

Focus Strategies in Chadic: The Case of Tangale Revisited*

Katharina Hartmann and Malte Zimmermann

Humboldt University Berlin

We argue that the standard focus theories reach their limits when confronted with the focus systems of the Chadic languages. The backbone of the standard focus theories consists of two assumptions, both called into question by the languages under consideration. Firstly, it is standardly assumed that focus is generally marked by stress. The Chadic languages, however, exhibit a variety of different devices for focus marking. Secondly, it is assumed that focus is always marked. In Tangale, at least, focus is not marked consistently on all types of constituents. The paper offers two possible solutions to this dilemma.

Keywords: tone languages, focus marking, focus movement

1 Introduction

This paper investigates the focus systems of some Chadic languages, in particular Tangale, a Western Chadic language spoken in the North of Nigeria. We show that standard focus theories, which are based on stress languages, cannot account for the rich variety of focus phenomena found in the Chadic tone languages. The standard theories assume that focus is obligatorily marked by stress. The Chadic languages, however, choose from a variety of devices for

* This article was written within the project B2 “Focusing in Chadic Languages” funded by the German Science Association (DFG) as part of the SFB 632 „Information Structure“. We would like to express our gratitude to the DFG, as well as to our main Tangale consultant, Mr Sa’eed M. Omar (from Kaltungo), and to Jörg Dreyer (ZAS/Berlin) for help with the recordings in the ZAS lab. A preliminary version of this paper was presented at the 40th meeting of the Chicago Linguistics Society. We thank the CLS audience, as well

focus marking (movement, morphological marking, prosodic phrasing). Apart from this, the formal means of focus marking sometimes depend on the syntactic category of the focus constituent, which can result in a systematic underspecification of focus: at least in Tangale, it appears that focus is not marked consistently on all types of constituents. The data discussed suggest that universal theories of focus have to be either more complex than so far assumed. Or, they could still be simple, but would have to allow for a certain degree of underspecification in focus marking. The second alternative shifts much of the interpretive burden to the pragmatic component.

In section two, we give a definition of focus and present our view of the standard theory. In section three, we show that tone languages sometimes use more than just one strategy to mark a focus, thereby deviating from one of the core assumptions of the standard theory. In sections four and five, we concentrate on the tonal languages of the Chadic family, especially on Tangale, a language spoken in Northern Nigeria (Gombe State). Our investigation shows that at least some Chadic languages seem to have more than one focus marking device at their disposal, suggesting a modification of the standard theory. However, in section six, we go on to show that only subjects are consistently marked for focus in Tangale. In contrast, focus on all other constituents is only sporadically marked and must therefore be heavily supported by the pragmatic system. This might bring us back to the assumption of the standard theory, that there is only one mechanism of (obligatory) focus marking.

2 Standard Focus Theories

2.1A definition of focus

We adopt the following definition of focus for tone and stress languages (which is independent of focus marking): Focus on a constituent α ($[\alpha]_F$) invokes a set A of alternatives to α , indicating that members of A are under consideration (Rooth 1985). Depending on the interaction of α with other alternatives, a focus can receive different pragmatic readings: A focus is *corrective* if α replaces an element of A previously introduced into the common ground (CG), i.e. the linguistic context preceding \forall , see (1a). A focus is *selective* if α introduces an element of A into the CG and some elements of A are made explicit, see (1b). A focus expresses *new-information* if α introduces an element of A into the CG and the members of A are left implicit, see (1c).

- (1) a. (Peter painted his bicycle red.) No, he painted it $[\text{blue}]_F$.
 $\alpha = \text{blue}$, $A = \{\text{blue, red, green, pink, ...}\}$
- b. (Did Peter paint his bicycle red or blue?) He painted it $[\text{blue}]_F$.
 $\alpha = \text{blue}$, $A = \{\text{blue, red, green, pink, ...}\}$
- c. (Which color did Peter paint his bicycle?) He painted it $[\text{blue}]_F$.
 $\alpha = \text{blue}$, $A = \{\text{blue, red, green, pink, ...}\}$

The alternative sets in (1a-c) are identical. This shows that the foci do not differ semantically, but only pragmatically in the sense illustrated above. In our view, focus as defined above is a universal category. The focus marking devices, however, vary considerably across the world's languages. This paper investigates means of focus marking in Chadic tone languages and compares them to focus marking in stress languages.

2.2 Standard focus theories

Theories of focus are usually based on the properties of stress languages. This bias towards a certain typological kind of languages has accompanied the development of focus theories since focus became a subject of scientific interest. In a nutshell, standard focus theories make the following three assumptions: Firstly, focus must be marked. Secondly, there is a single strategy to mark a focus, which is stress. And thirdly, any syntactic category can be focused.

Jackendoff (1972) already states that: “If a phrase P is chosen as the focus of the sentence S, the highest stress in S will be on the syllable of P that is assigned highest stress by the regular stress rules.” (p. 237). Following Jackendoff, the relation between the (pragmatically determined) size of a focus and placement of stress is mediated by a syntactic focus (F-) feature. The F-feature marks the focus of a sentence. The stress must be realised within the F-marked constituent (Jackendoff 1972:240f).

F-features also form the back bone of Selkirk’s focus theory (Selkirk 1984, 1995). In this approach, F-feature assignment is not primarily triggered by pragmatics, but by phonetic conditions: the constituent carrying main stress receives an F-feature (the *Basic Focus Rule*, Selkirk 1995:555). This feature can project along the functor-argument structure. If the accented constituent is a complement, it projects to the selecting head. If it is a head, it projects to the head’s maximal projection (*Focus Projection*, Selkirk 1995:555). Focus projection enables a constituent which is bigger than the stress bearing unit to be the focus of a sentence. Constituents which are F-marked (and are not the sentence focus) are interpreted as new in the discourse (Selkirk 1995:556). The following examples illustrate the working of Selkirk’s theory. The stress bearing constituent is printed in capitals.

- (2) a. What did Carolin bring to the party?
 She brought [_{NP} SALAD]_F
- b. What did Carolin do?
 She [_{VP} brought_F [_{SALAD}]_F]_F

In (2a), the accented object is F-marked. It is the focus of the sentence since it replaces the *wh*-word of the question. In (2b) the *wh*-question requires a predicate focus. Again, the accented object receives an F-feature, which projects across V to VP, thereby defining the focus of the sentence.

Schwarzschild (1999) and Büring (2004) examine the validity of focus projection rules showing that these rules are empirically inadequate. The heart of their argument is that any accent within an XP can project focus given an appropriate context. Thus, F-marking of XP does not require an accent on X^0 or on the complement of X^0 . This is shown in (3), taken from Büring (2004:7). This example shows that focus can project from unergative subjects, which is excluded in Selkirk's theory since the subject is neither a complement nor a head.

- (3) Q: Why did Helen buy bananas?
- A: [_{Because} JOHN bought bananas]_F

Büring and Schwarzschild maintain the assumption that a focus must be maximally prominent and that it must be marked somewhere within the focused constituent (see also Truckenbrodt 1995, 1999). The position of the main stress thus depends on the argument structure in a less direct way than hitherto proposed.

To summarise, the standard theories assume that focus on any constituent is marked by one and the same strategy. The only factor to be considered is

stress. Additional means of highlighting a focus constituent (i.e. clefting or movement) are possible in stress languages, but they are always accompanied by an accent on the clefted/moved constituent, as shown by the following example.

- (4) a. A BOOK, Peter bought (not a REcord).
 b. It is a BOOK that Peter bought (not a REcord).

3 Focus in tone languages

The assumption that focus is marked by only one factor does not hold for all tone languages. This is illustrated by two examples: In Mandarin Chinese, focus is indicated by two factors, movement and stress (manifested as length and intensity): Focused constituents which do not appear in their (sentence final) default position are likely to be stressed. Postfocal material is destressed (see Xu 1999, Xu 2004; the data in (5) are from Xu 2004:291).

