive subset of this set for which the predicate actually holds.

(É. Kiss 1998: 245)

On the basis of Hungarian and English, É. Kiss demonstrated that in-situ focus expresses information focus, while ex-situ focus (e.g. clefts in English) marks identificational focus.³ Following this distinction and using three diagnostic tests, namely (i) *also*-phrases, (ii) universal quantifiers, and (iii) *only*-phrases, it can be shown that Limbum features a similar structural distinction of two focus types.

3.2.1. *Also-phrases*

The test using *also*-phrases to distinguish between the two focus types explores that identificational focus entails exhaustivity, while information focus does not. Hence, clauses featuring identificational focus cannot be extended by

³Based on these definitions, we will use clefts in the English translations of examples in order to show identificational focus, while translations of information focus are given with *in situ* focus in English, marked by italics.

an *also*-phrase (É. Kiss 1998: 248). In (14), the subject (14a), object (14b), an adverb (14c), and an adjunct (14d) are illustrated in high focus. Note that all focused elements allow for extending the referent in question by an *also*-phrase:

- (14) a. á Nfò (cí) í bā zhē bāā (bá Tánkó fój)

FOC Nfor (COMP) 3SG PST1 eat fufu (and Tanko also)

'Nfor ate fufu (and so did Tanko).'
- b. á Ngálá (cí) mē bí kōnī (bá ŋgwá zhì fój)

FOC Ngala (COMP) I FUT1 meet (and wife his also)

'I will meet Ngala (and also his wife).'
- c. á àyàṅsè (cí) sì bífū yé Shey (bá mínji

FOC tomorrow (COMP) we.INCL FUT2 see Shey (and behind

àyàṅsè fój)

tomorrow also)

'We will see Shey *tomorrow* (and also the day after tomorrow).'
- d. á mà ntāā (cí) yà táā à m̀ d̀ (bá mà

FOC PREP market (COMP) my father 3SG PST3 go (and PREP

rfà fój)

work also)

'My father went *to the market* (and also to work).'

The following sentences in (15) feature the low focus counterparts to the sentences from (14). In this position, extension by an *also*-phrase is not felicitous for any of the focused constituents:

- (15) a. à bā zhē bá Nfò bāā (#bá Tánkó fój)

EXPL PST1 eat FOC Nfor fufu (and Tanko also)

'It is Nfor who ate fufu (#and so did Tanko).'
- b. mē bí kōnī bá Ngálá (#bá ŋgwá zhì fój)

I FUT1 meet FOC Ngala (and wife his also)

'It is Ngala (#and also his wife) whom I will meet.'
- c. sì bífū yé Shey bá àyàṅsè (#bá mínji àyàṅsè

we.INCL FUT2 see Shey FOC tomorrow (and behind tomorrow

fój)

also)

'It is tomorrow (#and also the day after tomorrow) that we will see Shey.'

- d. yà táā à m̀ d̀ b́à mà ntāā (#b́à mà rfà f́ɔŋ)
 my father 3SG PST3 go FOC PREP market (and PREP work also)
 ‘It is to the market (#and also to work) that my father went.’

Thus, it seems to be the case that high focus expresses information focus, while low focus marks identificational (exhaustive) focus. To ensure that this effect is not due to other unexpected interactions, we will also test for universal quantifiers and *only*-phrases, which both show different compatibility patterns with the two focus types.

3.2.2. *Universal quantifiers*

Since universal quantifiers semantically entail identification without exclusion, they are inherently incompatible with identificational focus, which exclude by identification (É. Kiss 1998, Kenesei 1986). Information focus, on the other hand, is perfectly compatible with them. As for the Limbum constructions discussed here, this would predict that the high focus position can be filled by a universal quantifier, in contrast to the low focus position. The following examples show that this is indeed the case: the high focus constructions with universal quantifiers in (16) are felicitous, while the low focus ones in (17) are not:

- (16) a. á ŋwè nsíp (cí) í b́à zhē b́āā
 FOC person all (COMP) 3SG PST1 eat fufu
 ‘Everybody ate fufu.’
 b. á ŋwè nsíp (cí) m̀ b́í k̀nī
 FOC person all (COMP) I FUT1 meet
 ‘I will meet *everybody*.’
 c. á ǹŋ nsíp (cí) sì ćī ýé Shey
 FOC day all (COMP) we.INCL PROG see Shey
 ‘We will be seeing Shey *everyday*.’
 d. á à b́dī? síp (cí) yà táā à m̀ d̀
 FOC PREP place all (COMP) my father 3SG PST3 go
 ‘My father went *everywhere*.’
- (17) a. *à b́ā zhē b́á ŋwè nsíp b́āā
 EXPL PST1 eat FOC person all fufu
 ‘It is everybody who ate fufu.’

- b. *mè bí kōnī bá ŋwè nsìp
 I FUT1 meet FOC person all
 ‘It is everybody that I will meet.’
- c. *sì cī yé Shey bá nòŋ nsìp
 we.INCL PROG see Shey FOC day all
 ‘It is everyday that we will be seeing Shey.’
- d. *yà táā à m̀ dò bá à b̀dì? s̀ip
 my father 3SG PST3 go FOC PREP place all
 ‘It is everywhere that my father went.’

