Malte Zimmermann

The grammatical expression of focus in West Chadic

Variation and uniformity in and across languages

The grammatical expression of focus in West Chadic: Variation and uniformity in and across languages*

MALTE ZIMMERMANN

Abstract

The article provides an overview of the grammatical realization of focus in four West Chadic languages (Chadic, Afro-Asiatic). The languages discussed exhibit an intriguing crosslinguistic variation in the realization of focus, both among themselves as well as compared to European intonation languages. They also display language-internal variation in the formal realization of focus. The West Chadic languages differ widely in their ways of expressing focus, which range from syntactic over prosodic to morphological devices. In contrast to European intonation languages, the focus marking systems of the West Chadic languages are inconsistent in that focus is often not grammatically expressed, but these inconsistencies are shown to be systematic. Subject foci (contrastive or not) and contrastive nonsubject foci are always grammatically marked, whereas information focus on nonsubjects need not be marked as such. The absence of formal focus marking supports pragmatic theories of focus in terms of contextual resolution. The special status of focused subjects and contrastive foci is derived from the Contrastive Focus Hypothesis, which requires unexpected foci and unexpected focus contents to be marked as such, together with the assumption that canonical subjects in West Chadic receive a default interpretation as topics. Finally, I discuss certain focus ambiguities which are not attested in intonation languages, nor do they follow on standard accounts of focus marking, but which can be accounted for in terms of constraint interaction in the formal expression of focus.

1. Introduction

Drawing on findings from original fieldwork and on existing accounts in the literature, this article provides an overview of the grammatical realization of focus in four West Chadic languages (Chadic, Afro-Asiatic), all of which are

spoken in Northern Nigeria. The central objectives of the article are twofold: To introduce new empirical data into the discussion of focus realization in the languages of the world, and to highlight certain aspects of the focus marking systems of these languages which are unexpected from the perspective of European intonation languages, and which shed new light on existing theories of focus marking. Empirically, I focus on the grammatical means used for the formal expression of focus in these languages, which are shown to differ widely across the four languages. I then turn to general differences between the focus marking systems of West Chadic languages, on the one hand, and European intonation languages, on the other. In particular, the West Chadic languages under discussion exhibit language-internal variation in the formal expression of focus: Information focus on nonsubjects frequently need not be marked, whereas subject foci (contrastive or not) and contrastive nonsubject foci are explicitly marked as such in the grammar. The frequent absence of formal focus marking is taken as support for pragmatic theories of focus, according to which focus must be contextually resolved. The special status of contrastive foci and focused subjects is derived from the Contrastive Focus Hypothesis, which requires unexpected focus constituents and focus meanings to be marked as such, and from the assumption that canonical subjects in West Chadic receive a default interpretation as topics. Finally, I discuss the emergence of certain focus ambiguities which are not attested in intonation languages, nor do they follow on standard accounts of focus marking, but which are accounted for in terms of constraint interaction in the formal expression of focus.

1.1.   *The languages*

The languages to be discussed are Hausa, Tangale, Bole, and Gùrùntùm, all of which hail from the Western branch of the Chadic languages, according to Newman's (1977) classification. In addition, reference to other West Chadic languages will be made where appropriate. West Chadic languages are mainly spoken in Northern Nigeria. On top of their geographical closeness, the languages discussed here share a great number of typological properties. All four languages are tone languages with two lexical tones, H (´) and L (`), as well as a falling (^) (and sometimes a rising) contour tone. All languages have the basic word order SVO and no morphological case marking. The argument status of subjects and objects is thus mainly identified by their position relative to the verb. The languages are aspect languages rather than tense languages and encode aspectual information in form of TAM-markers, typically before the verb. (1) shows an all-new sample sentence from each language, where *all-new* means that the sentence is uttered out-of-the-blue or in response to

a *What happened?*-question, where the focus domain comprises the entire clause.[1]

(1) a. Hausa
      Kàndé   táa   dáfà   kíifíi
      Kande   3SG.F.PERF cook   fish
      'Kande cooked fish.'

  b. Tangale
      Làkú   né   šwàd   yílàa
      Laku   PROG   hitting Yila
      'Laku is hitting Yila.'
      (Kidda 1993: 122, ex.(36ii.b))

  c. Bole
      Léngì   à   jìi   kàpp-à   mòrdő
      Lengi   3AGR   PROG plant-NOM   millet
      'Lengi is planting millet.'
      (Maina Gimba, p.c.)

  d. Gùrùntùm
      Aúdù   bà   shí   sháu
      Audu   PROG eat   food
      'Audu is eating food.'
      (Haruna 2003: 121)

The choice of the four languages for this article was mainly determined by the fact that their focus marking systems differ and pattern alike in intriguing ways. A closer inspection of these systems will thus shed more light onto the question of which aspects of the grammatical realization of focus are universal, and which ones are language specific.[2]

1.2. *Central observations*

The following three observations concerning the explicit realization of focus in West Chadic are of particular importance to the discussion of focus in general. To begin with, the realization of focus is subject to *crosslinguistic variation*, even among closely related languages. As will be shown in Section 2, Hausa expresses focus syntactically, Tangale does so prosodically, Bole by means of a mixture of syntactic and morphological means, and Gùrùntùm marks focus morphologically. The observed differences give rise to the general question of how to account for such parametric variation?

Second, the grammatical focus marking systems of these languages are two-way split systems, with the splits occurring along two independent dimensions.

The first split concerns the grammatical function of the focus constituent. Three of the four languages discussed, namely Hausa, Tangale, and Bole, exhibit a *subject/nonsubject split* in the formal expression of focus. In these languages, focused subjects are always unambiguously marked as such, whereas the formal expression of focus on nonsubjects either depends on discourse-semantic factors (Hausa, Bole), or is — in certain environments — altogether excluded by independent formal properties of the language (Tangale). In Hausa and Bole, focus on nonsubjects is only explicitly marked with special instances of focus, namely with instances of contrastive or emphatic focus (see Section 1.3 below). In Tangale, by contrast, the split between subjects and nonsubjects only shows up in certain structural environments (imperfective clauses) and appears to be conditioned by grammatical factors. While focus is systematically marked in perfective clauses, its formal expression in imperfective clauses is categorically blocked by the specific morphosyntactic form of such clauses. To make matters more complicated still, the fourth language, Gùrùntùm, differs from the other three in that it exhibits obligatory focus marking on subjects and nonsubjects alike. Gùrùntùm is thus quite similar to intonation languages, which always mark focus by means of a nuclear pitch accent.

   The second split is only partly related to the first and concerns the pragmatic type of focus. All the languages under discussion make a difference between the expression of *information focus* and the expression of *contrastive*, or *emphatic*, *focus*. Simplifying somewhat, contrastive focus must be grammatically marked, while information focus tends to be unmarked in the languages under discussion. This means that sentences with information foci typically occur in their canonical form without additional focus marking. In Gùrùntùm, which obligatorily expresses focus on all constituents, things are slightly different in that contrastive focus on nonsubjects is marked by a clefting strategy in addition to regular focus marking. From a crosslinguistic perspective, these findings are interesting since the observable differences in the grammatical expression of information and contrastive focus in these languages are not quantitative, but qualitative in nature — unlike in intonation languages, where one finds at best a gradual difference between the focus accents used for signaling information foci and contrastive foci, respectively (Bolinger 1961, 1989; Lambrecht 1994; Gibbon 1998; Alter et al. 2001). By contrast, the West Chadic languages under discussion employ readily identifiable syntactic or morphological strategies for marking contrastive foci. Finally, the distinction between information and contrastive focus is only visible on nonsubjects, since focus on subjects is always marked; see in particular Section 3.3 for data and explicit discussion of this point. The interaction between the two orthogonal split systems gives rise to the following preliminary cross-classification, which will be slightly revised in Section 3.3:

Table 1.   *Information and contrastive focus on subjects and nonsubjects in West Chadic*

	contrastive focus	information focus
subject	marked	marked
nonsubject	marked *(Gùrùntùm: doubly marked)*	unmarked *(Gùrùntùm: marked)*

   The existence of the bottom-right cell is surprising from the perspective of intonation languages, in which the marking of all kinds of foci is taken to be obligatory; see, for instance, Selkirk (1984, 1995). Crosslinguistically, however, a parallel lack of explicit marking of (information) focus on nonsubjects has been observed for a range of languages; see, for instance, Sabel and Zeller (2006) on the Bantu language Nguni, Zerbian (2006) on the Bantu language Northern Sotho, and Fiedler et al. (2010) on Gur and Kwa languages. Apart from the question of what conditions trigger the absence of information focus marking on nonsubjects, Table 1 raises a number of additional questions concerning the grammatical realization of focus in natural languages: (i) What is the reason for the subject bias in the expression of focus?; (ii) Is this subject bias a universal property of natural languages, or specific to (a subset of) the African languages?; (iii) Does the categorical grammatical distinction between contrastive and information focus reflect a similar categorical distinction at the level of information structure?; (iv) What is the pragmatic or semantic essence of *contrastive foci*, such that it must be clearly signalled in many languages of the world; see, for instance, Vallduví and Vilkuna (1998) on Finnish, and Kenesei (2006) and Suranyi (to appear) on Hungarian. Since contrastive (nonsubject) foci are morphosyntactically marked in West Chadic, and as such are easy to identify, it is hoped that their closer inspection will help in the task of specifying the exact contextual conditions and background assumptions that govern the use of contrastive foci in these languages, and crosslinguistically.