- (5) a. Shui lai-le?
 who came
 ‘Who has come?’
 b. Lai-le [jige meiguoren]_F (*focus default position*)
 came some Americans
 ‘Some Americans have come.’
 c. [Jige MEIGUOREN]_F lai-le (*non-default position*)

In Tupuri (Niger-Congo) focus is sometimes indicated by an *ex situ* (cleft) strategy (6a), from Ruelland (2000), and sometimes by reduplication (6b), our data (unfortunately without tones).

- (6) a. t_1 wō dē púy tí dǎrgè dìŋ táktíbáy₁
 go with hyena to hunt COP bat
 ‘It is Bat that will go hunting with Hyena.’
- b. A juujuu gi, a ri súu ga
 hedrink-drink ?? he ate yesterday NEG
 ‘He DRANK, but he didn’t eat yesterday.’

The data in (5) and (6) show that at least some tonal languages exhibit more than one focus strategy. While in Chinese the choice of strategies seems to depend on structural factors (focused constituent sentence final or not), in Tupuri the choice of strategy depends on the syntactic category (focused constituent verbal or not).

4 Focus in Chadic Languages

4.1 DP-focus in Chadic

Focusing of DP-arguments is well-documented for Hausa (see Newman 2000, Jaggar 2001) and for a range of other Chadic languages (see Tuller 1987, 1992, Frajzyngier 1989, 1993, 2001, 2002, Schuh 1998, 2004).

4.1.1 Focus movement

A common strategy of focusing a DP-constituent in Chadic is to move it to a designated position. Often, the resulting structure has a cleft-like nature and a lexical focus marker (in many cases formally identical to the copula or the relative marker). Movement may also be accompanied by high tone raising of the fronted constituent (Hausa, see Leben et al. 1989), or by a change in verbal aspect (Hdi, Frajzyngier 2002). Focus movement can target several positions, namely to the sentence-initial position, to a postverbal position, or to the sentence-final position. We will consider each kind in turn.

In Hausa, an SVO language, focused DPs are fronted to the sentence-initial position (cf. Newman 2000). After the fronted constituent, a focus marker (FOC) is optionally inserted. (7a) is an example with neutral (i.e. all new) focus. In (7b), the object is focused and appears sentence-initially.

- (7) a. Bintà zaa tà biyaa teelà *(neutral)*
 B. FUT 3sg.f pay tailor
 ‘Binta will pay the tailor.’
- b. *teelà₁ (nee)* Bintà zaa tà biyaa t₁ *(OBJ-focus)*
 tailor FOC B. FUT 3sg.f pay
 ‘Binta will pay the TAILOR.’

Focus fronting also occurs in Hdi, a VSO language documented in Frajzyngier (2002). (8a) is a neutral example again. In (8b), the focused object is fronted. In addition to fronting, there is a change in verbal aspect (see Frajzyngier 2002:408; SO = point of view of reference, REF = referential, SEQ = sequential marker).

- (8) a. kà ks-ú-tá ùvá tá vázák *(neutral)*
 SEQ touch-SO-REF cat OBJ rooster
 ‘And Cat devoured Rooster.’
- b. [ghùz-á xiyá]₁ yà tà sə mbítsá t₁
 beer-GEN guinea corn DEM IMPF drink M.
 ‘It is the corn beer that Mbitsa drinks.’ *(OBJ-focus)*

Focused constituents are also fronted to the sentence-initial position in Kanakuru (Tuller 1992) and Pero (Frajzyngier 1989).

The second strategy of focus movement observed in the Chadic languages is movement to a postverbal position. For an illustration of this strategy, consider the following Tangale data (from Kida 1993:30f; due to the

phonological process of vowel deletion, cf. also section 5.1, the name *Laku* sometimes appears as *Lak*).

- (9) a. Lak padu-g landá (neutral)
 L. buy-PERF dress
 ‘Laku bought a dress.’
- b. padu-g landá nóŋ tom tíjo? (SUBJ-focus)
 buy-PERF dress who from T.
 ‘Who bought a dress from Tijo?’

Tangale is an SVO language; (9a) represents the neutral word order. If a subject is focused as in (9b) (a *wh*-focus), it is obligatorily displaced from its initial base position to a postverbal position. The Tangale focus system will be discussed in detail in section 5. Focus movement to a postverbal position also takes place in Bade, Podoko, Kanakuru, and Ngizim (cf. Tuller 1992).

Focused constituents can also appear in sentence-final position, as evidenced by the following example from Ngizim (SVO, Tuller 1992). In (10), the subject is focused, it consequently appears in sentence-final position. This strategy is also testified in Tangale (Tuller 1992), Bole (Schuh 2004, cf. also footnote 5), and Pero (Frajzyngier 1989).

- (10) ɸəbdə karee aa aasək nən Audu (SUBJ-focus)
 sold goods in market FOC A.
 ‘AUDU sold the goods in the market.’

4.1.2 In situ focus

In some languages, focused DPs remain in situ. In this case, prominence is achieved by morphological, aspectual, or prosodic marking. Consider the Mupun examples in (11) (from Frajzyngier 1993). The focused object DP is not

displaced from its base-generated position (Mupun is an SVO language). Focus is only indicated by the presence of the focus marker *a*.

- (11) war cet a lua ba a pupwap kas. (*OBJ-focus*)
 3f cook FOC meat NEG FOC fish NEG
 ‘She cooked MEAT, not FISH.’

In Miya (Schuh 1998), the verbal aspect changes in order to indicate focus. In (12b), the object is focused. The aspectual change is manifested in the absence of the discontinuous totality marker (TOT) *suw...ay*, which is present in the neutral example (12a).

- (12) a. à már suw zhàak-áy (*neutral*)
 he got TOT donkey-TOT
 ‘He got a donkey.’
- b. à már zhàakə (*OBJ-focus*)
 he got donkey
 ‘He got a DONKEY.’

In situ focus is also possible in Lele, where it is indicated by a focus marker (see Frajzyngier 2001). In Pero, in situ focus is marked by an intonational break before the focused element (cf. Frajzyngier 1989). Focus constituents can also remain in situ in Ga’anda (cf. Ma Newman 1971) and in Hausa, where it is not evident if and how in situ foci are marked (cf. Jaggar 2001 and Green and Jaggar 2002).

To sum up, the Chadic languages express focus on DP-arguments by using different markers of prominence. DP-focus is indicated by movement (Hausa, Hdi, Tangale, Kanakuru, Ngizim, Bade, Bole, Pero), by morphological marking (Mupun, Lele), by changes in the verbal aspect (Miya), or by different prosodic

phrasing (Pero). Languages that mark focus by movement sometimes use morphological marking or a change of verbal aspect in addition. Their grammatical systems appear to be somewhat uneconomical with respect to focus marking.

With the exception of Pero (focus fronting and prosodic phrasing) and Hausa (focus fronting and in situ focus), the Chadic languages discussed here employ a single strategy to mark DP-focus. This suggests the following preliminary hypothesis:

(13) *Preliminary Hypothesis (to be refuted):*

In general, Chadic languages employ only a single focus strategy.

We will see below that this hypothesis cannot be maintained on closer inspection.

4.2V(P)-focus: The picture changes

Concerning the realisation of predicate focus, the Chadic languages differ as to whether or not they employ a unified strategy for coding focus. Some languages use a unified, category-neutral strategy (cf. examples (14) and (15)). Others have category-dependent focus-strategies (cf. example (16)).

Hausa and Hdi are representatives of the first type. These languages have a unified strategy based on the movement strategy for nominal focus (see (7) and (8) above). V- and VP-focus are marked by assimilation to the nominal strategy. In Hausa, focused verbs have to be nominalized before being fronted (Newman 2000). (14a) is a neutral sentence. In (14b), the VP is nominalized (indicated by lengthening of the final vowel) and moved to the sentence initial position (DEP = dependent = a specific auxiliary form obligatory with A'-movement in Hausa).

-
- (14) a. su-n bàmamá *(neutral)*
 3pl-PERF bolt.away
 ‘They bolted away.’
- b. *bàmamá* su-kà yi *(VP-focus)*
 bolting.away 3pl-PERF.DEP do
 ‘They BOLTED AWAY.’ (lit. ‘Bolting away, they did.’)