3.2.3. Even-phrases

The third test invoked here makes use of the semantic nature of the additive particle *even*, which ‘identifies a member of the relevant set of persons for whom the predicate holds without excluding any members for whom it does not hold’ (É. Kiss 1998: 252). The particle *even* being semantically incompatible with identificational focus, we would again predict that high focus constructions are compatible with *even*, while low focus constructions are not.

In Limbum, the semantics of *even* are expressed by the particle *ká?*, which seems to function as focus marker of its own,⁴ so that it cannot co-occur with the usual focus marking particles *á* or *bá*. It also precedes the constituent it refers to and shows restrictions as to where it can occur in the clause, i.e. it is featured in the high focus position (18), while it cannot occur in the low focus position (19):

- (18) a. *ká?* Nfò à bā zhē bāā
 even Nfor 3SG PST1 eat fufu
 ‘Even *Nfor* ate fufu.’
- b. *ká?* Ngálá m̀è bí kōnī
 even Ngala I FUT1 meet
 ‘I will meet even *Ngala*.’
- c. *ká?* àyàŋsè̀ sì bífū yé Shey
 even tomorrow we.INCL FUT2 see Shey
 ‘We will see Shey even *tomorrow*.’

⁴This seems to be an areal feature, see Zimmermann (2014) for a comparative overview of exclusive, additive, and scalar particles in West African languages.

- d. *ká? mà ntāā yà táā à m̀ d̀*
 even PREP market my father 3SG PST3 go
 ‘My father went even *to the market*.’

In (19c) and (19d), the particle *ká?* is not unacceptable in the low focus position, but seems to be less felicitous in contrast to (18c) and (18d), respectively. At this point, we do not have a good explanation for that; this would need to be addressed in more detail in future research.

- (19) a. *à bā zhē *ká?* Nfò bāā
 EXPL PST1 eat even Nfor fufu
 ‘It is even Nfor who ate fufu.’
 b. *m̀ bí k̀nī *ká?* Ngàlá
 I FUT1 meet even Ngala
 ‘It is even Ngala whom I will meet.’
 c. ?sì bífū yé Shey *ká?* àyàŋsè
 we.INCL FUT2 see Shey even tomorrow
 ‘It is even tomorrow that we will see Shey.’
 d. ?yà táā à m̀ d̀ *ká?* mà ntāā
 my father 3SG PST3 go even PREP market
 ‘It is even to the market that my father went.’

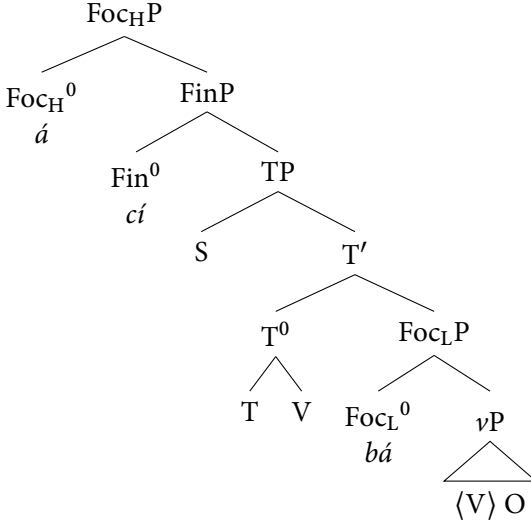
The fact that the particle *ká?* does not simply co-occur with the information focus marker *á*, but surfaces in the exact same position within the clause and is not felicitous in the other position, is yet another argument for two distinct high and low focus positions. Furthermore, it is evidence for the fact that the head of the high focus phrase in Limbum can be realized either by the usual focus marker (*á*) or alternatively a focus sensitive operator such as *ká?* ‘even’.

3.3. An analysis of Foc_HP and Foc_LP

We will now turn to the structure of the two focus constructions. In the spirit of the cartographic approach to syntax (e.g. Rizzi 1997), several works (e.g. Belletti 2004, Samek-Lodovici 2006, van der Wal 2006, Aboh 2007, Zubizarreta 2010) argue for the structural richness of the *v*P in analogy to the CP, and provide arguments in favour of another, second focus position in the left periphery of the *v*P based on data from Romance and Bantu. Accordingly, in this paper, we assume a focus phrase in the CP and another focus phrase directly above *v*P.

We assume the following basic structure of the Limbum clause with both FocPs schematized in (20):

(20) *Basic clause structure in Limbum*



The Foc_HP with *á* as its head dominates a FinP, adopted from the structural make-up of the CP argued for in Rizzi (1997). This is relevant here, because the complementizer *cí* can surface to the right of Foc_HP. Since it selects for a finite clause and can effect the agreement marker of the subject,⁵ we assume that it is the head of FinP.

The TP hosts the subject in its specifier position and the verb in T⁰ due to V-to-T movement.⁶ Below TP, there is another focus projection Foc_LP. The head of the latter is the identificational focus marker *bá*.