   The third interesting aspect of the focus marking systems to be discussed is the emergence of *focus ambiguities* that derive from structural constraints on the grammatical placement of the focus marking device. It shows that some of the languages under discussion exhibit focus ambiguities that are not predicted to be possible on existing theories of (prosodic) focus marking (e.g., Selkirk 1984, 1995), which are largely formulated on the basis of European intonation languages. In particular, Tangale and Gùrùntùm exhibit a curious focus ambiguity between narrow focus on the verb and narrow focus on the direct object DP.

   Taken together, the findings from this article constitute ample support for pragmatic approaches to focus, according to which the resolution of focus ambiguities, and more generally of focus as such, does not depend so much on grammatical factors, such as, for instance, overt focus marking and the percolation of F-features, but rather on contextual factors; see, for instance, Rooth (1992, 1996), Büring (2006, 2007), and Féry (2008), among others.

The article is organized as follows. The remainder of the introductory section gives a more precise characterization of the information-structural categories of focus, information focus, and contrastive focus. Section 2 introduces the different strategies of grammatical focus realization found in West Chadic. Section 3 discusses the (optional) absence of explicit focus marking on non-subjects in Hausa, Bole, and Tangale, as well as the obligatory presence of focus marking on subjects. It also puts forward a new perspective on the relation between different pragmatic types of focus, that is, information and contrastive focus, and their grammatical realization in terms of canonical and marked structures, respectively. Section 4 discusses the grammatical under-determination of focus in West Chadic and the emergence of focus ambiguities that arise from the interaction of information-structural and general structural constraints on the placement of focus markers. Section 5 concludes by summing up the implications of the empirical findings for a general theory of focus marking in natural languages.

1.3.   *Focus, information focus and contrastive focus*

In this article, *focus* is understood as an information-structural category which helps in identifying a set of explicit or implicit propositional alternatives that are salient in the context; cf. Rooth (1992), Krifka (2008). This set of *focus alternatives* plays a crucial role in the dynamic interpretation of an utterance in a given discourse situation. By narrowing down the list of potential candidates that have to be considered for inclusion into the *Common Ground* (Stalnaker 1978, Roberts 2004), focus alternatives thus significantly facilitate the task of information update between speaker and hearer (Zimmermann and Onéa 2011). This broad conception of focus as inducing alternatives subsumes two special uses of focus, namely *information focus* and *contrastive focus*; see Rochemont (1986) and Aboh (2007), among many others. The view taken here thus differs from alternative accounts according to which only instances of contrastive focus evoke the existence of (relevant) alternatives; see, for instance, É. Kiss (1998), and Kratzer and Selkirk (2007) for proposals along these lines.

Viewed from the perspective of alternative semantics, the role of *information focus* exhausts itself in supplying a specific value from a set of alternatives A in an unbiased discourse context, which is typically set up by means of a preceding (implicit) question.

(2)   Q: What did Hawwa cook?   (A = {bananas, cassava, beans, maize, fish, . . .}

       A: Hawwa cooked [FISH]$_{FOC}$.

In the case of (2), the meaning of the question together with the utterance context provides a range of alternatives from which the actual new information to be added to the Common Ground is chosen. The question-answer pair method illustrated in (2) figured prominently in the elicitation of the focus data from West Chadic to be discussed below.

   Instances of contrastive focus are like information foci in that they, too, supply a specific value from a set of alternatives (Delin and Oberlander 1995), but contrastive foci have another discourse-semantic function besides. Not only do they provide a value for the focus constituent, but, in addition, they indicate the existence of a contrast between the denotation of the focus constituent and one or more of its alternatives that are considered as strong contenders for inclusion into the Common Ground, either because of the preceding utterance context or because of general world knowledge. Contrastive foci are typically found in corrective statements, such as (3aB), in which the meaning of the focus constituent replaces an alternative that is a strong contestant for inclusion into the Common Ground, as it has been explicitly proffered by speaker A in the preceding discourse; cf. Umbach (2004). Contrastive foci also occur in answers to *wh*-questions in which the ordinary denotation of the focus constituent can be taken to be less expected, or more surprising, than some of its implicit alternatives, due to general world knowledge. Because of their special discourse-semantic function, contrastive foci are typically realized in a noncanonical way. For instance, contrastive foci in English tend to be realized by contrastive pitch accents; see Bolinger (1961) for an early discussion.

(3)   a.   A: Hawwa cooked beans.
            B: No, Hawwa cooked [FISH]$_{FOC}$.
      b.   Q: What did Hawwa cook?
            A: Hawwa cooked [CROCODILE]$_{FOC}$.

How should the notion of contrastive focus be modeled? In most treatments, contrast is simply understood as co-membership in the set of focus alternatives, but this simple kind of contrast is already implicit in the general alternative-based definition of focus and therefore will not do for our purposes. As an alternative, I submit that the use of contrastive focus marking on a focus constituent indicates a speaker-hearer mismatch that obtains whenever there is a conflict between the information asserted by the speaker and the (supposed) background assumptions of the hearer. To be concrete, the use of a contrastively marked focus constituent α by the speaker expresses a contrast between the information conveyed by the speaker in asserting α and the assumed expectation state of the hearer (Zimmermann 2008):[3]

(4)   *Contrastive Focus Hypothesis (CFH):*
      Contrastive focus marking on a focus constituent α is required if the
      speaker has reason to believe that the hearer will *not* consider (i.) the

content of α, or (ii.) the information-structural status of α as the focus of the utterance as likely to be(come) part of the Common Ground.

According to (4i), a speaker will use a noncanonical contrastive marking on a focus constituent α if she has reason to suspect that the hearer does not expect the assertion of α as likely to be included into the Common Ground. Because of this, the speaker uses a non-canonical structure, that is, a structure that is grammatically marked in some way in order to guide the hearer's attention to the perceived mismatch, and thus to facilitate updating of the Common Ground with the contested new information.[4] The reference to the unexpected information-structural status of α a*s the focus of the utterance* in (4ii) becomes relevant in Section 3.3, where it is required in order to account for the mandatory marking of focus on subjects, which — again — contributes to facilitating the updating of the Common Ground. Notice, too, that the CFH only makes a claim about the formal marking of *focus constituents*, the denotation of which is not yet part of the Common Ground, and hence not activated (Beaver and Clark 2008). Crucially, it makes no predictions concerning the formal realization of contrastive topics, which intuitively also appear to rely on a concept of alternatives, but which differ from contrastive foci in that they — as with other kinds of topics — refer to a set of contextually salient, or activated, discourse referents that already form part of the Common Ground in the generalized conception of Roberts (2004), and which provide an address under which *new* information can be stored (Krifka 2008).[5]

2.   Strategies of focus realization

Given the characterization of focus as an information-structural category from Section 1.3, it is necessary to distinguish between focus and the grammatical realization of focus by means of special focus marking devices, which may be syntactic, prosodic, or morphological in nature. Alternatively, a focus constituent may also be realized without any special grammatical marking. In the former case, the focus constituent is explicitly marked as such. In the latter case, the resulting sentence takes the form of a canonical (all-new) clause with a maximally underspecified focus-background structure. In this section, I introduce the different grammatical strategies of realizing focus explicitly in West Chadic. As will be shown, the languages under discussion mark focus by a variety of grammatical means, including syntactic, prosodic, and morphological devices. At the same time, the languages have in common that there is a single preferred grammatical strategy for realizing focus *whenever focus is overtly expressed*. This preferred strategy may be accompanied by other grammatical processes, but, crucially, focus cannot be realized without it.

Before we look at the individual languages and strategies of focus realization in detail, it is worth pointing out, again, that information focus need not be explicitly marked on nonsubjects in many of the languages under discussion, quite unlike what is found in intonation languages like English (Selkirk 1984, 1995). In such cases, the information-structural prominence of the (information) focus constituent is *not* reflected in the form of an absolute grammatical (i.e., prosodic, syntactic, or morphological) marking. In the following, whenever I refer to the grammatical realization of focus, or the preferred strategy of focus realization in West Chadic, I refer to the question of how focus is realized *if it is grammatically expressed in the form of a noncanonical structure*, leaving open the possibility that an explicit formal realization of focus is altogether absent; see Zerbian (2006), Hartmann and Zimmermann (2007a), Fiedler et al. (2010), Büring (2010), for further discussion of the absence of formal focus marking.