Hdi inserts a cognate object that is fronted when the verb is in focus (Frajzyngier 2002), cf. (15b) (D:SO = distal extension, point of view of source).

- (15) a. mbàzá-ùgh-mbàzá Pghinta tá mbàzá *(neutral)*
 wash-D:SO-wash P. OBJ wash
 ‘Phinta washed.’
- b. *mbàzá* mbàzá-ùgh-mbàzá Pghinta *(V(P)-focus)*
 wash wash-D:SO-wash P.
 ‘Phinta WASHED.’ (lit. ‘Wash, Phinta washed.’)

The second group of languages uses category-dependent focus strategies. In Mupun and Tangale, for instance, focus on nominal expressions is expressed differently from focus on verbs and VPs. In Mupun, focused nominals carry a focus marker ‘a’ (see (11)), whereas focused verbs reduplicate in addition (Frajzyngier 1993):

- (16) mo cet a cet lua ne ba mo sur(a)sur kas *(V(P)-focus)*
 3pl boil FOC boil meatthe NEG 3PL fry FOC fry NEG
 ‘They BOILED the meat, they didn’t FRY it.’

As we will show in section 5, in Tangale, at least some focused nominals move to a postverbal focus position (see (8b) above), whereas focused verbs (and VPs) show no sign of movement. Again, there seem to be at least two strategies for focusing a constituent.

The data discussed in this section lead us to conclude that some Chadic languages use different strategies for focusing different syntactic categories. This forces us to refute the Preliminary Hypothesis assumed in (13). Some Chadic languages differ from stress languages in that more than one factor has to be considered in focus marking. In the next section we will analyse the Tangale focus system in detail. The discussion will provide more evidence for the claim that the standard focus theories do not extend directly to all Chadic languages.

5 Predicate Focus in Tangale

In this section, we take a closer look at predicate focus, i.e. V- or VP-focus in Tangale, a Western Chadic language from the Bole-Tangale subbranch.¹ We present the main empirical findings in 5.2. For a better understanding of the following discussion, however, it is necessary to first take another look at (argument) DP-focus in Tangale.

5.1 Existing accounts of focus in tangale

The—to the best of our knowledge—two existing accounts of focus in Tangale (Kenstowicz 1985, Tuller 1992) assume focus to be realised syntactically: The focused DP is moved (sometimes vacuously) to a postverbal position. The two accounts differ only as to the direction of movement.

In Kenstowicz (1985:86), focused (DP-) constituents move to the right and adjoin to S (or S'). In the neutral, all new sentence (17a), the subject is in its

¹ For a general introduction into the grammatical system of Tangale, see Jungrathmayr (1956), as well as the two grammatical sketches in Jungrathmayr (1991) and Kidida (1993).

unmarked sentence-initial position and precedes the verb. When focused, however, the subject moves to a postverbal position (17b).²

- (17) a. [S Malay [VP múdúd-gó]] *(neutral)*
 M. die-PERF
 ‘Malay died.’
- b. [S t₁ múdúd-gó] nóŋ₁ *(SUBJ-focus)*
 die-PERF who
 ‘Who died?’

In a parallel fashion, direct objects are assumed to move vacuously for reasons that have to do with the different phonological realisation of the perfective aspect marker as *-ug* or *-go* in (18ab):

- (18) a. [S Kay [VP dob-ug Máláy]] *(neutral)*
 K. call-PERF M.
 ‘Kay called Malay.’
- b. [S Kay [VP dob-gó t₁] nóŋ₁] *(OBJ-focus)*
 K. call-PERF
 ‘Who did Kay call?’

While focused (DP-) constituents also move in Tuller’s (1992) analysis, the direction of movement is to the left and the focused material left-adjoins to the VP-projection. Since the perfective verb has to move to the inflectional head I⁰ for independent reasons, focused constituents nevertheless surface in a postverbal position, as shown for a focused object in (19) (cf. Kenstowicz’s 18b).³

² We abstract away from the open/closed distinction in vowel quality.

³ Tuller does not discuss the precise structure of clauses with focused subjects.

- (19) [S [IP Kay dob-gó [VP nóŋ_I [VP t_v t_I]]]] (OBJ-focus)
 K. call-PERF who

As indicated above, there is only indirect, namely phonological evidence for the assumption of vacuous movement in the case of focused objects (be it to the left or to the right). The evidence comes in form of a prosodic barrier between V and the focused OBJ that blocks two phonological processes, namely *vowel elision* (henceforth: VE) and *left line delinking*.⁴

In (18b) with a focused object, the prosodic barrier preceding the object blocks VE and the perfective marker must be realised as *-go*. Had VE applied, the perfective marker would have been realised as *-ug*. Kenstowicz (1985:80) defines VE as follows (where ‘]’ marks the end of the stem or word):

- (20) *Vowel Elision (VE)* deletes the final vowel of a stem or a word when in close syntactic connection with some following phonological material denoted by the X: $V \rightarrow \emptyset / _] X$

The relevant restriction here is that VE between two elements is possible only when the two elements stand in a close syntactic relation, e.g. head-complement. Application of VE to perfective verbs elides the final vowel of the perfective marker *-go* (cf. 21b). Since the result of elision does not comply with Tangale syllable structure, an epenthetic vowel *-u-* is inserted in a last step (cf. 21c).

- (21) a. mad-gó ‘read-perf’ >> b. mad-g (after VE) >> c. mad-ug

⁴ Kidida (1993:110) speaks of a *strong boundary* in this connection. Apart from vowel elision and left line delinking, Kidida (1993:135) cites three more phonological processes, namely right line delinking II, decontouring, and P-lowering, which are also blocked at a strong boundary before a focused object.

The (non-) application of VE is relevant for the present discussion because it gives us a reliable diagnostic for OBJ-focus. The empirical generalisation is that whenever the object is focused, VE is blocked: $\text{OBJ}_{\text{FOC}} \Leftrightarrow *VE$. For illustration, VE can apply in the neutral sentence (22a), deleting the final *-o* of the perfective marker. In contrast, VE is blocked with the focused (wh-) objects in (22b) such that the perfective marker surfaces as *-gó*:

- (22) a. *Áudu mad-ug littáfi.*
 A. read-PERF book
 ‘Audu read a book.’
- b. Q: *Áudu mad-gó/*mad-ug nán?* A: *Áudu mad-gó/*mad-ug littáfi.*
 A. read-PERF what A. read-PERF book
 ‘What did Audu read?’ ‘Audu read A BOOK.’

Given the definition of VE in (20), the non-application of VE in (22b) implies that verb and object do not stand in a close syntactic relation when the object is focused. From this Kenstowicz and Tuller conclude that the object must have moved (vacuously) away from the verb.

As mentioned above, the presence of a prosodic barrier before focused objects is also indicated by the blocking of a second phonological process: Left line delinking (henceforth LLD), which has the same domain of application as VE in the postverbal domain (Kenstowicz 1985:82), separates tones that have spread to the right from their original tone-bearing unit (Kenstowicz 1985, Kidda 1993). The effect of LLD is visible in (18a), where the underlying H tone of the perfective marker *-gó* (cf. 23a) has spread onto the object (cf. 23b) before being detached from its original tone-bearing unit by LLD (cf. 23c):

- (23) a. *dob-gó Malay* → b. *dob-gó Málay* → c. *dob-ug Málay*
 H H H by LLD H

In (18b), where the object is focused, LLD cannot apply. As a result (and since VE is also blocked before focused objects), the resulting surface form is *dob-gó Máláy*, with the perfective marker still being attached to its underlying H-tone. As with VE, the blocking of LLD before a focused object therefore shows the presence of a prosodic barrier before a focused object. Using the same argumentation as with VE, Kenstowicz and Tuller take this prosodic barrier to indicate vacuous movement of the focused object.⁵

Neither Kenstowicz nor Tuller discusses instances of V- or VP-focus, to which we turn in the next section. There, it will emerge that the insertion of a prosodic boundary that blocks VE and LLD plays a more general role in Tangale focus marking than so far assumed.