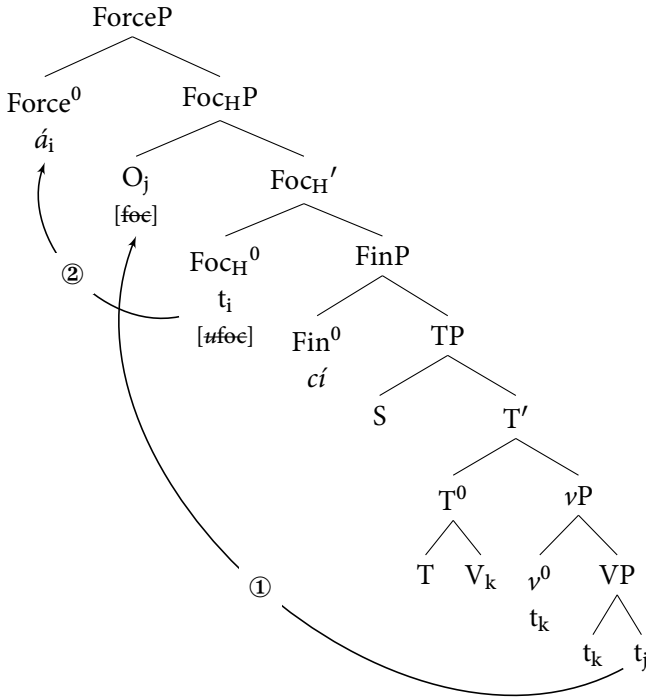
⁵In case the complementizer is present, the agreement marker for 3SG is no longer *á* but *í*, which we indicate by brackets in the examples to which this applies. As it is not of major concern to the topic discussed in the present paper, we will have to leave this locality effect open for future research.

⁶We assume that the verb generally is spelled out in a high position; it shall suffice here to note that adverbs cannot occur between the subject and the verb, but follow the latter. Furthermore, movement of the verb out of vP has also been suggested for other Grassfields languages such as Aghem (Aboh 2007), Nweh (Nkemnji 1995), and other Bantu, e.g. Zulu (Sabel & Zeller 2006). In the surface structure, the auxiliary marks tense, which should not be relevant to the syntactic structure argued for here, once a DM-like late insertion in morphology is assumed.

We will address $\text{Foc}_{\text{H}}\text{P}$ in more detail now. Consider example (21) repeated below with the schematic word order represented in brackets:

- (21) a. á *Nfò* (cí) í bā zhè bāā
 FOC Nfor (COMP) 3SG PST1 eat fufu
 ‘*Nfor* has eaten futu.’ (á S (Comp) V O)
- b. á *Ngàlá* (cí) mē bí kōnī
 FOC Ngala (COMP) I FUT1 meet
 ‘I will meet *Ngala*.’ (á O (Comp) S V O)

The derivation of the structure relevant to high focus involves two steps: first, the focused phrase moves to $\text{SpecFoc}_{\text{H}}\text{P}$ in order to check its [foc] feature. Once the features have been checked, we assume head movement of the Foc_{H} -head (the focus marker) to the next highest head Force^0 , since it linearly precedes the focused element. The higher projection is labelled ForceP here for the sake of contiguity with Rizzi’s (1997) terminology, it could equally be labelled CP in a recursive CP system (see van Craenenbroeck 2010) or FP (functional projection). The derivation is given in (22) for a focused object as in (21b); deriving the focus construction of other focused constituents works in a similar way in that it involves no crucially different derivations.

(22) *Object focus in Foc_HP*

We can now turn to Foc_LP and its focus marking mechanism, which differs from the one of Foc_HP. This might not be entirely unexpected given that the two projections host different types of focus. We saw for Foc_HP that the focused constituent must move into Foc_HP in order to get its focus interpretation. The necessity of this movement can be directly observed in the surface structure. This is not the case for focus in Foc_LP. Since there is no good evidence for movement of the focused constituent (and as we will see later, there seems to be rather evidence against it), we assume that the focused constituent stays in-situ. Therefore, we postulate the following property for Foc_LP:

(23) *Foc_LP condition*

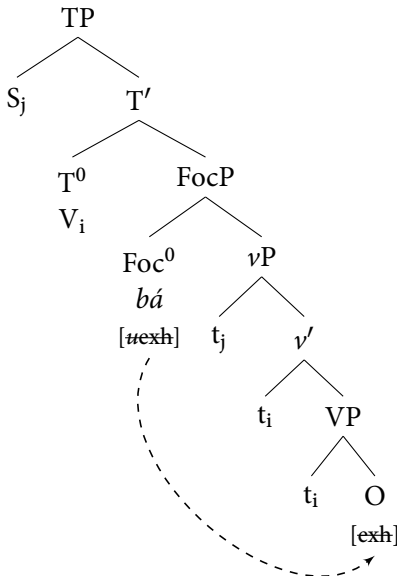
The first major constituent in the scope of the Foc_LP head must be exhaustively focused, that is, bear a [exh] feature.