2.1. *Hausa: Syntax*

Hausa marks focus syntactically by A′-moving the focus constituent to a left-peripheral focus position (Tuller 1986, Wolff 1993, Green 1997, Newman 2000, Jaggar 2001). Compare the fronted focused object DP in (5a) with the neutral all-new sentence in (1a). As is typical of A′-movement, the fronted constituent must be a maximal projection. Moreover, focus movement is accompanied by a change in the form of the TAM-marker from *absolute* to *relative* in the progressive and perfective aspect. According to Tuller (1986), the relative form of the TAM-marker generally indicates the application of A′-movement, as it is not only found with fronted foci, but also in *wh*-questions and relative clauses. Consequently, the absolute TAM-marker *taa* from (1a) is replaced by its relative variant *ta* in (5). The obligatory presence of the relative TAM-marker *ta* in (5b) shows that focus on subjects, which are canonically realized in sentence-initial position, is realized in the form of vacuous movement (Green and Jaggar 2003, Jaggar 2006).[6]

(5) a. *O-focus*
     Kìifíi₁ *(nèe) Kàndé   tá   dáfàa   t₁.*
     fish   PRT.M Kande 3SG.F.PERF.**REL** cook
     'Kande cooked FISH.'

  b. *S-focus*
     Kàndé₁ *(cèe) t₁   tá | *táa   dáfà   kìifíi.*
     Kande   PRT.F 3SG.F.PERF.**REL** 3SG.F.PERF cook   fish
     'KANDE cooked fish.'

The fronting strategy is found not only with arguments and adjuncts, but also with VPs. However, the verbal head of the VP must be nominalized for the VP

to undergo such focus fronting (Newman 2000: 193), cf. (6b). Fronting of a finite VP, as in (6c), is ruled out.

(6)   a.   *all-new*
          Múusáa yáa   kár̃àntà líttáaf ̀ìi
          Musa   3SG.PERF   read   book
          'Musa read a book.'

      b.   *VP-focus*
          Kàr̃àatú-n líttáaf ̀ìi   *(née) yá*   *yí*
          reading-of book   PRT   3SG.PERF.REL   do
          'Reading a book is what he did.'

      c.   **Kár̃àntà   líttáaf ̀ìi**   *(née) yá*   **(yí)*
          read   book   PRT   3SG.PERF.REL   do

The data in (6) show that the fronted constituent is optionally followed by a focus-sensitive particle *nee(masc.)/cee(fem.)*. Moreover, Leben et al. (1989) observe that focus fronting is accompanied by a prosodic process of H-tone raising, which raises the pitch of any H-tone on the fronted constituent to an extra-high level. Summing up, focus in Hausa is often expressed by means of several grammatical devices at the same time, namely syntactically (fronting), morphologically (TAM-morphology, focus particle), and prosodically (H-tone raising). Nonetheless, syntactic fronting is the prime means of expressing focus in Hausa in that it must apply whenever focus is expressed overtly. The other processes are either optional companions to focus fronting, as is the case with the focus particles, which are inserted for independent semantic reasons (Hartmann and Zimmermann 2007c), or they arise as a direct consequence of the fronting operation (TAM-morphology, H-tone raising).

2.2.   *Tangale: Prosody and syntax*

Tangale marks focus prosodically in the form of a phonological phrase (φ)-boundary, which is typically inserted right before the focus constituent (Kenstowicz 1985, Tuller 1992). The presence of φ-boundaries results in the blocking of certain tonal and segmental processes that would apply in the absence of such boundaries. Two of these are *vowel elision (VE)* and *left line delinking (LLD)* (Kenstowicz 1985, Tuller 1992).[7] VE deletes the final vowel of stems or words that are in a close syntactic relationship (e.g., sisterhood) with some following phonological material. In Tangale, VE typically detaches the final vowel of a verb before the following direct object, and LLD detaches H-tones that have spread to the right from their original tone-bearing unit. Both processes are illustrated in the all-new sentence in (7a), where the application of VE and LLD affects the surface realization of the underlying verbal form

wài-gó 'sell-PERF': VE deletes the final vowel of the suffix *–gó*. LLD detaches the H-tone of the suffix *–gó* after H-spreading onto the following object *landa*. The resulting surface form after vowel epenthesis of *u* for phonotactic reasons is *wayug*. The application of both processes, which is illustrated schematically in (7b), shows that verb and object are not separated by a φ-boundary in all-new sentences.

(7) *all-new*

    a. *Làk wày-**ùg** lándà*
       Lak sell-PERF dress
       'Laku sold a dresss.'

    b. wài-**gó** + ´ $\xrightarrow{\text{VE + LLD}}$ wài-**g** + ´ $\xrightarrow{\textit{u}\text{-epenthesis}}$ wày-**ùg** + ´

In the object focus sentence (8), by contrast, both VE and LLD fail to apply, such that the verb surfaces in its underlying form *wài-gó*. This shows that focused objects are separated from the preceding verb by a φ-boundary:

(8) Q: *Làk wài-**gó**)φ **náŋ**?*
        Laku sell-PERF what
        'What did Laku sell?'

    A: *O-focus*
        *Làk wài-**gó**)φ **lándà***
        Laku sell-PERF dress
        'Laku sold [a DRESS]F.'

While the focus-indicating φ-boundary precedes focused nonsubjects in their canonical base position, focused subjects cannot occur in the canonical sentence-initial position. Instead, they must invert to a postverbal position, i.e., either to the sentence-final position, or to a position immediately following the object, but separated from it by a prosodic boundary (Kenstowicz 1985, Tuller 1992, Hartmann and Zimmermann 2007b). In (9a) from Kidda (1993: 131, ex. 47), the prosodic boundary before the subject DP is evidenced by the blocking of final decontouring on the pre-boundary vowel *éè* from HL to HH; see Note 7. (9b) illustrates the two possible realizations of focused subjects directly behind the object or in sentence-final position, respectively (examples from Tuller 1992: 307, 322, without tones).

(9) a. Q: *pàd-gò tàabéè)φ **nóŋ**?*
           buy-PERF tobacco who
           'Who bought tobacco?'

       A: *pàd-gò tàabéè)φ **kài***
           buy-PERF tobacco Kai
           'KAI bought tobacco.'

b. *wa   patu   ayaba   (**nuŋ**) ta luumo   dooji   (**nuŋ**)?*
  FUT   buy   banana   who   at market   tomorrow   who
  'Who will buy bananas at the market tomorrow?'

The inversion of focused subjects to a postverbal position has alternatively been analyzed in terms of right adjunction (Kenstowicz 1985), cf. (10a), or in terms of movement to a designated focus position (Tuller 1992), which can be either SpecCP, cf. (10bi), or a position at the left edge of VP. In the latter case, movement of the focused subject is accompanied by subsequent movement of the V-+O-complex to I, cf. (10bii).

(10)   a. $[_{IP} [_{IP} t_{SUBJ} V O] S_{FOC}]$
     bi. $[_{CP} [t_S V O XP] S_{FOC}]$
     bii. $[_{IP} [V+O] [_{VP} S_{FOC} [_{VP} t_S t_{V+O}]]]$

With regard to the inversion of focused subjects, Tangale resembles the Romance languages Spanish and Italian. Not surprisingly, then, the analysis in (10bii) is similar in spirit to Samek-Lodovici's (2005) account of focused subject inversion in Italian, whereas the analyses in (10a) and (10bi) resemble more closely Zubizaretta's (1998) account of focused subject inversion in Spanish. According to Zubizaretta, the syntactic reordering of focused subjects is ultimately driven by prosodic requirements (*p-movement*), namely by the need for the focused subject to occur in sentence-final position where it can be assigned the main accent. In parallel fashion, the postverbal realization of focused subjects in Tangale may be linked to the fact that Tangale realizes focus by means of prosodic boundaries; see also Note 17. Since a subject in default initial position is always preceded by a prosodic boundary, one could not tell whether the subject is focused or not. Whence comes the need for focused subjects to invert to a position in which they can be unambiguously marked for focus by means of a preceding φ-boundary (Zimmermann 2006b). While this line of reasoning does not exclude the possibility of a purely syntax-internal motivation for subject inversion, it tentatively suggests that the inversion of focused subjects in Tangale is ultimately conditioned by prosodic factors and the need for unambiguous focus marking on subjects; cf. Fiedler et al. (2010). Section 2.4 provides additional arguments to the effect that subject inversion in Tangale does not involve syntactic clefting, nor does it in Bole, to which we turn next.

2.3.   *Bole: Morphology and syntax*

Bole has a split system of explicit focus marking, making use of both morphological and syntactic means in the realization of focus. Focus on nonsubjects is realized morphologically by means of a morphological marker *yé*, which pre-

cedes the focus constituent (Gimba 2005). Compare the all-new sentence (1c) from above with instances of O-focus and locative ADJ-focus in (11ab) (all the Bole data provided by Maina Gimba, p.c.):

(11) a. *O-Focus*

     Q: *Léngì à   jìi   kàpp-à   **yé** **lè**?*
       Lengi 3AGR PROG plant-NOM PRT what
       'What is Lengi planting?'

     A: *Léngì à   jìi   kàpp-à   **yé** **mòrdő***
       Lengi 3AGR PROG plant-NOM PRT millet
       'Lengi is planting MILLET.'

  b. *ADJ-focus*

     Q: *Léngì à   jìi   kàpp-à mòrdő **yé** **gà** **àw**?*
       Lengi 3AGR PROG plant-NOM millet PRT LOC where
       'Where is Lengi planting the millet?'