5.2 Verb (phrase)-focus in Tangale

In this section, we show that predicate focus on the verb or on the entire VP in Tangale is in some cases marked differently from argument DP-focus. Unlike SUBJ-focus, predicate focus in Tangale does not involve movement to a postverbal position. Instead, it is sometimes indicated morphologically by means

⁵ By and large, similar facts seem to obtain for subject and object focus in Bole, a closely related SVO-language (see Schuh 2004). Focused subjects appear *ex situ* (ia), while focused objects (and other focused constituents) remain *in situ* (ib).

- (i) a. kàppū mòrdò lò? kàppū mòrdò Bamoi
 planted millet who planted millet B.
 ‘Who planted millet?’ ‘BAMOI planted millet.’
- b. ita à kòna làawò lò? ita à kòna làawò Bamoi
 she aux take(fut) child who she aux take(fut) child B.
 ‘Whose child will she take?’ ‘She will take BAMOI’S child.’

As in Tangale, the focus status of objects is indicated by the blocking of a phonological process, namely *low tone raising* (LTR), see Schuh (2004) for details.

of a verbal suffix (5.2.1), or prosodically by the insertion of a prosodic boundary (5.2.2). Thus, there seem to be at least three strategies of focus marking in Tangale: syntactic movement, suffixation, and prosodic phrasing. In addition, we show that V-, VP- and OBJ-focus are often realised identically to the exclusion of SUBJ-focus, arguing against Kenstowicz's (1985) and Tuller's (1992) analyses of OBJ-focus as involving vacuous movement.

In eliciting the various focus markings in Tangale, we used contexts invoking different pragmatic foci (as defined in section 2.1), namely corrective, selective, and new-information focus. The elicited data do not seem to show variation across these contexts, suggesting that focus marking in Tangale (as in stress languages) is insensitive to such pragmatic distinctions.

5.2.1 Morphological focus marking

With some intransitive verbs, V(P)-focus is marked morphologically by means of a verbal suffix *-i*.⁶ This is shown in (24b), where the verb (or the entire VP) is in focus and the suffix is added after the perfective suffix *-go*. In contrast, no special focus-suffix is added in neutral, all new contexts (24a):

- (24) a. Fátíma wur-go. (neutral)
 F. laugh-PERF
 'Fatima laughed.'
- b. Q: Mairo yaa-gó náj? A: Mbáastám wur-gó-i. (V(P)-focus)
 M. do-PERF what she laugh-PERF-FOC
 'What did Mairo do?' 'She LAUGHED.'

⁶ For reasons unclear to us, this focus marking device does not seem to occur with all intransitive verbs. Also, *i*-suffixation exhibits a certain degree of optionality even with those verbs on which it can occur in principle.

This is a focus strategy differing from the one observed for focused subjects, which involved movement to a postverbal position, as shown in (17b). Unlike in stress languages, there are thus at least two focus strategies in Tangale, one of them (suffixation) seemingly reserved for intransitive verbal predicates.

5.2.2 Prosodic focus marking

Prosodic focus marking is used with transitive verbs or VPs. It turns out that the phonological processes of vowel elision (VE) and left line delinking (LLD) on perfective verbs are blocked not only with focused objects (see section 5.1), but also with focused verbs or VPs. (25a) is an already familiar example with OBJ-focus. The crucial cases are (25b), with VP-focus, and (25c), with V-focus.

- (25) a. Q: What did Laku sell? *(OBJ-focus)*
 A: Lak wai-gó lánda
 L. sell-PERF dress
 ‘Laku sold [A DRESS]_{FOC}.’
- b. Q: What did Laku do? *(VP-focus)*
 A: Lak waig-ó lánda
 L. sell-PERF dress
 ‘Laku [sold A DRESS]_{FOC}.’
- c. Q: What did Laku do at the market? *(V-focus)*
 Did she buy a dress or did she sell a dress?
 A: Lak wai-gó lánda
 L. sell-PERF dress
 ‘Laku [SOLD]_{FOC} a dress.’

In all three cases, the perfective verb appears in its non-elided form *wai-gó*, and the H-tone has not been detached from the perfective marker *-gó* by LLD. The blocking of both VE and LLD indicates the presence of a prosodic phrase boundary after the verb, which makes the three cases identical in syntactic and

phonological structure. In section 5.3, we will show on the base of exemplary pitch tracks that the three foci in (25a-c) do not appear to be distinguished by other prosodic means (prosodic breaks, tone raising, etc.) either.

The prosodic phrase boundary after the verb in (25b) cannot be the direct result of moving the VP as a whole, since the boundary is inside the VP. Nor can the prosodic phrase boundary in (25c) be the result of verb movement for principled reasons. Obviously, the verb in (25c) has not moved to the right, adjoining to S (see Kenstowicz 1985). What about movement to the left, say to the head of a functional projection FocP? According to Tuller (1992), perfective verbs must, focused or not, move to the inflectional head I^0 in order to support the perfective suffix. Tuller (1992:317) further assumes that verb traces in Tangale are unable to assign case to their direct object. Therefore, whenever the verb moves, the object has to move along with it (presumably after incorporating into the verb) for reasons of case. Hence, if the verb moved to Foc⁰ on its way to I^0 in (25c), the object would move along, preserving the close syntactic relation between the two elements (recall that VE only applies between locally related elements). As a result, VE should not be blocked in (25c).

The alternative assumption that the verb moves to I^0 on its own, leaving its object behind in its base position, makes wrong predictions as well. After V-(to-Foc-)to-I movement, verb and object would no longer stand in a close syntactic relation such that VE should be blocked. However, since movement to I^0 is assumed to take place whether or not the verb is in focus, we would expect VE to be blocked in all perfective sentences. This prediction is falsified by (26), from Kidda (1993:122), where VE applies in a neutral all new sentence:

- (26) Lak šwad-ùg yiláà
 L. hit-PERF Y.
 ‘Laku hit Yila.’

We conclude that the insertion of a prosodic phrase boundary is a focus marking device independent of movement. Focus on the VP in (25b) and on the verb in (25c) are marked by inserting a phrase boundary at PF. No previous syntactic movement is necessary. But given this, we no longer have to assume that the prosodic phrase boundary showing up with OBJ-focus in (25a) is the result of vacuous movement, as argued by Kenstowicz (1985) and Tuller (1992) (see section 5.1). Rather, V-focus, VP-focus and OBJ-focus seem to be marked by the same formal device, namely by inserting a prosodic phrase boundary to the right of the verb. This phrase boundary signals that some element of the VP, or the entire VP is in focus. Tangale thus differs from stress languages, in which narrow V-focus is marked differently from narrow OBJ-focus by stress placement on the verb or the object, respectively.

In contrast, SUBJ-focus with transitive verbs is again marked by syntactic movement. As in the intransitive sentence (17b), the focused subject in (27) has moved from its default preverbal position to a postverbal position.

- (27) t_1 way-ug land-í nóŋ₁? (SUBJ-focus)
 sell-PERF dress-the who
 ‘Who sold the dress?’

Summing up, there seem to be at least three focus strategies in Tangale, namely syntactic movement, *i*-suffixation, and prosodic phrasing. These strategies are in part dependent on the syntactic category or the grammatical function of the focused constituent. Syntactic movement seems to be reserved for focused subjects, while *i*-suffixation is reserved for (intransitive) verbal predicates. With transitive verbs, instances of V-, VP- and OBJ-focus are not formally distinguished, leading to focus ambiguity.