As will be shown later, this requirement is necessary to account for the linear order in low focus constructions (an even more evidently, in cases of verb doubling). Before we address the derivation of the latter in detail, the low focus constructions with subject and object are repeated in (24):

- (24) a. à bā zhē bá Nfò bāā
 EXPL PST1 eat FOC Nfor fufu
 ‘It is Nfor who ate fufu.’ (Expl V bá S O)
- b. mē bí kōnī bá Ngàlá
 I FUT1 meet FOC Ngala
 ‘It is Ngala whom I will meet.’ (S V bá O)

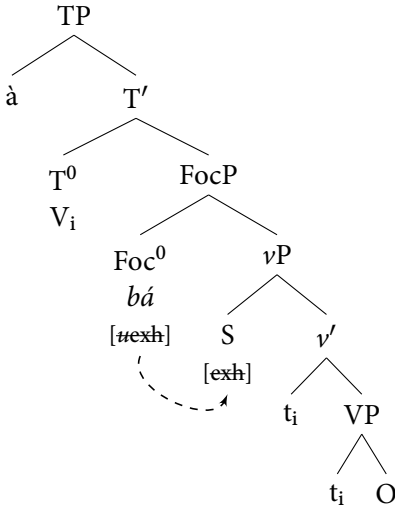
The structure in (25) illustrates the object low focus derivation. The Foc_{LP} head searches downwards for a constituent that can check its $[uexh]$ feature. Independently from the focus projection, the subject has moved out of $Spec_{vP}$ to check the EPP feature and the verb has undergone V-to-T movement. Consequently, the closest candidate that the Foc_{LP} head finds is the object. Being the immediate constituent below Foc_L^0 , its $[exh]$ feature checks the $[uexh]$ of Foc_L^0 , so that the uninterpretable feature of the latter can be deleted.

(25) Object focus with Foc_{LP}



For a subject with identificational focus, the derivation is similar. As is illustrated in (24a), the subject does not obligatorily move to SpecTP in order to check its EPP feature, instead, an expletive can be inserted into that position to fulfil the criterion. The subject, on the other hand, stays in Spec ν P immediately below Foc_L^0 within the scope of Foc_{LP} , which searches for a goal to check its [$u\text{exh}$] feature:

(26) *Subject focus with Foc_{LP}*



Regarding the expletive \acute{a} , there is not much clear language internal evidence for it in other constructions; typical expressions involving expletives such as weather verbs, locative inversions, or existential constructions do not show \acute{a} in Limbum. In the related languages Aghem and Igbo, on the other hand, we find similar elements in both focus and existential constructions. In Aghem (27), the sentence with the expletive is ambiguous between a focus and an existential reading; example (28) shows an existential sentence from Igbo:

- (27) \acute{a} m̀ ñ́íj t́bv́ú á⁺źóó
 EXPL PST run dogs yesterday.
 ‘There ran dogs yesterday /
 It is the dogs that ran yesterday.’

(Aghem, Hyman & Polinsky 2006: 8)

- (28) *A ga-agba ọsọ*
 EXPL FUT-run race
 ‘There will be a running race.’ (Igbo, Akinremi 2013: 1132)

Therefore, we conclude that *à* in Limbum can be viewed as expletive.

3.4. Evidence from wh-questions

The present section provides some examples of wh-questions (rather than the full pattern) in support of the two FocPs assumed in this approach. Similar to what has been shown for focused constituents in the previous section, wh-words can appear either in-situ or in both Foc_{HP} and Foc_{LP} focus positions.

The default questions expressing information focus feature the wh-word in-situ. This is illustrated below for subject (29a) and object (29b):

- (29) a. *ndá á bā zhē bāā*
 who 3SG PST1 eat fufu
 ‘Who ate fufu?’
 b. *wè bā yé kéré*
 you.SG PST1 see what
 ‘What did you see?’

In addition to such in-situ questions, Limbum allows for wh-words to occur in both focus positions, as is shown for subject (30) and object (31) questions:

- (30) a. *á ndá (cí) í bā zhē bāā*
 FOC who (COMP) 3SG PST1 eat fufu
 ‘Who is it that ate fufu?’
 b. *à bā zhē bá ndà bāā*
 EXPL PST1 eat FOC who fufu
 ‘Who (if not X / of them) ate fufu?’
 (31) a. *á kéré wè bā yé*
 FOC what you.SG PST1 see
 ‘What is it that you saw?’
 b. *wè bā yé bá kéré*
 you.SG PST1 see FOC what
 ‘What (if not X) did you see?’

Without going into more detail here, it can be noted that the questions parallel

the structure and focal interpretation of the constructions seen in 3.1 and 3.2, schematized in the bracket structures below for (30b) (subject in Foc_LP) and (31a) (object in Foc_HP), respectively:

(32) [TP à [TP⁰ bā zhē [Foc_L⁰ bá_[#exh] [vP ndà_[exh] [vP bāā]]]]]

(33) [ForceP⁰ á [Foc_HP kÉÉ_[fœ] [Foc_H⁰ [fœ] [TP wè [TP⁰ bā yÉ]]]]]

A wh-word in Foc_HP checks its [foc] feature and hence receives focus interpretation, while a wh-word with the [exh] feature below Foc_LP is focused exhaustively if it is immediately c-commanded by an active Foc_L⁰.