     A: *Léngì à   jìi   kàpp-à mòrdő **yé** **gà** **gàa kòorí***
       Lengi 3AGR PROG plant-NOM millet PRT LOC farm
       'Lengi is planting the millet ON THE FARM.'

Crucially, the sentences in (11b) would retain their word order even if focus were shifted to the direct object, which suggests that the focused constituents in (11ab) are indeed located *in situ* instead of, say, being (vacuously) moved to some right peripheral position. Moreover, notice that *yé* acts as a background marker on the preceding material, rather than as a focus marker on the material following (Schuh 2005). Prosodically, *yé* is restricted to occur at the right edge of phonological phrases, as are other functional elements, such as, for instance, the negation marker *sa*. From this, it follows that the focus constituents in (11ab) are preceded by a prosodic φ-boundary in addition to the morphological marker.[8]

   In contrast to the focused nonsubjects in (11ab), focused subjects do not occur in their canonical (i.e., preverbal) position. Instead, they must invert and occur in a right-peripheral position, similar to what happens in Tangale, cf. (12):

(12) Q: *À   jìi kàpp-à mòrdő **yé** **lò**?*
       3AGR PROG plant-NOM millet PRT who
       'Who is planting the millet?'

     A: *À   jìi kàpp-à mòrdő **yé** **Léngì***
       (3AGR) PROG plant-NOM millet PRT Lengi
       'LENGI is planting the millet.'

Although postverbal focused subjects are for the most part preceded by the *yé*-marker (especially with transitive verbs), the latter is not obligatory, at least with intransitive verbs (Russell Schuh p.c.); see also (35) in 3.3. From this, I

conclude that Bole has two largely independent means of realizing focus: Focus on nonsubjects is realized morphologically by means of the background marker *yé*, whereas focus on subjects is realized syntactically by means of subject inversion. As in Tangale, the postposed subject does not prosodically integrate with the rest of the clause, but must be preceded by a prosodic boundary.

2.4.   *Subject inversion in Tangale and Bole ≠ (Pseudo-)Clefting*

Looking only at the Tangale focus data in (8) and (9), and in particular at the Bole focus data in (11) and (12), one could get the erroneous impression that the realization of (subject) focus in these languages relies on a syntactic strategy of clefting or pseudoclefting, as illustrated by the English example in (13a). Accordingly, one might be tempted to assign to the Bole sentence (12A) the incorrect syntactic structure in (13b), in which the backgrounded material is realized in form of an (empty headed) relative clause construction introduced by the marker *yé*, which would now be analyzed as a relative marker.

(13)   a.   [$_{DP}$ (The one) that is planting the millet] is Lengi.
       b.   *Incorrect structure for (12A):*
            [[À   jìi   kàpp-à   mòrďŏ   ] yé   ] Lengi$_F$.
              3AGR PROG plant-NOM millet   PRT   Lengi

Analyses along these lines have been proposed for a number of African languages; see, for instance, Frascarelli (2010) on Somali, and Zerbian (2006) on Northern Sotho, where focused subjects are syntactically realized by means of clefting. However, the following data show that an analysis of (subject) focus realization in Bole and Tangale in terms of clefting or pseudoclefting cannot be correct.

Observe first that the background marker *yé* in Bole is not identical to the relative marker *la*, which must furthermore *precede* the relative clause, as shown in (14).[9]

(14)   Bole
       Ìn   gómúu   à   [mèemù [là   Bámói   èesúngòo]   yêe]
       1SG   met   with   man   REL Bamoi   called   DEF
       'I met the person that Bamoi called.'

We conclude that the Bole sentences in (11) and (12) do not involve an empty-headed relative clause.

Second, inverted subjects and other focus constituents in postverbal position can be followed by additional background material in both languages. This is shown for Tangale in (15a) from Tuller (1992: 307, ex. (4b)), without tones, and for Bole in (15b):

(15) a. Tangale

wa patu ayaba)φ **nuŋ** *ta luumo dooji*
FUT buy banana who at market tomorrow
'Who will buy bananas at the market tomorrow?'

b. Bole

Q: Who is planting the millet at the farm?

A: *À jìi kàppà mòrɗǒ* **yé Léngì** *gà gàa koori* ***(yê)**
3SG IPF plant millet PRT Lengi in farm PRT
'LENGI is planting the millet at the farm.'

The fact that backgrounded material can both precede and follow the focus constituent in (15ab) provides further evidence against an analysis of subject inversion in terms of a cleft construction, in which the background material typically forms a single constituent, such as, for instance, a relative clause. Moreover, the obligatory double occurrence of the Bole marker *yé* in (15bA) and in the object focus case in (16) shows that this expression indeed functions as a background marker preceding or following the focus constituent.[10]

(16) Q: *What did Lengi plant yesterday?*

A: *(Léngì kàpp-ák* **yé** **mòrɗǒ** *(nzònó* **yê**).
Lengi plant-PERF.F PRT millet yesterday PRT
'Lengi planted MILLET yesterday.'

Finally, sentences with focused subject inversion in Tangale differ semantically from their cleft or pseudocleft counterparts, which are also available in this language: Both the cleft sentence in (17A1) and the pseudocleft sentence in (17A2) receive an exhaustive interpretation, as witnessed by the infelicity of the subsequent additional statement (in bold). By contrast, such a subsequent addition is fine in the case of focused subject inversion, cf. (17A3), showing that this construction need not be interpreted exhaustively. All data are taken from Truckenbrodt et al. (2008), without tones.[11]

(17)

Q: *pọnụk polašaara* **noŋ**?
know English who
'Who knows English?'

A1: *a* **lakụ-m** *pọnụk polašaara* # *tiju pọnjịn polašaara* **takịn**
COP Laku-REL know English Tiju know English too
'It's LAKU who knows English' 'Tiju knows English, too.'

A2: *mu-m* *pọnụk polašaara* **ŋ** *lakụ* # *tiju pọnjịn polašaara* **takịn**
person-REL knows English PRT Laku Tiju know English too
'The one who knows English is LAKU.' 'Tiju knows English, too.'

A3: *pọnụk polašaara* **lakụ** ✓ *tiju pọnjịn polašaara* **takịn**
knows English LAKU Tiju know English too
'LAKU knows English.' 'Tiju knows English, too.'

Summing up, the data in (14) to (15) conclusively show that the postverbal realization of focused (subject) constituents does not involve a cleft or pseudo-cleft structure. Instead, I maintain that focused nonsubjects remain *in situ*, whereas focused subjects must invert to a position where they can be preceded by a prosodic boundary and the background marker *yé*.

2.5.   *Subject inversion in other Chadic languages (Schuh 1971, 1982, Tuller 1992)*

Tangale and Bole are not the only West Chadic languages exhibiting subject inversion with focused subjects. Schuh (1971, 1982), and following him Tuller (1992), discuss a number of languages in which focused subject DPs, including questioned subjects, are syntactically realized in a marked postverbal position, whereas focused object DPs, including questioned objects, appear in their canonical position immediately following the verb. This holds for Duwai, Ngizim, and Bade from the B subbranch of West Chadic, as well as for Kanakuru from the A sub-branch. The data in (18) to (20) are taken from Schuh (1982: 161–167), and the Kanakuru data in (21), without tones, are taken from Newman (1974: 63–64, 66):

(18)   *Duwai*
    a.   *O-focus*
         Dùgwé   màaká   **ndúunyè**?
         D.   look.for   whom
         'Who did Dugwe look for?'
    b.   Q: *S-focus, inverted*
              dée   **nə́**   **ndíyè**?
              came FM   who
              'Who came?'
         A: *S-focus, inverted*
              dèe   **nə̀**   **Múusá**
              same FM   M.
              'MUSA came.'

(19)   *Ngizim*
    a.   *O-focus*
         Tìjáaní   máaká   **tàì**?
         T.   look.for   who
         'Who did Tijani look for?'
    b.   Q: *S-focus, inverted*
              dèe -**n**   **tâì**?
              came-FM   who
              'Who came?'

     A: *S-focus, inverted*
         *dĕe-**n**   **Múusə́***
         came-FM   M.
         'MUSA came.'

(20) *Gashua Bade*

    a. *O-focus*
       *Dùgwíi máakə́ **tài***
       D.   look.for   who
       'Who did Dugwi look for?'

    b. Q: *S-focus, inverted*
           *dàawà **n-ái**?*
           came   FM-who
           'Who came?'

       A: *S-focus, inverted*
           *dàawà-**n** **Múusá***
           came-FM M.
           'MUSA came.'

(21) *Kanakuru*

    a. *O-focus*
       *kàa   nai   **mandai**?*
       you   call   who
       'Whom are you calling?'

    b. *S-focus, inverted*
       *na   dibə̀re gami   **mandai**?*
       FUT buy   ram-the   who
       'Who will buy the ram?'

    c. *S-focus, inverted*
       *are   lowoi   **jewoi**   la lusha*
       bury boy-the slave-the in bush
       'THE SLAVE buried the boy in the bush.'