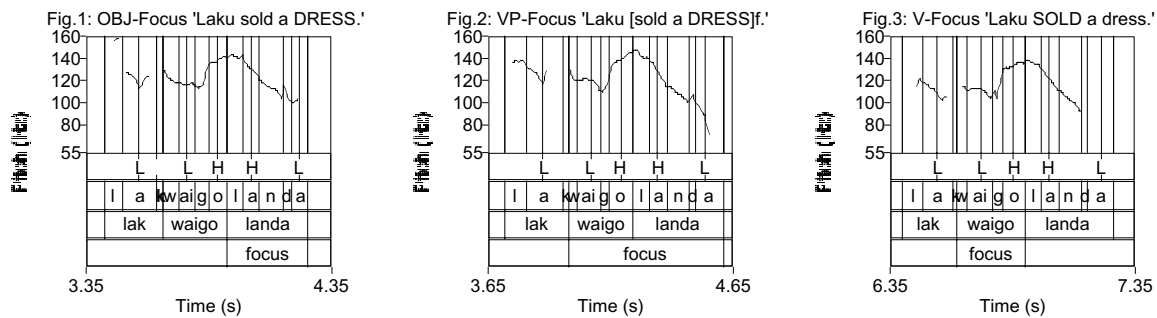
5.3 Focus and prosody in the perfective aspect

In the previous section, we showed that a prosodic boundary is inserted after the verb not only with focused objects, but also when a verb or a VP is focused. The existence of this prosodic boundary is witnessed by the fact that the two phonological processes of vowel elision (VE) and left line delinking (LLD) are blocked. This raises the question if there are any other prosodic clues, such as intonational breaks, boundary tones, tone raising, register height etc., which would formally distinguish the three different focus structures.

In order to establish if there are any significant prosodic differences between structures with VP-, V-, or OBJ-focus, we conducted a production experiment. We compiled a list of in total 170 Tangale sentence pairs with different focus structures (VP-, V-, OBJ-, and all-new focus) in three different aspects (perfective, progressive, future).⁷ The individual pairs consisted of a trigger sentence and a target sentence. In most cases, the trigger sentence was a question that determined the focus structure of the corresponding answer, the target sentence. For instance, the question *Lak yaa-go nang?* ‘L. do-PERF what = What did Laku do?’ determines that the answer will contain a VP-focus. The 170 sentences were randomly mixed with regard to focus structure and aspect in order to prevent repetitive effects. The consultant was then asked to read each sentence pair aloud. The recording was converted into a WAV.-file, which was then analysed with PRAAT. For each target sentence, we extracted the F0 tracing in order to check for differences in intonation.

⁷ 42 sentence pairs tested V-, VP-, and OBJ-focus in the perfective aspect. 49 sentence pairs tested V-, VP, OBJ, and all-new focus in the progressive aspect. 49 sentence pairs tested V-, VP, OBJ, and all-new focus in the future (=long progressive) aspect. 15 sentences tested the association of the focus particle *núm* ‘only’ with V-, VP-, and OBJ-focus in the perfective aspect. An additional 15 sentences tested the association of the focus particle *núm* ‘only’ with V-, VP-, and OBJ-focus in the progressive aspect.

Looking at the phonetic realisation of the 42 perfective sentences that were recorded, we could find no significant prosodic differences between V-, VP-, and OBJ-focus.⁸ The three pitch contours for (25a-c) are given in figure 1-3.



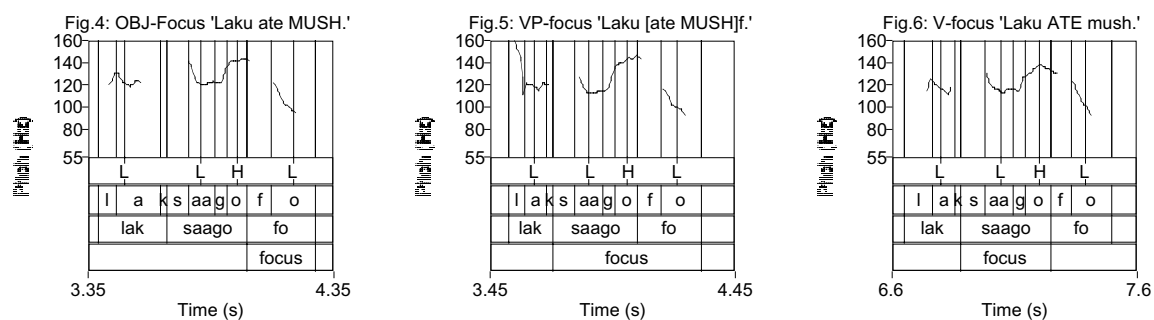
The three tone contours appear to be virtually identical. In all three structures, H-tone has spread from the perfective marker *-gó* onto the first syllable of the object. In all three structures, the H-tone has not been detached from its original tone-bearing unit, the perfective marker *-gó*. The three low tones are either lexical tones (*lak*), or derived by the general tone rules *m(orphological)-lowering* (lowers the tone of the verb before the suffix *-gó*) and *p(honological)-lowering* (lowers the second tone of the object before a pause, presumably due to a low boundary tone L% at the edge of the intonational phrase), see Kidda (1993) for discussion. In addition, there is no evidence for most of the intonational processes that tone languages commonly use in order to indicate structural (here: information structural) differences (see Yip 2002:260). The entire pitch register and the pitch range of the three utterances are the same.

⁸ In the analysis, we have only looked for differences at the *phonetic surface* that would help to distinguish the different foci. We do not exclude the possibility that there could be phonological differences underlyingly, which - for some reason - are neutralized at the phonetic surface (see the remarks below fig. 4-6, which go in the same direction). However, it is not clear to us why focus marking in a language should be organised in such a way that its results are never, or hardly ever perceivable. Also bear in mind that a purely qualitative analysis such as presented here may miss certain significant differences, and should be supplemented by a quantitative analysis and a perception study.

Also, there is no sign of additional boundary tones inserted at the edge(s) of the respective focus domains. Finally, there are no intonational breaks either before or after the focus domain, nor are there any differences in vowel length.

The only discernible difference in Fig. 1-3 concerns the relative height of the two adjacent H-tones. In the case of VP-focus (fig.2), the second H-tone on *lán* seems to be lower than the first H-tone on *-gó*, whereas it seems to be slightly higher in the case of OBJ-focus (fig.1) and V-focus (fig.3). One could therefore speculate whether the lower second H-tone in the case VP-focus is not the result of *downdrift/downstep* or *declination* (Yip 2002:262), which in this case would not be blocked by an intervening focus boundary.⁹ In the case of OBJ-focus and V-focus, downdrift/downstep or declination would be blocked by the intervening focus boundary, resulting in a reset of the next H tone to the original level. Apart from the fact that the realisation of V-focus and OBJ-focus would still be identical (unlike in stress languages), such an hypothesis is not supported by additional data.

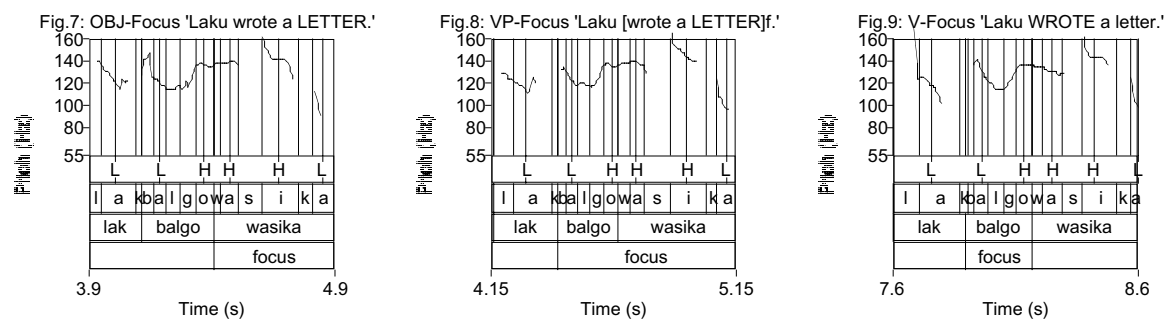
Fig. 4-6 show that the prosodic realisation of the three different foci in the sentence *Lak saa-gó foo* ‘L. eat-PERF mush = Laku ate mush’ does not differ.



⁹ There is no discussion of downdrift/downstep or declination in Tangale in Kidida (1993). It appears likely, though, that some such process is active in Tangale, as it is in Hausa. Inkelas & Leben (1990) show that downstep in Hausa can be interrupted by smaller phonological phrase boundaries within the intonational phrase, such that the next H tone is raised.