4. Verb doubling

Having established the existence of Foc_HP and Foc_LP in the Limbum clause, we will address verb doubling in this section. Syntactic verb doubling in Limbum can be accounted for by the assumption of those two structural projections, and at the same time, it provides even stronger evidence that is visible in the surface structure for the derivations addressed in 3.3, e.g. for the Foc_LP requirement.

4.1. The data

Like in many other West African languages (including Yoruba (Manfredi 1997), Ewe and Akan (Ameka 1992), Ga (Kropp Dakubu 2005), Gungbe (Aboh 1998, 2006), Nweh (Nkemnji 1995), Vata (Koopman 1984), Kabiye (Collins & Essizewa 2007), Buli (Hiraiwa 2005), Fongbe (Lefebvre & Brousseau 2002), Tuki (Bilola 1997), Asante-Twi (Hein this volume), and Krachi (Kandybowicz & Torrence 2016)), verb focus in Limbum is realized by doubling of the verb. As for intransitive verbs, the two copies of the verb appear adjacent to each other and do not yet indicate syntactically motivated doubling per se. This is exemplified in (34) for an unergative, in (35) for an unaccusative verb.

- (34) a. á *r-cāŋ* (cí) ŋgwá wò à mū *cāŋī*
 FOC INF-run (COMP) wife your.SG 3SG PST run
 ‘Your wife ran.’
 b. ŋgwá wò à mū *cāŋ* *cāŋī*
 wife your.SG 3SG PST run run
 ‘It is running that your wife did.’

- (35) a. á *r-gwè* (cí) ndāp f̄ à ∅ *gwè*
 FOC INF-FALL (COMP) house DET 3SG PERF fall
 ‘The house *fell*.’
- b. ndāp f̄ à ∅ *gwè gwè*
 house DET 3SG PERF fall fall
 ‘It was falling that the house did.’

Example (36) features a doubled transitive. In this case, the two copies of the verb are no longer adjacent to each other in the low focus construction, but precede and follow the object (36b):

- (36) a. á *r-yū* (cí) njíjwè f̄ bí *yū* msāŋ
 FOC INF-buy (COMP) woman DET FUT1 buy rice
 ‘The woman will *buy* rice.’
- b. njíjwè f̄ bí *yū* msāŋ *yú*
 woman DET FUT1 buy rice buy
 ‘It is buying that the woman will do to the rice.’

Note that in (34a), (35a), and (36a), the copy of the verb that has moved to Foc_{HP} is no longer a verbal root but marked by an infinitive prefix. We hence assume that Foc_H⁰ can only select for non-verbal elements, so that V is realized as infinitive at Spell-Out. In cases of low verb doubling, the expected focus marker *bá* is not spelled-out, focus marking is visible on the surface only through verb doubling. Another rather unexpected fact concerning low verb focus is that it is the lower copy which is prosodically more prominent than the higher one. This suggests that the lower copy of the verb is the one in Foc_LP.⁷

In all the three examples above, only the verb and not the entire predicate is focused. Moreover, predicate focus cannot be expressed by the constructions discussed here, as is demonstrated in the following two infelicitous examples:

- (37) a. *á *r-yū* *msāŋ* (cí) njíjwè f̄ bí *yū* msāŋ
 FOC INF-buy rice (COMP) woman DET FUT1 buy rice
 intended: ‘The woman will *buy* rice.’
- b. njíjwè f̄ bí *yū* msāŋ *yú*
 woman DET FUT1 buy rice buy
 ‘It is buying rice that the woman will do.’

⁷Note that the high tone of the lower verb *yú* in (36b), contrasting with the mid tone (*yū*) in all other instances of the verb in (36) is an effect independent from focus: the base form of the verb (*yú*) has a high tone, which is lowered after a high tone TAM marker (e.g. *bí*).

Interestingly, the ungrammatical construction in (37a) showing predicate focus involving Foc_HP, can be repaired by *do*-support instead of verb doubling:

- (38) á r-yū msāŋ (cí) njíŋwè f̄s bí gī
 FOC INF-buy rice (COMP) woman DET FUT1 do
 ‘The woman will *buy rice*.’⁸

Note that a low focus counterpart to (38) with *do*-support replacing the verb copy that is not in Foc_LP is not grammatical:⁹

- (39) *njíŋwè f̄s bí gī (bá) yū msāŋ
 woman DET FUT1 do (FOC) buy rice
 intended: ‘It is buying rice that the woman will do.’

A more detailed account of the constructions with *do*-support would exceed the purpose of the present paper; we will therefore not consider it in the following sections. However, the analysis proposed to account for high and low focus as well as verb doubling can principally also capture the construction involving *do*-support. As for a detailed account of the distribution of verb doubling and *do*-support see Hein (this volume). Based on the ordering of head movement and chain reduction at PF, either both copies of the verb can be spelled out or one copy is deleted so that we observe *do*-support instead. In principle, this analysis should also be applicable to the Limbum data.