In light of these data, the inversion of focused subjects in Tangale and Bole can be taken as representative for a whole range of languages in the West Chadic group.[12] Duwai, Ngizim, and Bade more closely resemble Bole in that the inverted subject is preceded by a morphological marker, which derives from the definite determiner historically (Russell Schuh, p.c.).[13] Kanakuru resembles Tangale in that there is no such morphological marker preceding the focused subject.

2.6. *Gùrùntùm*

The final Chadic language to be discussed, Gùrùntùm, also realizes focus morphologically, but in a more direct and more consistent way than Bole.

Gùrùntùm has a focus marker *a*, which typically precedes the focus constituent. (22a)–(22c) illustrate for narrow focus on object, subject, and adjunct respectively (data from Hartmann and Zimmermann 2009):

(22) a. Q: *Á   kwá   bà   wúm kwálíngálá-ì?*
           FM   who   PROG chew colanut-the
           'Who is chewing the colanut?'

     A: *Á fúrmáyò bà   wúm kwálíngálá*
           FM fulani   PROG chew colanut
           'THE FULANI is chewing colanut.'

     b. Q: *Á   kə̃ə̃   mài   tí   bà   wúmì?*
           FM   what   REL   3sg   PROG chew
           'What is he chewing?'

     A: *Tí   bà   wúm-á   kwálíngálá*
           3SG   PROG chew-FM   colanut
           'He is chewing COLANUT.'

     c. Q: *Tí   bà   dáan-à   yâu?*
           3SG   PROG sit-FM   where
           'Where is he sitting?'

     A: *Tí   bà   dáan-à   gə̃ə̃   shìndí*
           3sg   PROG sit-FM   on   stone
           'He is sitting ON THE STONE.'

As the *a*-marker is a genuine focus marker, as opposed to the background marking element *yé* in Bole, and freely occurs at the left edge of prosodic domains, it can express focus on all constituents, including subjects, in their canonical position. It follows that focused subjects in Gùrùntùm are not inverted, but get marked for focus in preverbal position.

2.7.   *Conclusion*

There is no uniform strategy of realizing focus in West Chadic: Focus is realized by syntactic means (Hausa), by morphological means (Gùrùntùm), by a combination of prosodic and syntactic means (Tangale), or a combination of morphological and syntactic means (Bole). At the same time, the existence of different strategies of realizing focus should not be taken to imply that West Chadic languages consistently mark all kinds of focus on any kind of constituent, as European intonation languages do. Quite to the contrary, the next section will show that focus on nonsubjects is often not explicitly marked in West Chadic.

3.   The absence of overt focus marking on nonsubjects

The fact that all the languages under discussion have a special grammatical way of expressing focus does not imply that they would also make consistent use of this option across grammatical categories and across focus types. This section shows that focus on nonsubjects is frequently not marked in Hausa, Bole, and Tangale. This is quite unlike what is found in European intonation languages, where the focus constituent always carries a nuclear pitch accent, irrespective of its grammatical function and the pragmatic type of focus. In the West Chadic languages under consideration, the absence of explicit focus marking on non-subjects may be optional, as is the case with *information focus* in Hausa and Bole (Section 3.1). Alternatively, focus marking on nonsubjects may be alto-gether impossible in certain syntactic environments for independent structural reasons, as is the case with information and contrastive foci in imperfective clauses in Tangale (Section 3.2). In all the languages discussed, focused subjects differ from focused nonsubjects in that focus marking on the former is mandatory with all kinds of foci, contrastive or not (Section 3.3). The Contrastive Focus Hypothesis from (4) above provides an account for the special behavior of fo-cused subjects that crucially builds on the assumption that canonical preverbal subjects in West Chadic are typically interpreted as topics. As a result, the focus status of subjects in unexpected, and hence in need of explicit marking.

  Notice that the term *optional focus marking* relates to the fact that the marked realization of focus is neither triggered nor restricted by grammatical factors, but simply depends on pragmatic considerations like the distinction between information focus and contrastive focus (see section 1.3). At the same time, there is no strong 1:1 correlation between the presence or absence of explicit focus marking and the pragmatic interpretation of a focus as contrastive or in-formation focus, respectively. While contrastive foci must always be marked as such in Hausa and Bole, information foci may or may not be marked. This observation leads to a refinement of the *Contrastive Focus Hypothesis* in Section 3.4.

3.1.   *Absence of focus marking with information focus: Hausa and Bole*

Recent studies of focus in Hausa by Jaggar (2001, 2006), Green and Jaggar (2003), Hartmann (2006) as well as Hartmann and Zimmermann (2007a) have shown that — contrary to received wisdom — focus on nonsubjects need not be explicitly marked by syntactic movement. Instead, the focused constituent may optionally remain *in situ*, i.e., in its canonical position. (23ab), from Hartmann and Zimmermann (2007a), illustrate this for focus on an object DP and a loca-tive adjunct, respectively:

(23) a. *O-Focus*
        Q: ***Mèe*** *sú-kà*   *káamàa?*
            what 3PL-REL.PERF   catch
            'What did they catch?'
        A: *Sún*   *káamà* ***dáwáakíi***
            3PL.PERF catch   horses
            'They caught HORSES.'
    b. *ADJ-Focus*
        Q: *(À) cíkín* ***mèe*** *sú-kà*   *sâa   kùdî-n-sù?*
            at inside-of what 3PL-REL.PERF   put   money-of-3PL
            'What did they put their money in?'
        A: *Sún*   *sâa kùdî-n-sù*   *cíkí-n*   ***àkwàatì***
            3pl.PERF put mone-of-3PL inside-of   box
            'They put their money into a BOX.'

The *in situ* pattern is far from being a marked, and thus only rarely attested option. In a corpus study, Hartmann and Zimmermann (2007a) found that about one third of all instances of focus in the corpus were realized *in situ*. Regarding the expression of *information focus*, as found in answers to *wh*-questions, the *in situ* strategy is even the predominant strategy: About 4/5 of all new information foci in the corpus answers were realized *in situ*. At the same time, it does not seem to be the case that fronted foci occurring in answers to *wh*-questions always constitute instances of contrastive focus. This assumption seems necessary in order to account for the surprising fact that the focus fronting-strategy is commonly presented as the *default strategy* for answering *wh*-questions in textbooks and learner's grammars, which is more than puzzling in light of the reported corpus findings; see Jaggar (2001, 2006) and Hartmann (2006) for discussion. In view of this, the emerging generalization seems to be that only contrastive foci, as discussed in Section 1.3, are in need of explicit grammatical marking in Hausa, whereas information foci may or may not be realized by means of special grammatical marking;[14] see Section 3.4 for further discussion.

As for the prosodic realization of *in situ* foci in Hausa, Hartmann and Zimmermann (2007a) show that the lack of syntactic focus realization is not compensated for by other grammatical means. Based on qualitative and quantitative analyses, as well as on a perception study, they conclude that *in situ* foci are not marked by prosodic means, say in the form of tonal raising/lowering or prosodic phrase boundaries. Figures 1–4, from Hartmann and Zimmermann (2007a), show that there are no striking differences in the pitch contour of sentence (24) when uttered under varying focus conditions. In particular, there is no significant variation on or around the focus constituent. This holds no matter whether the focus comprises the entire clause (all-new focus, Fig. 1), the VP (Fig. 2), the object DP (Fig. 3), or the verb alone (Fig. 4).
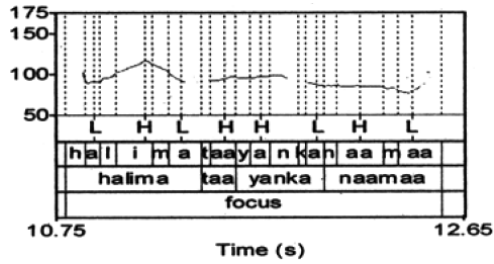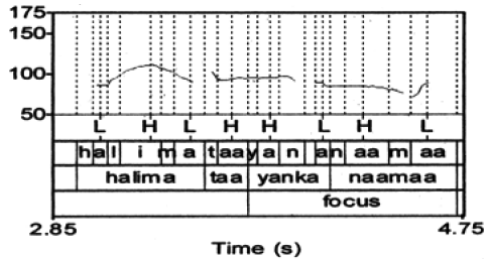
Figure 1.   *IP-Focus: [Halima has cut meat]*

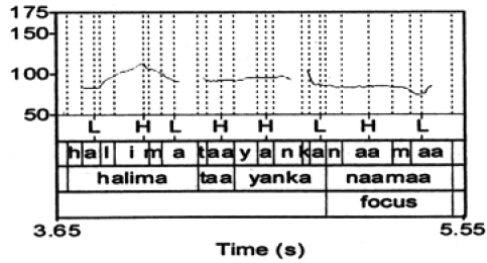Figure 2.   *VP-Focus: Halima has [cut meat]*

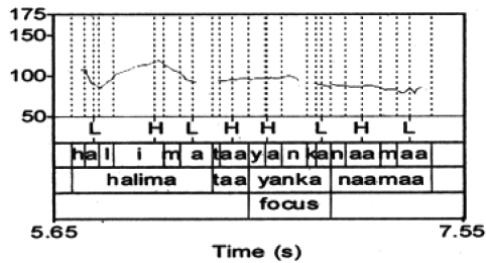Figure 3.   *OBJ-Focus: Halima has cut [meat]*

Figure 4.   *V-Focus: Halima has [cut] meat*

(24)   *Hàlíimà táa   yánkà   náamàa*
       Halima 3SG.F.PERF cut   meat.
       'Halima cut meat.'