Because the monosyllabic object *foo* occurs before a pause, p-lowering will lower its tone independent of other tonal processes (H-tone spread) that may have applied before, thereby neutralizing any potential differences in tone height. As a result, the tone of the object will always be lower than that of the perfective marker *-gó* (notice again that LLD has not applied to *-gó*) and the F0 tracings of the various focus structures are identical.

Finally, fig. 7-9 show that the same holds for the sentence *Lak bal-gó wásiika* ‘L. write-PERF letter = Laku wrote a letter’ with a trisyllabic object, where potential differences in tone height are not neutralized by final p-lowering.



In the absence of further evidence, we therefore conclude that prosody is not used in order to disambiguate V-, VP-, and OBJ-focus in perfective sentences in Tangale.¹⁰ The same will be shown for the progressive aspect in section 6.2.

¹⁰ There may be a potential methodological problem lurking here, which has to do with the general set up of the production experiment. Questions triggering VP-focus in the answer are of the same general form than questions triggering OBJ-focus, namely of the form *x yaa-go nang?* ‘X do-perf what = what did x do?’. Strictly speaking, only the object is focused in such a question. In principle, it is possible that a requirement on *phonological parallelism* between (focused) answers and the trigger questions is operative in Tangale. If so, we would expect no phonological differences between sentences with OBJ-focus and sentences with VP-focus despite their differences in focus structure. This brings out nicely the general methodological problem of using linguistic triggers in eliciting linguistic data.

6 An Alternative Solution: Subjects vs Non-Subjects?

6.1 Focus theories revisited

In section 2, we have seen that focus in stress languages can be captured by a fairly simple model that considers only one factor, namely stress.

- (28) Focus model for stress languages (based on Selkirk 1995):
 CONSTITUENT STRESSED → focus/new, otherwise old information

In sections 4.1 and 4.2, it was then shown that this mono-factorial model of the standard analysis can be extended to some Chadic languages, such as Hdi. In Hdi, focus marking of all categories is assimilated to the nominal strategy, such that only movement has to be considered:¹¹

- (29) Focus model for Hdi:
 CONSTITUENT MOVED → focus/new, otherwise old information

Due to the lack of information on predicate focus in most Chadic languages, it remains to be seen if a mono-factorial analysis can be extended to those languages that employ only one strategy for marking nominal focus (see 3.1).

Given the discussion in section 5, it is clear that focus marking in Tangale is more complicated, and cannot easily be captured by mono-factorial models like those sketched in (28) and (29). (The same may hold for Pero, which also

¹¹ In Hausa, another language that assimilates marking of predicate focus to the nominal strategy of focus movement, the situation is complicated by the fact that it also allows for in situ focus (see the remarks in section 4.1). If so, checking of whether or not a constituent has moved to the initial position is insufficient for determining the precise information structural status of a constituent as being old information: An element could still be in focus (in situ) without having moved. Interestingly, in situ focus in Hausa displays a subject-object asymmetry similar to that observed for Tangale in the main text. Unlike objects, subjects cannot be focused in situ (see Green & Jaggard 2002).

makes use of more than one focus strategy, namely movement and prosodic phrasing, see section 4.1). Based on the data in 5.1 and 5.2, a model of focus marking in Tangale would have to consider at least three factors as shown in (30):

- (30) Focus model for Tangale:
 if CONSTITUENT MOVED → SUBJ-focus, otherwise
 if i-SUFFIXATION → intransitive V(P)-focus, otherwise
 if PROSODIC BOUNDARY → V, VP-, OBJ-focus, otherwise
 old information or neutral

It seems, then, that focus marking in Tangale is a complex process that requires a more complex theory of focus.

6.2 Focus in the progressive aspect

The picture of focus marking in Tangale gets even more complicated when verbal aspects others than the perfective are considered. In the progressive, there are no discernible differences at all between neutral, i.e. all-new sentences on the one hand (31), and sentences with OBJ-focus, or VP-focus, or V-focus, on the other (32a-c). In all cases, VE obligatorily deletes the final vowel on the verbal noun *balli* > *ball*.¹²

- (31) Lakú n ball wasíika (neutral)
 L. PROG writing letter
 ‘Laku is writing a letter.’

- (32) a. Q: Lakú n ball náj? A: Lakú n ball wasíika (OBJ-focus)
 L. PROG writing what L. PROG writing letter
 ‘What is Laku writing?’ ‘Laku is writing A LETTER.’

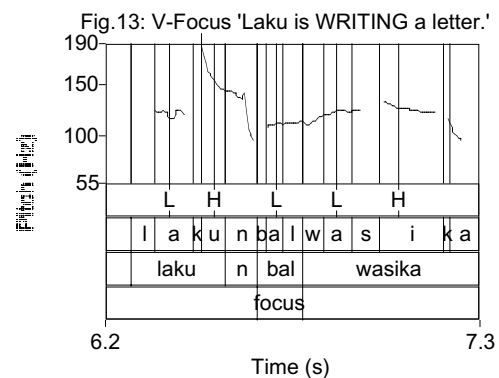
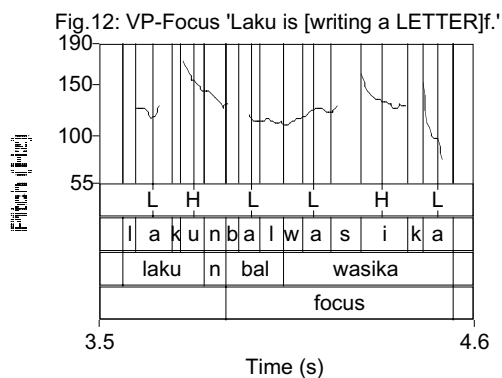
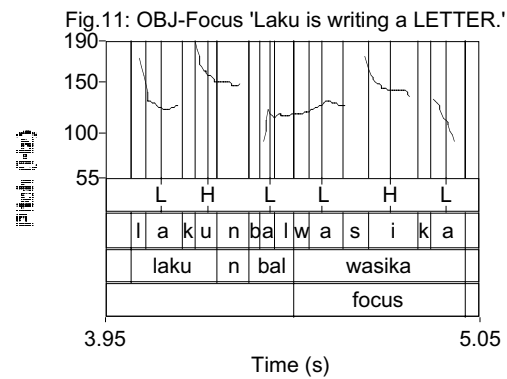
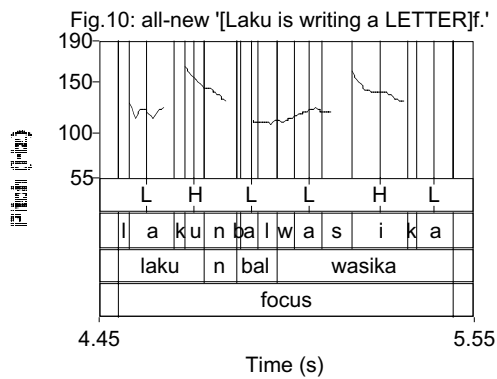
¹² Here, our elicited data are not in accordance with Kidida’s claim (1993:127) that VE in the progressive is blocked before focused objects, as it is in the perfective.

- b. Q: Lakú n yaaj náj? A: Lakú n ball wasíika (*VP-focus*)
 L. PROG doing what L. PROG writing letter
 ‘What is Laku doing?’ ‘Laku is [writing A LETTER]_F.’
- c. Q: Lakú n ball wasíika yá mad wasíika?
 L. PROG writing letter or reading letter
 ‘Is Laku WRITING a letter or READING a letter?’
- A: Lakú n ball wasíika (*V-focus*)
 L. PROG writing letter
 ‘Laku is WRITING a letter.’