Similar to focus constructions in embedded clauses, dependent infinitives can be focused in both Foc_HP and Foc_LP as well.

- (40) m̄è cī tà? à yèè ndúr wà yèè
 I PROG want 3SG see brother my see
 ‘It is *seeing* my brother that I want to do.’

In addition to the example of the dependent infinitive given in (40), also the control verb *tà* ‘want’ can be focused by doubling. However, the lower copy does not surface in the expected clause-final position (41b), instead, both copies of the verb occur adjacent to each other preceding the clausal argument (41a):

⁸In order to be coherent, we gave an English functionally equivalent counterpart with in-situ and hence information focus, instead of the formally more similar cleft construction *It was buying rice that the woman will do*.

⁹In section 4.3 we will show that it has to be the lower copy of the verb which is in Foc_LP.

- (41) a. m̀̀̀ cī tà? tà? à ỳ̀̀̀ ndúr wà
 I PROG want want 3SG see brother my
 ‘I want to see my brother.’
- b. *m̀̀̀ cī tà? à ỳ̀̀̀ ndúr wà tà?
 I PROG want 3SG see brother my want
 intended: ‘I rather want to see my brother.’

Exceeding the topic of the present paper, an account for this pattern will have to be provided in future work.

Multiple focus constructions with both FocPs being active can also be expressed with verb doubling. Of all combinatorial possibilities available, we will restrict the examples to high subject focus with low verb focus (42a) and high object focus with low verb focus (42b).

- (42) a. á Nfò (cí) à (i) mū s̀̀̀? ɲgū s̀̀̀̀̀
 FOC Nfor (COMP) 3SG (3SG) PST2 fetch wood fetch
 ‘It is wood fetching that *Nfor* did.’
- b. á ɲgū (cí) Nfò à mū s̀̀̀? s̀̀̀̀̀
 FOC wood (COMP) Nfor 3SG PST2 fetch fetch
 ‘It is wood fetching that *Nfor* did.’

4.2. Information vs. identificational focus

In this section, the question of different focus types associated with Foc_HP and Foc_LP will be addressed very briefly with respect to verb focus. As was seen in section 3.2 for other focused constituents, Foc_HP expresses information focus, while Foc_LP marks identificational focus. The compatibility with high verb doubling and *also*-phrases in (43a) on the one hand and their incompatibility of low verb doubling in (43b) confirms this.

- (43) a. á r-lá (cí) ẁ̀̀̀ à lá bzhīī (ā zhēē f́́́)
 FOC INF-cook COMP we 1PL cook food (and eat also)
 ‘We cooked the food (and also ate it).’
- b. ẁ̀̀̀ à lá bzhīī lá (*ā zhēē f́́́)
 we 1PL cook food cook (and eat also)
 ‘It is cooking (and also eating it) that we did to the food.’

The test with the additive particle *ká?* ‘even’ shows similar effects in compatibility with the two verb focus constructions:

- (44) a. *ká?* *r-lá* (cí) wèr à *lá* bzhīī
 even INF-cook COMP we 1PL cook food
 ‘We even *cooked* the food.’
 b. wèr à *lá* bzhīī (**ká?*) *lá*
 we 1PL cook food (**even*) cook
 ‘It is (**even*) cooking that we did to the food.’

Combining the verbs in the doubling constructions with *kū* ‘only’ as in (45) has the opposite effects as its semantics include exhaustivity.

- (45) a. **kū* *r-lá* (cí) wèr à *lá* bzhīī
 only INF-COOK COMP we 1PL cook food
 ‘We only *cooked* the food.’
 b. wèr à *lá* bzhīī *kū* *lá*
 we 1PL cook food only cook
 ‘It is only cooking that we did to the food.’

Thus, verb doubling not only follows the structure of the two focus constructions, but also conveys the same meanings of information focus (Foc_HP) vs. identificational focus (Foc_LP), which makes it evident that the derivations of the two expressions must be linked to each other.

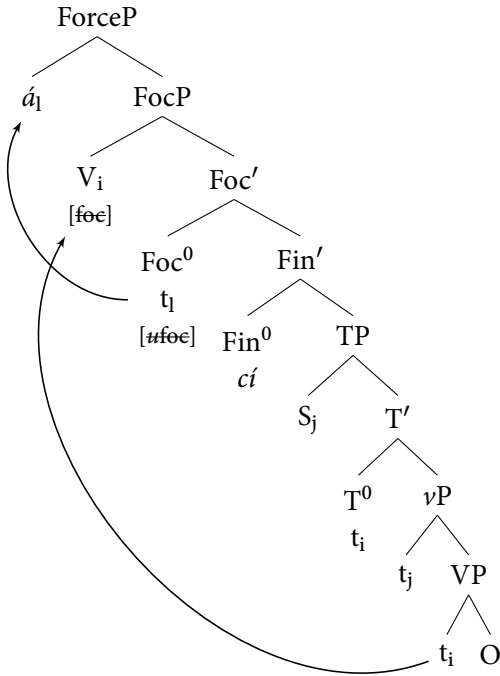
4.3. An analysis of verb doubling

The account for verb doubling in order to focus verbs is based on the analysis of focus constructions argued for in section 3.3. Here, we show that the copy of the verb moves into Foc_HP and Foc_LP similar to other focused constituents.