The same results are obtained if one considers longer utterances that would
— in principle — provide evidence for the existence of prosodic phrase bound-
aries, such as the double object-construction in (25a), and a sentence with ob-
ject DP and locative adjunct in (25b).

(25)   a.   *Ìbráhìm yáa   bái   wà   dǎ-n   Múusáa lèemóo bìyár*
            Ibrahim 3SG.M.PERF give to   son-of Musa   lemon   five
            'Ibrahim gave five lemons to Musa's son.'
       b.   *Máalàm Shéhù yáa   kíiráa Dèelú à   cíkín   gàríi*
            Malam Shehu 3SG.M.PERF call   Deelu LOC inside town
            'Malam Shehu called Delu in town.'

The sentences in (25) are construed in such a way that the sequence of lexical
tones should allow for the detection of prosodic phrase boundaries on the focus
constituent, based on the (non)application of certain tonal processes that have
been argued to be sensitive to such boundaries (e.g., Leben et al. 1989).[15] Fig-
ure 5 shows the overlaid pitch contours of a male speaker for focus on the
entire sentence (all-new), the VP, the first object DP, the second object DP, the
cardinal modifier, as well as for discontinuous focus on verb and second object
DP. Figure 6 shows the pitch contours of a female speaker for focus on the
entire sentence (all-new), the verb alone, the VP, the object DP, and the locative
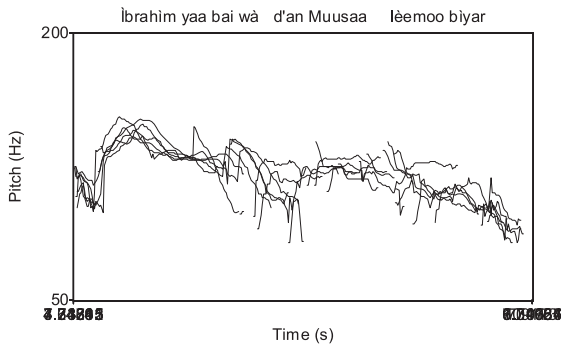adjunct.

Figure 5.   *F0-contour of (25a) (male)*

    Figures 5 and 6 show in an impressionistic manner that there is no clear ef-
fect of the focus position on the prosodic realization of the two clauses. The pitch
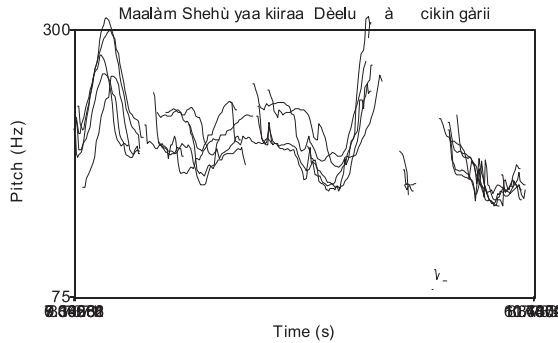
Figure 6.   *F0-contour of (25b) (female)*

contours show no clearly discernible differences under the varying focus con-
ditions. Notice that the adjunct PP *à cíkín gàrii* in (25b) is always separated from
the core clause, as can be seen from the prosodic break between *Dèelu* and *à*
and the application of *High Base Value Resetting* on the first H-tone of *cíkín*; see
Note 15. Crucially for our purposes, comparable prosodic breaks are not found
elsewhere in the sample sentences independent of their respective focus struc-
tures. In other words, the information-structural status of *in situ* foci in the Hausa
sentences (25ab) is neither expressed syntactically, nor by prosodic means.

The same holds for Bole, where the insertion of the background marker
yé before focused nonsubjects (plus the accompanying prosodic boundary) is
likewise optional with instances of information focus. Because of this, all the
examples of object and adjunct foci in (11) above can also be realized without
the *yé*-marker. The resulting structures in (26ab) are formally indistinguishable
from the corresponding all-new clauses (Maina Gimba p.c.):

(26)   a.   *O-Focus*
      Q: *Léngì à   jìi   kàpp-à   lè*?
           Lengi 3AGR   PROG plant-NOM   what
           'What is Lengi planting?'
      A: *Léngì à   jìi   kàpp-à   mòrɗó*
           Lengi 3AGR   PROG plant-NOM   millet
           'Lengi is planting MILLET.'

   b.   *ADJ-focus*
      Q: *Léngì à   jìi   kàpp-à   mòrɗó   gà   àw*?
           Lengi 3AGR   PROG plant-NOM   millet   LOC   where
           'Where is Lengi planting the millet?'
      A: *Léngì à   jìi   kàpp-à   mòrɗó   gà   gàa kòorí*
           Lengi 3AGR   PROG plant-NOM   millet   LOC   farm
           'Lengi is planting the millet ON THE FARM.'

(27a) and (27b) illustrate the absence of the grammatical realization of VP- and V-focus:

(27)   a.   *VP-focus*
   Q: *Léngì à jìi íi-ná (yé) lè?*
     Lengi 3AGR PROG do-NOM PRT what
     'What is Lengi doing?'
   A: *Léngì à jìi **kàpp-à** **mòrɗó***
     Lengi 3AGR PROG plant-NOM millet
     'Lengi is PLANTING MILLET'
  b.   *V-focus*
   Q: *Léngì à jìi íi-ná (yé) lè gà mòrɗó yê?*
     Lengi 3AGR PROG do-NOM PRT what with millet DEF
     'What is Lengi doing with the millet?'
   A: *Léngì à jìi **kàpp-à** mòrɗó yê*
     Lengi 3AGR PROG plant-NOM millet DEF
     'Lengi is PLANTING the millet.'

Finally, (28a)–(28c) show that the lack of focus realization is not restricted to the imperfective aspect, but is also found in the perfective aspect. In this respect, Bole differs from Tangale, where the lack of focus realization is only attested in imperfective sentences (see Section 3.2).

(28)   a.   *O-Focus*
   Q: *Léngì kàpp-ák (yé) lè?*
     Lengi plant-PERF.F. PRT what
     'What did Lengi plant?'
   A: *Léngì kàpp-ák (yé) **mòrɗó***
     Lengi plant-PERF.F PRT millet
     'Lengi planted MILLET.'
  b.   *VP-focus*
   Q: *Léngì ák (yé) lè?*
     Lengi do-PERF.F. PRT what
     'What did Lengi do?'
   A: *Léngì kàpp-ák **mòrɗó***
     Lengi plant-PERF.F millet
     'Lengi planted MILLET.'
  c.   *V-Focus*
   Q: *Léngì ák (yé) lè gà mòrɗó yê?*
     Lengi do-PERF.F. PRT what with millet DEF
     'What did Lengi do with the millet?'
   A: *Léngì **kàpp-ák** mòrɗó yê*
     Lengi plant-PERF.F millet DEF
     'Lengi PLANTED the millet.'

In conclusion, the information-structural status of nonsubject constituents as focused need not be expressed by means of special grammatical marking in Hausa and Bole, at least with instances of information focus. It follows that the explicit marking of focus on nonsubjects is not strictly determined by grammatical factors, nor by the need to express focus in terms of an absolute grammatical prominence. Once again, this is quite unlike what is found in intonation languages, where the information-structural prominence of the focus constituent must be matched by an absolute prosodic prominence.[16] I return to the question of what triggers the explicit formal marking of focus on nonsubjects in languages in which focus marking is optional in Section 3.4.

We conclude this section by referring to an anonymous reviewer's objection that the mere existence of optional focus marking in Hausa and Bole does not in general rule out the possibility that the realization of both marked and unmarked instances of focus is grammatically determined in a uniform way in these languages.[17] While this is certainly correct, the question of whether or not there is a uniform licensing mechanism for instances of (prosodically, syntactically, morphologically) marked and unmarked foci in Hausa and Bole is largely orthogonal to the central question at issue here, which is: What are the relevant factors responsible for the marked or unmarked realization of foci in languages in which explicit focus marking is optional? In this connection, the data in this subsection have shown that a marked (i.e., noncanonical) realization of nonsubject information foci in Hausa or Bole is not required by the grammatical systems of these languages.

3.2. *Structural constraints on the realization of focus*

The previous sub-section has shown that information focus on nonsubjects in Hausa and Bole can be grammatically realized or not, irrespective of grammatical factors. Other West Chadic languages, such as Ngizim, Duwai, and Bade, present a more extreme case in that focus on nonsubjects is never grammatically realized, not even optionally (Russell Schuh, p.c.).[18]

This subsection presents the less extreme case of Tangale, in which general structural factors block focus from being realized in certain syntactic environments. To be concrete, focus on object DPs cannot be realized by a preceding prosodic phrase boundary in Tangale clauses marked for the imperfective aspects progressive and future. This observation stands in stark contrast to what was observed for the perfective aspect above, where a prosodic boundary must precede focused object DPs (see 2.2). The absence of a prosodic boundary before focused (questioned) object DPs in imperfective clauses is illustrated in (29), a naturally occurring example from a corpus of Tangale folktales (Jungraithmayr 2002: 52):

(29)   [CONTEXT: She asked: 'What is it?']
     sì   wánà   n   yáa-ẓ   nân?
     2SG.F go-VPF   PROG do-NOM what
     'What have you come here for?' (lit. 'What have you come here to do?')