The reason for this formal identity has to do with the fact that the focus marking device for OBJ-focus and V(P)-focus in Tangale, i.e. the insertion of a prosodic phrase boundary between verb and object (see 4.2), is bled by the syntactic structure of the progressive plus the general conditions on VE. As in Hausa, verbs are nominalised and form an N-N-complex with their direct object in the progressive aspect. Kenstowicz (1985) shows that VE obligatorily applies in such N-N-configurations, presumably because the two N-elements stand in a close syntactic relation. But if VE must apply obligatorily, it can no longer serve as a diagnostic for OBJ-focus and V(P)-focus in the progressive aspect. In other words, narrow focus on V(P) or object does not seem to be explicitly marked at all in the progressive, resulting in an underspecification of focus.¹³

Again, this conclusion is supported by a closer inspection of the pitch contours associated with the different focus structures in (31) and (32a-c). As shown in the following figures, the pitch contours of neutral focus (fig.10), OBJ-focus (fig. 11), VP-focus (fig.12) and V-focus (fig.13) appear to be identical in all relevant aspects.

¹³ The same holds for the future, or long progressive, which is identical in syntactic structure.



It seems, then, that focus marking in Tangale is not only a complicated process, but also an underspecifying process with systematic gaps. In certain aspects, narrow focus (be it on the OBJ, on VP, or on V) does not seem to be indicated at all. This is a surprising result given that the theories of focus generally assume that (narrow) focus must be marked somewhere on the focused constituent.

Interestingly, the only constituent in Tangale that can unambiguously be marked for focus even in the progressive and future aspect is the subject. As in (17b) and (27) above, the subject occurs again in a postverbal position.¹⁴

¹⁴ When the subject is focused, the word order (nominalised) V >> OBJ >> SUBJ is often changed by making the object the (optional) sentence-initial topic of the utterance. In such a case, a pronominal suffix *-i* is added to the nominalised verb, as illustrated in the answer in (33). It remains to be seen if there exists more than an accidental homophonic relationship between the neutral pronominal suffix *-i* and the focus marker *-i* discussed in section 4.2.1.

-
- (33) Q: bal wasíika-i nóŋ? A: (wasíika-i) ball-í Músa
 writing letter-the who letter-the writing-it M.
 ‘Who is writing the letter?’ ‘MUSA is writing the letter.’

The data in (31)-(33) give rise to the following empirical generalisation:

- (34) In Tangale, focus marking is fully grammaticalised only on subjects. On all other constituents, focus is only sporadically marked and relies heavily on pragmatic resolution.

The generalisation in (34) is a more drastic version of the hypothesis that focus on different syntactic categories is marked differently, which was argued for in sections 4 and 5. On some syntactic categories, focus may be left unmarked. If correct, the generalisation in (34) allows for a significant simplification in the focus marking system of Tangale, as sketched in (35).

- (35) Alternative focus model for Tangale:
 CONSTITUENT MOVED → SUBJ-focus, otherwise the interpretation of elements as focused or not is pragmatically resolved.

The underspecification-based model in (35) seems to be all that can be said about Tangale focus marking in the progressive and future aspect, and perhaps even in general.¹⁵ Interestingly, there is additional evidence in favour of (35). This evidence comes from the behaviour of the focus particle *núm* ‘only’, to which we turn now.

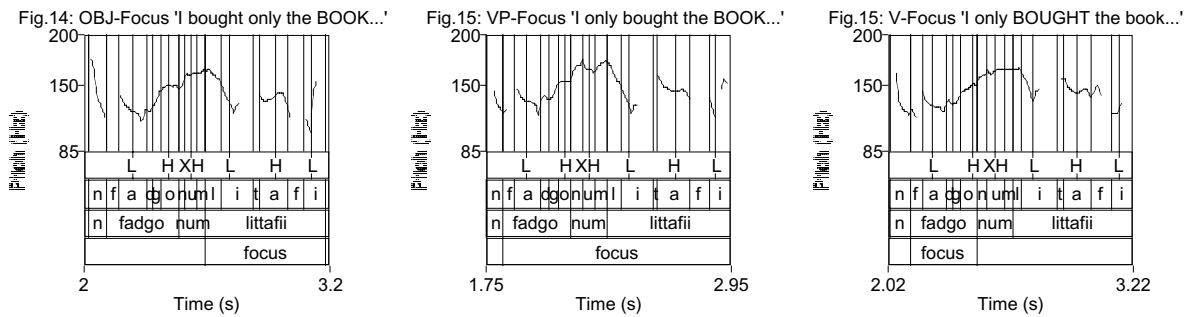
¹⁵ If (35) is an adequate model of focus marking in Tangale in general, the question arises why focus can or should ever be marked on constituents other than the subject, as was shown in sections 5.1 and 5.2. At the moment, we have no conclusive answer to this.

6.3 Association with focus

The hypothesis that focus marking in Tangale does not differentiate between V-, VP, and OBJ-focus in most cases is supported by the behaviour of the focus particle *núm* ‘only’. Semantically, *núm* can associate either with a focused object (36a), or with a focused VP (36b), or with a focused verb (36c). Syntactically, however, it can only combine with nominal (DP) expressions like its Hausa counterpart *sái* and unlike its English counterpart *only*. For this reason, the different narrow foci in (36a-c) come with identical syntactic structures.

- (36) a. N fad-go *núm* littáfi-i, n fad-ug wamgáayi-m (*OBJ-focus*)
 I buy-PERF only book-the I buy-PERF s.th.else-NEG
 ‘I bought only THE BOOK, I bought nothing else.’
- b. N fad-go *núm* littáfi-i, n yaa-g wamgáayi-m (*VP-focus*)
 I buy-PERF only book-the I do-PERF s.th.else-NEG
 ‘I only bought THE BOOK, I did nothing else.’
- c. N fad-go *núm* littáfi-i, fon di n mad-go-m (*V-focus*)
 I buy-PERF only book-the but yet I read-PERF -NEG
 ‘I only BOUGHT the book, but I have not read (it) yet.’

In addition, the pitch tracks for (36a-c) in fig. 14-16 suggest, once again, that there are no prosodic differences either. In each case, presence of the focus particle *núm* effects a rise from the preceding H-tone on -gó to an extra high tone on *núm*. It also leads to a considerable raise in the pitch register of the utterance. Otherwise, *núm* appears to be tonally ‘opaque’ in that it does not spread its H-tone onto the next tone bearing unit *li*.



Setting aside the tonal properties of *núm*, we conclude that the presence of a focus-sensitive particle such as *núm* does not help to distinguish OBJ-, VP-, or V-focus, neither syntactically nor phonologically.¹⁶ The sentences in (36a-c) with *núm* are as ambiguous with respect to focus structure as are their counterparts without (see section 6.3).

In contrast, the focus particle *núm* can only combine and associate with focused subjects when these have moved to postverbal position.

- (37) a. Landa pad-go *núm* Laku
 dress buy-PERF only L.
 ‘Only LAKU bought a dress. (Nobody else bought a dress).’
- b. * *Núm* Laku pad-go landa
 only L. buy-PERF dress

Concluding, the data from association with focus with the focus-sensitive particle *núm* support the hypothesis that there is a fundamental asymmetry between focus marking of subjects and focus marking of non-subjects. Only association with a focused subject is marked unambiguously (by displacing the

¹⁶ Association with focus with *núm* has other interesting characteristics with theoretical repercussions. Due to the fact that *núm* can only combine with nominal (DP-) expressions, association with focus does not seem to be subject to c-command in Tangale, and possibly Chadic languages in general. This means that the c-command requirement for association with focus (Büring and Hartmann 2001) cannot be a language universal. Possibly, the

focused element). Association with other focused constituents (OBJ, VP, V) is marked ambiguously and left open for pragmatic resolution. Altogether, our findings support the claim that focus marking may not be fully grammaticalised in Tangale.

6.4 Cross-linguistic parallels

The model in (35) draws a sharp line between subjects and non-subjects when it comes to focus marking. It singles out focused subjects as being in special need of explicit focus marking. Intuitively, the reason for this apparent subject bias in the Tangale focus system seems clear. The (default) preverbal subject position triggers a topic interpretation (see Givon 1976). Therefore, if a subject is to be interpreted as focus (and not as topic) something special has to be done. In the Tangale case, the subject has to be dislocated.