We will now turn to verb doubling with information focus, as it was illustrated in (36a), repeated below.

- (46) á *r-yū* (cí) njíjwè fō bí *yū* msāj
 FOC INF-buy (COMP) woman DET FUT1 buy rice
 ‘The woman will *buy* rice.’

By analogy to the derivation proposed in (22), the structure of verb doubling involving Foc_HP is the following:

(47) *Verb doubling with Foc_{HP}*

The verb has a [foc] feature that it can check by moving to $SpecFoc_{HP}$.¹⁰ The head of Foc_{HP} , in turn, moves into a higher projection, since it precedes the verb copy in the surface structure. The latter is spelled out as infinitive, we could assume that the Foc_{HP} head can only select for a non-verbal element, so that the verb is nominalized by its infinite marker. This would also account for the fact that we see multiple spell-out of the verb: the standard case of movement only allows the highest copy of a movement chain to be realized at PF, however, since the highest copy is phonetically different, both copies are realized.

The account of verb doubling involving the Foc_{LP} , in contrast to the verb doubling discussed above, is perhaps less straightforward, since the object

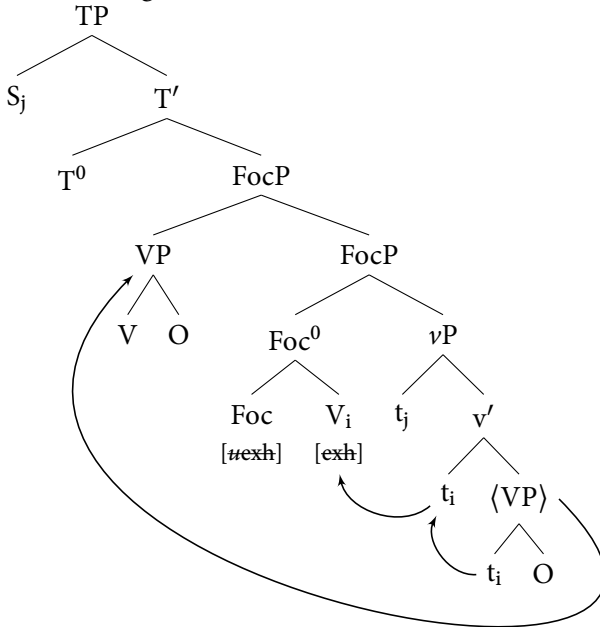
¹⁰Head movement is problematic in this case, since the verb would need to move to Fin^0 as well. Instead, following Vicente (2009), we propose that the bare verb can directly move to $SpecFoc_{HP}$.

occurs between the two copies of the verb, while prosody suggests that the lower copy is the one which bears the focus interpretation. Example (36b), repeated below, illustrates this again.

- (48) njíŋwè fɔ́ bí yū msāŋ yú
 woman DET FUT1 buy rice buy
 ‘It is buying that the woman will do to the rice.’

We propose the following derivation to account for clauses such as (48):

- (49) *Verb doubling with Foc_LP*



Since the subject moves to SpecTP, it is not affected by the Foc_LP condition. The verb undergoes head movement to Foc_L⁰ in order to check its focus feature. Once Foc_L⁰ being filled by the verb, the focus marker *bá*, which we would expect in such a context, is blocked and does not surface. At this point, the VP is the immediate constituent below Foc_L⁰, where it would violate the Foc_LP condition since it is the first major constituent c-commanded by the low focus head not being (exhaustively) focused, that is, bear a [exh] feature.

In order to prevent this, it has to move out of the scope of Foc_L⁰, i.e. to the

specifier of Foc_{LP} . The lower copy of V still being active in syntax, scrambling of VP will lead to another copy of V in $\text{SpecFoc}_{\text{LP}}$, paralleling the linear order of SVOV. Multiple Spell-Out of V can, in this case, be accounted for by the fact that the two copies of the verb do not belong to the same movement chain (see Hein this volume).

At this stage, the Limbum facts recall scrambling phenomena in Germanic, where elements that normally appear within the VP scramble out of this domain, so that lower elements in the VP can be focused (Zubizarreta 1998, Drubig 2003, Fanselow 2003).¹¹

Fanselow (2003) labels this ‘altruistic movement’, an illustration from German is given in (50). In the default word order, the adverb *gestern* ‘yesterday’ precedes the object in (50a); by ‘moving to the left’, the object allows either the verb or the adverb to be focused in (50b):

- (50) a. dass die Polizei *gestern* *Linguisten* verhaftete
 COMP ART police yesterday linguists arrest.PST.3SG
 ‘that the police arrested the linguists yesterday’
 b. dass die Polizei *Linguisten* *gestern* verhaftete
 COMP ART police linguists yesterday arrest.PST.3SG
 ‘that the police arrested linguists *yesterday*’