The absence of a prosodic boundary before the focused object DP in (29) is witnessed by the fact that vowel elision (VE) has applied to the final vowel of the preceding nominalized verb *yaazi* 'doing', reducing it to the surface form *yaaz*.[19] Based on direct elicitations, Hartmann and Zimmermann (2007b) provide comparable data to the effect that focus realization on the nonsubject categories object DP, VP, and V is systematically absent in imperfective clauses. There are no prosodic differences whatsoever between all-new sentences on the one hand, cf. (30), and sentences with O-focus, VP-focus, or V-focus, and on the other, cf. (31a)–(31c).[20] In each case, VE obligatorily deletes the final vowel of the verbal noun *balli > ball*.

(30)   *all-new*
     Làkú   n   báll   wàsíká
     L.   PROG   writing   letter
     'Laku is writing a letter.'

(31)   a.   *O-focus*
         Q: *Làkú   n   báll   **náŋ?*** A: *Làkú n   báll   **wàsíká***
             L.   PROG writing   what   L.   PROG writing   letter
             'What is Laku writing?'   'Laku is writing A LETTER.'

       b.   *VP-focus*
         Q: *Làkú n   yáaj   **náŋ**?* A: *Làkú n   **báll**   **wàsíká***
             L.   PROG doing   what   L.   PROG writing   letter
             'What is Laku doing?'   'Laku is [writing A LETTER]ₓ.'

       c.   *V-focus*
         Q: *Làkú n   **báll**   wàsíká yáa   **mád**   wàsíká?*
             L.   PROG writing   letter   or   reading   letter
             'Is Laku WRITING a letter or READING a letter?'
         A: *Làkú n   **báll**   wàsíká*
             L.   PROG writing   letter
             'Laku is WRITING a letter.'

The absence of a grammatical realization of focus in (31a) can be derived from the fact that the prosodic realization of focus on object NPs in Tangale, namely the insertion of a phrase boundary between the verb and the subsequent object NP (see Section 2.2), is bled by the specific syntactic structure of imperfective clauses and general structural conditions on the application of VE. Same as in Hausa, Tangale verbs are nominalized in imperfective clauses, and as such form

an N-N complex with their nominal object complement.[21] Kenstowicz (1985: 85) shows that VE must obligatorily apply in such N-N complexes, though, because of the close syntactic relation between the two nominal expressions, cf. (32).

(32) *ayaba   noŋ   ⇒   ayab(*a) noŋ*
      banana   who
      'whose banana'

Given that VE is obligatory in syntactic N-N configurations, it follows that it can no longer serve as a diagnostic for O-focus in the imperfective aspect. In brief, narrow focus on object NPs (and V(P)s) in imperfective clauses can never be grammatically expressed by means of a prosodic phrase boundary because of the tight structural relation between the verbal noun and its nominal complement. Moreover, Hartmann and Zimmermann (2007b) show that the lack of focus realization in terms of phrase boundaries is not compensated for by other prosodic means, such as, for instance, by pitch raising or lowering. Their conclusion is based on a closer inspection of the pitch contours associated with the different focus structures in (30) and (31), which reveals that the pitch contours of all-new focus (cf. 30), O-focus (cf. 31a), VP-focus (cf. 31b), and V-focus (cf. 31c) are identical in all relevant aspects. I conclude that there are general structural factors in Tangale which ban focus on nonsubjects from ever being realized in imperfective clauses. This is quite unlike what is observed for European intonation languages, where the placement of focus pitch accents is not subject to any categorial restrictions, such that focus pitch accents can be found on all syntactic constituents, and even on segmental subparts of words (Artstein 2004).

3.3.   *The special status of subjects*

The foregoing discussion of focus constituents with no special grammatical marking has exclusively focused on nonsubjects, and for a good reason: The three languages Hausa, Tangale, and Bole exhibit a striking asymmetry between subjects, on the one hand, and nonsubjects, on the other, when it comes to the realization of focus. Crucially, focus on subjects must always be expressed, whereas focus on nonsubjects need not, or (in Tangale imperfective clauses) must not be realized; see Zerbian (2006) and Fiedler et al. (2010) for additional data and discussion.

As already shown in (5b), repeated as (33a), subject focus in Hausa requires the relative TAM-marker, which marks the application of vacuous focus movement (Jaggar 2001, 2006, Green and Jaggar 2003). (33b) shows the same for sentences in the progressive aspect:

(33) a.   ***Kàndé₁*** *(cee) t₁* *tá(*a)*   *dáfá* *kíifíi*
             Kande   PRT   3SG.F.PERF.REL cook   fish
             'KANDE cooked fish.'

      b. Q: ***Wàa*** *yá-kèe*   *kírà-ntà?*
             who   3SG-REL.PROG call-her
             'Who is calling her?'

          A: ***Dáudà*** *yá-kèe*   */* -nàa*   *kírà-ntà*
             Dauda   3SG-PROG.REL / *-PROG   call-her
             'DAUDA is calling her.'

As shown in Section 2.2, focused subjects in Tangale cannot be expressed in their canonical preverbal position, but must undergo subject inversion to a postverbal position. This was shown for perfective clauses in (8), and holds even true for focused subjects in the imperfective aspect, where focus is otherwise unmarked, cf. (34) from Hartmann and Zimmermann (2007b).

(34) Q: *bàl*   *wàsíkà-i* ***nóŋ?***
         writing   letter-DEF who
         'Who is writing the letter?'

      A: *(wàsíkà-i)* *bàll-í*   ***Músà***
         letter-DEF   writing-it Musa
         'The letter, MUSA is writing it.'

In Bole, too, focused subjects must undergo subject inversion to a postverbal position. In Section 2.3, this was shown for transitive clauses in (12), and (35) presents an example with an intransitive verb. Notice that the *yé*-marker is optional in such cases, where the focused subject follows directly on the verb.

(35) Q: *(Án)*   *dów-úu*   *(yé) lò?*
         (3AGR) sit-PERF PRT who
         'Who sat?'

      A: *(Án)*   *dów-úu*   *(yé)* ***Bámói***
         (3AGR) sit-PERF PRT Bamoi
         'BAMOI sat./ The one who sat is Bamoi.'

Finally, subject foci in Ngizim, Duwai, and Bade must always be marked as well, whereas focus on nonsubjects is never grammatically marked.

   In sum, focused subjects in many West Chadic languages are special in that their focus status must be grammatically expressed. The obligatory realization of focus on subjects in West Chadic is significant, for it shows that the grammar of these languages must be sensitive to an information-structural category of *focus*. At the same time, the curious asymmetry found in the focus marking systems of West Chadic languages gives rise to two additional questions, which may turn out to be just two sides of the same coin: (i.) Why would subject foci

be systematically marked by the grammatical systems of the respective languages (but nonsubject foci not)?; (ii.) Why is the difference between information focus and contrastive focus, which shows up in the grammatical realization of nonsubject foci, systematically neutralized with subject foci?

One could take the challenge posed by the second question head-on and postulate that there is no interesting difference between information foci and contrastive foci after all, and this may very well be true as long as contrastive focus is simply characterized in terms of (the exclusion of) alternatives. However, by denying the existence of a difference between the two focus types, we lose the explanation for the differentiated grammatical behavior of nonsubject foci, which are only optionally marked as information foci, but which seem to require formal marking as contrastive foci. It seems, then, that any account of the facts surrounding focus realization in West Chadic must incorporate a notion of *contrastiveness*, or *emphasis*, for that matter.

A more promising alternative, and the one that is pursued here, consists in adopting a different characterization of contrastive focus, as discussed in Section 1.3. According to this characterization, the contrastive potential of a focus constituent is measured not relative to alternative denotations, but relative to the other discourse participants' expectations as to how the discourse should further develop. Together with the *Contrastive Focus Hypothesis* from Section 1.3, this new conception of contrastive foci also allows for an answer to the first question posed above, namely why focus on subjects *must* be grammatically realized. I contend that the special status of focused subjects in West Chadic follows from the fact that these SVO-languages exhibit a robust topic-comment split in their grammatical systems. In the default case, the sentence structure in (36a), which contains a canonical preverbal subject and a VP, is mapped onto the information-structural topic-comment partition in (36b):[22]

(36) a. $[_{TP}$ S $[_{VP}$ V O XP $]]$
          $\Downarrow$
      b. $[_{TOP}$ S $]$ $[_{COMM}$ V O XP $]$

As indicated in (36), subjects in the canonical sentence-initial position receive a default interpretation as topic, modulo the restriction discussed in Note 22; see e.g., Jackendoff (1972); Chafe (1976); Givón (1976); Lambrecht (2001); Zerbian (2007) for discussion of this point.[23] It follows that, if a nonsubject is to constitute the topic of a clause, it must be explicitly marked as such, for instance, by left dislocation, or by a morphological topic marker, or both.[24]

Conversely, if the grammatical subject of an utterance is to be interpreted not as topic, but as focus, this has to be indicated by a noncanonical grammatical realization; see also Hartmann and Zimmermann (2007a); Fiedler et al. (2010).[25] Adopting this view, then, the obligatory marking of (all kinds of) subject focus in West Chadic constitutes a special subcase of the Contrastive

Focus Hypothesis: Since focused subjects are not the norm, but the exception, in West Chadic (and beyond), I take them to be conventionally marked as such by the grammatical systems of these languages in order to ease the burden of discourse integration and context updating for the hearer. In other words, there simply are no noncontrastive instances of subject focus in these languages. This necessitates a slight revision of Table 1 from Section 1.2 to the effect that the upper-right cell is not attested in languages with a strong subject-topic correlation.