A comparable special status for focused (wh-) subjects has been observed for a number of languages both within and outside the Chadic language family. For instance, in the Bantu languages Kinyarwanda, Dzamba, and Kitharaka, and also the Austronesian languages Malagasy, Tagalog, and Javanese, wh-subjects have to move, whereas wh-objects can remain in situ (see Sabel & Zeller, to appear, and references therein). Looking again at the Chadic languages, it was mentioned in fn. 11 in section 6.1 that focused objects in Hausa can remain in situ whereas focused subjects have to move (Green & Jaggar 2002). Similarly, focused subjects must move in Bole, whereas focused objects appear to remain in situ (see fn. 5 in section 5.1). Finally, focused subjects require special TAM's (tense-aspect-mood markers) in Miya, whereas focused objects can only be

requirement only holds for languages like stress accent languages, which have the means to grammatically mark individual narrow foci.

identified indirectly by the absence of the totality marker (see (11) above and Schuh (1998) for more discussion).

Hopefully, future work will show more clearly if and to what extent the distinction between subjects and non-subjects plays a central role in the focus systems of the Chadic languages. At any rate, it appears inevitable to us that more attention be paid to the realisation of focus on non-nominal categories.

7 Conclusion

In this paper, we have investigated nominal and verbal focus marking in various Chadic languages, in particular in Tangale. While it seems possible to extend the standard mono-factorial analyses of stress languages to some of the Chadic languages (e.g. to Hdi), the focus systems of other Chadic languages seem to be more complex. Our investigation of the Tangale focus system has shown that three different factors play a role in the perfective aspect. We also showed that narrow foci on object, verb, and VP are not formally distinguished in Tangale. In the progressive aspect, a special focus marking on V, VP, or OBJ appears to be absent altogether, resulting in an underspecification of focus. Given this underspecification, an alternative solution would be to keep the focus system of Tangale simple (assuming only a single distinction between SUBJ- and non-SUBJ-focus) at the cost of shifting the major burden of focus resolution to the pragmatic system.

References

- Büring, Daniel. 2004. Focus Projection and Default Prominence. To appear in: Valéria Molnár and Susanne Winkler (eds.) *The Architecture of Focus. Studies in Generative Grammar*. Berlin, New York: Mouton de Gruyter.

-
- Büring, Daniel and Katharina Hartmann. 2001. The Syntax and Semantics of Focus-Sensitive Particles in German. *Natural Language and Linguistic Theory* 19, 229-281.
- Frajzyngier, Zygmunt. 1989. *A Grammar of Pero*. Berlin: Reimer.
- Frajzyngier, Zygmunt. 1993. *A Grammar of Mupun*. Berlin: Reimer.
- Frajzyngier, Zygmunt. 2001. *A Grammar of Lele*. Stanford: CSLI Publications.
- Frajzyngier, Zygmunt. 2002. *A Grammar of Hdi*. Berlin: Mouton de Gruyter.
- Givón, Talmy. 1976. Topic, pronoun and grammatical agreement. In: C. Li (ed.) *Subject and Topic*. London/New York: Academic Press, 149-88.
- Green, Melanie & Philip J. Jaggar. 2002. Ex-situ and In-situ Focus in Hausa: Syntax, Semantics, and Discourse. To appear in: Jacqueline Lecarme, Jean Lowenstamm & Ur Shlonsky (eds.) *Research in Afroasiatic Grammar III*. Amsterdam: John Benjamins Publishing Company.
- Inkelas, Sharon & Will Leben. 1990. Where phonology and phonetics intersect: the case of Hausa intonation. In J. Kingston & M. Beckman (eds.) *Between the Grammar and Physics of Speech: Papers in Laboratory Phonology I*. Cambridge: Cambridge University Press, 17-34.
- Jackendoff, Ray. 1972. *Semantic Interpretation in Generative Grammar*. Cambridge, MA: MIT Press.
- Jaggar, Philip J. 2001. *Hausa*. Amsterdam: John Benjamins Publishing Company.
- Jungraithmayr, Herrmann. 1956. Untersuchungen zur Sprache der Tangale in Nordost-Nigerien. Unpublished Doctoral Dissertation. Hamburg.
- Jungraithmayr, Herrmann. 1991. *A Dictionary of the Tangale Language (Kaltungo, Northern Nigeria) with a Grammatical Introduction*. Berlin: Reimer.
- Kenstowicz, Michael. 1985. The Phonology and Syntax of WH-Expressions in Tangale. In *Studies in the Linguistic Sciences* 15, 79-91.
- Kidda, Mairo E. 1993. *Tangale Phonology. A Descriptive Analysis*. Berlin: Reimer.

- Leben, W. R., S. Inkelas and M. Cobler (1989) Phrases and Phrase Tones in Hausa. In: P. Newman and R. D. Botne (eds.) *Current Approaches to African Linguistics*. Dordrecht: Foris, 45-61.
- Ma Newman, Roxanna. 1971. *A Case Grammar of Ga'anda*. PhD Dissertation, UCLA, Los Angeles.
- Newman, Paul. 2000. *The Hausa Language*. New Haven: Yale University Press.
- Rooth, Mats. 1985. *Association With Focus*. PhD Dissertation, UMass, Amherst.
- Ruelland, Suzanne. 2000. Topicalisation et Focalisation en Tupuri. In B. Caron (ed.), *Topicalisation et focalisation dans les langues africaines*. Louvain-Paris: Peeters, 135-159.
- Sabel, Joachim & Jochen Zeller. To appear. Wh-question formation in Nguni. In *Proceedings of the 35th Annual Conference on African Linguistics*.
- Schuh, Russell G. 1998. *A Grammar of Miya*. Berkeley, Los Angeles, London: University of California Press.
- Schuh, Russell G. 2004. Draft chapters and sections of a forthcoming Reference Grammar of Bole, downloadable at http://www.humnet.ucla.edu/humnet/aflang/Bole/bole_papers.html
- Schwarzschild, Roger. 1999. Givenness, AvoidF and Other Constraints on the Placement of Accent. *Natural Language Semantics* 7, 141-177.
- Selkirk, Elisabeth. 1984. *Phonology and Syntax: The Relation between Sound and Structure*. Cambridge, MA: MIT Press.
- Selkirk, Elisabeth. 1995. Sentence Prosody: Intonation, Stress, and Phrasing. In J. Goldsmith (ed.) *Handbook of Phonological Theory*. Oxford: Blackwell.
- Truckenbrodt, Hubert. 1995. *Phonological Phrases: Their Relation to Syntax, Focus, and Prominence*. PhD Dissertation, MIT. Published 1999 by MITWPL.
- Truckenbrodt, Hubert. 1999. On the Relation between Syntactic Phrases and Phonological Phrases. *Linguistic Inquiry* 30, 219-255.
- Tuller, Laurice 1987. Variation in Focus Constructions. In Z. Frajzyngier (ed.) *Current Progress in Chadic Linguistics. Proceedings of the International Symposium on Chadic Linguistics*. Amsterdam: John Benjamins, 9-33.

-
- Tuller, Laurice. 1992. The Syntax of Postverbal Focus Constructions in Chadic. *Natural Language and Linguistic Theory* 10, 303-334.
- Xu, Liejiong. 2004. Manifestation of Informational Focus. *Lingua* 114, 277-299.
- Xu, Yi. 1999. Effects of Tone and Focus on the Formation and Alignment of f_0 Contours. *Journal of Phonetics* 27, 55-105.
- Yip, Moira. 2002. *Tone*. Cambridge: Cambridge University Press.

Katharina Hartmann
Institut für deutsche Sprache und Linguistik
Humboldt-Universität zu Berlin
Unter den Linden 6 / Sitz: Schützenstr. 21
10099 Berlin
e-mail: K.Hartmann@rz.hu-berlin.de

Malte Zimmermann
SFB 632, Projekt B2
Humboldt-Universität zu Berlin
Unter den Linden 6 / Sitz: Hausvogteiplatz 5-7
10099 Berlin
e-mail: malte.zimmermann@staff.hu-berlin.de