(Fanselow 2003: 198)

Further evidence in support of VP scrambling in order to avoid focus comes from constituent following the lower copy of the focused verb in Foc_{L}^0 . The Foc_{LP} condition requires the immediate constituent below Foc_{L}^0 to bear an [exh] feature. As it seems, only one constituent can be focused in each Foc_{P} , so that no other constituent is allowed to have a [exh] feature if the verb is already focused in Foc_{L}^0 . Consequently, we predict that no other constituent can follow the focused copy of the verb. Indeed, (51) shows that the prediction holds for both adjuncts and adverbs:

¹¹Manfredi (1997) proposes a similar account for a phenomenon other than focus, namely the rather unusual OV order in different Kru and Kwa languages. In durative contexts, the object is forced to move out of the VP in order to escape the scope of the durative semantics of the verb, which it is incompatible with. The so-called ‘scopophobic’ behaviour of the object hence results in the OV order.

- (51) $\eta w\grave{e}$ $rt\bar{a}$ \grave{a} $m\bar{u}$ $k\acute{o}$ $nzh\grave{e}$ $k\acute{o}$ (* $m\grave{a}$ $nt\bar{a}\bar{a}$) (* $n\grave{i}\eta k\grave{o}r$)
 man cap 3SG PST2 catch thief catch (PREP market) (yesterday)
 ‘It was catching that the policeman (lit. capped man) did to the thief (at the market) (yesterday).’

In order to rescue sentences as (51) above, the adjunct and the adverb can occur as topics in the left periphery of the clause or before the lower copy of the verb in Foc_L^0 , i.e. within the scrambled VP:

- (52) ($m\grave{a}$ $nt\bar{a}\bar{a}$) ($n\grave{i}\eta k\grave{o}r$), $\eta w\grave{e}$ $rt\bar{a}$ \grave{a} $m\bar{u}$ $k\acute{o}$ $nzh\grave{e}$ ($m\grave{a}$
 (PREP market) (yesterday) man cap 3SG PST2 catch thief (PREP
 $nt\bar{a}\bar{a}$) ($n\grave{i}\eta k\grave{o}r$) $k\acute{o}$
 market) (yesterday) catch
 ‘(Yesterday) (at the market,) it was catching that the police man (lit. capped man) did to the thief (at the market) (yesterday).’

Low (identificational) focus of constituents other than the verb, on the other hand, does not involve movement of the focused constituent to $Foc_L P$, since the Foc_L^0 searches downwards in order to check its [*uexh*] feature. For that reason, there always is a constituent immediately below Foc_L^0 with a [*exh*] feature in such constructions. We hence predict that in contrast to low focus of the verb, further elements can appear below other low focused constituent. Example (53) demonstrates that for identificational focus of the subject in opposition to (51):

- (53) \grave{a} $m\bar{u}$ $k\acute{o}$ $b\acute{a}$ $\eta w\grave{e}$ $rt\bar{a}$ $nzh\grave{e}$ ($m\grave{a}$ $nt\bar{a}\bar{a}$) ($n\grave{i}\eta k\grave{o}r$)
 EXPL PST2 catch FOC man cap thief (PREP market) (yesterday)
 ‘It is the police man (lit. capped man) who caught the thief (at the market) (yesterday).’

5. Conclusion

In this paper, we presented two different instances of replication in Limbum. On the one hand, section 3 showed focus constructions to result from two distinct focus projections in the clause, which is a rather abstract example of replication involving structure of the clause. On the other hand, section 4 addressed verb doubling (a more concrete instance of replication) which proved to make use of the same focus projections.

Along the lines of the cartographic approach to syntax, we developed an

analysis of the two focus constructions in section 3.3. We argued for a higher Foc_{HP} in the CP layer marking information focus and a lower Foc_{LP} above νP denoting indentificational focus. Focus marking in F_{HP} was obtained by movement of the focused constituent into SpecF_{HP} ; focus in F_{LP} , on the other hand, did not feature movement of the focused constituent. Instead, we argued that the latter requires the immediate constituent in its scope to bear a [exh] feature.

We also demonstrated that verb focus constructions expressed by doubling of the verb, follow the same basic patterns as focus of other constituents. As for identificational verb focus (in F_{LP}), the structure seemed to be less straight-forward, the linear order of constituents being SVOV. However, this is what our account predicted: the focused verb being moved to F_{L}^0 , the VP is the immediate constituent in the scope of F_{L}^0 . As the VP does not bear a [exh] feature, it is forced to move out of the scope of F_{H}^0 , resulting in the linear order of SVOV. In addition, it was shown that no other constituent could follow the lower copy of the verb in such constructions, contrarily to low focus of e.g. subjects.

The aim of the present paper was to capture the basic patterns of focus and verb doubling in Limbum. More specific issues, such as doubling of control verbs (see example (41) on page 75) and predicate focus realized by *do*-support (see example (38) on page 75) instead of verb doubling, need to be addressed in more detail in future research.

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