Table 2.   *Information and contrastive focus on subjects and nonsubjects in West Chadic (revised)*

	contrastive focus	information focus
subject	marked	—
nonsubject	marked *(Gùrùntùm: doubly marked)*	unmarked *(Gùrùntùm: marked)*

The crucial factor distinguishing focused subjects from focused nonsubjects is thus the fact that the contrast need not hold between the denotation of the focus constituent and its focus alternatives for explicit focus marking to be licensed. Instead, it is sufficient that there be a contrast between the unexpected actual information-structural function of subjects as foci and their expected role as topics, in line with the more general discourse-oriented characterization of contrast from Section 1.3: The fact that focused (and hence nonactivated) subject constituents are not realized in their canonical preverbal (topic) position facilitates the information update in discourse since it prevents the hearer from mistakenly trying to look up the subject denotation in the set of salient (and hence activated) discourse referents in order to set it up as a topic for the rest of the clause.[26]

We close this subsection by noting that Gùrùntùm obligatorily realizes focus on all major constituents, including nonsubjects. In this respect, Gùrùntùm resembles intonation languages, which also require the consistent marking of focus on subjects and nonsubjects by means of focus pitch accents. In light of this, I conclude that the subject/nonsubject asymmetry in the focus-marking system is perhaps a typical property of West Chadic languages, but certainly not a defining characteristic of this language group as a whole.

3.4.   *Focus realization and focus interpretation*

We conclude this section with some general remarks on the relation of grammatical *focus realization* and *focus interpretation*. In the syntactic literature on focus, there is often claimed to be a one-to-one correlation between the syntactic realization of a focus constituent *ex situ*, i.e., in a designated focus position,

or *in situ*, i.e., in its canonical position, and its pragmatic interpretation; see, for instance, É. Kiss (1998) on Hungarian and Vallduví and Vilkuna (1998) on Catalan and Finnish. The *in situ* strategy is associated with instances of information focus, whereas the *ex situ* strategy is employed in more marked discourse contexts, the generalization being that constituents in *ex situ*-position come with additional meaning effects, such as, for instance, exhaustivity, identification, contrast etc., which are typically not observed with *in situ* foci.

The data from West Chadic by and large confirm the picture found for the European languages. At the same time, they suggest an even more general approach to the phenomenon, not in terms of the dichotomy *ex situ* vs. *in situ*, but in terms of the dichotomy *grammatically marked focus* vs. *grammatically unmarked focus*. Recall from Section 3.1 that focused nonsubjects in Hausa can either be realized *ex situ* in a left-peripheral focus position, cf. (37a), or else they can remain *in situ* in their canonical position. In the latter case, focus is not explicitly marked, and the sentence is formally identical to a neutral all-new sentence, cf. (37b).

(37) a. (= 5a)   *O-focus realized*
      Kíifíi₁ *(nèe) Kàndé   tá   dáfàa* t₁.
      fish   PRT Kande   3SG.F.PERF.REL cook
      'Kande cooked FISH.'

   b. (= 1a)   *O-focus unrealized*
      *Kàndè   táa   dáfà   **kíifíi***
      Kande   3SG.F.PERF cook   fish
      'Kande cooked FISH.'

As already mentioned in Section 3.1, the corpus study in Hartmann and Zimmermann (2007a) revealed that focus in Hausa remains predominantly unmarked when it is interpreted as information focus, such as, for instance, in answers to preceding *wh*-questions. In about 4/5 of such cases, the focus was not realized by special grammatical means. By contrast, more than 9/10 of all pragmatically marked instances of focus, such as contrastive or corrective foci, were grammatically realized by moving them to the focus position in the left periphery of the clause. Based on these findings, Hartmann and Zimmermann (2007a) concluded that the explicit (i.e., noncanonical) grammatical realization of focus leads to a pragmatically marked interpretation of focus as contrastive. This generalization appears to be too strong, however, in light of the full range of focus-marking patterns observable in West Chadic, or even in Hausa. At the same time, the *Contrastive Focus Hypothesis* (CFH) in (4), though intuitively appealing, is not specific enough. Since it makes no mention of information focus at all, it is consistent with information foci being grammatically marked or not. In view of these problems, Hartmann and Zimmermann's one-way implication from noncanonical marking to marked interpretation is replaced with

the weaker *Focus-Marking Implication* (FMI) in (38). The FMI, which is a slightly adapted variant of a similar implication relation in Skopeteas and Fanselow (2009), concerns the relation between information and contrastive foci, on the one hand, and their marked or unmarked realization, on the other. It can be conceived of as a refinement of the CFH, whose central insight it preserves: If there is a special way of marking focus on a grammatical category α in a language, it will inevitably show up with instances of contrastive focus. In addition, the FMI accounts for all the attested combinations of focus type and focus marking in West Chadic. The four different combinations that are predicted to be (im)possible by the FMI are shown schematically in (39):

(38)   *The Focus-Marking Implication:*
        If a noncanonical grammatical strategy is used in order to mark
        information focus (on a grammatical category α), it is also used to
        mark contrastive focus on α, but not vice versa.

(39)   i.   * contrastive focus: UNMARKED;   information focus: MARKED
        ii.   ✓ contrastive focus: MARKED   ;   information focus: UNMARKED
        iii. ✓ contrastive focus: MARKED   ;   information focus: MARKED
        iv.   ✓ contrastive focus: UNMARKED;   information focus: UNMARKED

To begin with, the FMI generally precludes the combination in (39i), according to which information foci are marked in a noncanonical way, but contrastive foci are not. Secondly, it allows for the combination of marked contrastive foci and unmarked information foci in (39ii), which is at the heart of the *Contrastive Focus Hypothesis* and all cartographic approaches that assume different kinds of syntactic realizations for different kinds of foci. The combination is licit because the implication goes from marked instances of information focus to marked instances of contrastive focus only, but not vice versa. This state of affairs is observed in Hausa and Bole, which both mark contrastive focus on subjects and nonsubjects in a noncanonical way, whereas information focus on nonsubjects remains mostly unmarked. Third, the FMI correctly predicts the consistent marking of contrastive and information foci in a language, cf. (39iii). This is the case in Gùrùntùm, in which consistent morphological marking of information focus on all constituents is licit since contrastive foci are grammatically marked as well. Fourth, the FMI also captures the systematic lack of a formal grammatical marking on focus constituents, contrastive or not, cf. (39iv): If information foci are not grammatically marked to begin with, the implication in (38) does not apply. This state of affairs is observed for the West Chadic languages Ngizim, Duwai and Bade, which have no formal means of marking focus on nonsubjects, contrastive or not. Finally, coming back to Hausa, the FMI also accounts for the at first sight problematic fact — mentioned in passing in Section 3.1 — that information foci in answers to *wh*-questions can be optionally realized *ex situ*, without incurring additional discourse-semantic

effects. This is licit, according to the FMI, as long as contrastive foci are obligatorily realized *ex situ*, which they are in Hausa (in line with the CFH).

Summing up, the revised account of the grammatical realization of different kinds of foci, and in particular the proposed implicational relation from grammatically marked information foci to grammatically marked contrastive foci, preserves the central insight of the *Contrastive Focus Hypothesis*, which retains its status as a useful descriptive generalization, and according to which a contrastive interpretation of a focus constituent is typically signalled by means of a noncanonical grammatical marking. At the same time, the FMI expands the empirical coverage in that it exceptionally allows for contrastive foci to go unmarked (given that the language lacks grammatical means of expressing nonsubject focus in general), and for nonsubject information foci to be grammatically marked, as is optionally the case in Hausa.[27] Concerning claims in the syntactic literature that there is a relation between the marked or unmarked syntactic realization of a focus, on the one hand, and its marked or unmarked interpretation, on the other, the Hausa facts confirm the existence of such a relation, albeit in the form of a (much) weaker one-way implication.

Similar facts are observed for Bole, which differs from Hausa in that focus on nonsubjects is not explicitly marked by means of syntactic movement, but by means of the morphological marker *yé* preceding the focus constituent. The semantic differences between (40a), with explicit focus realization, and (40b) without, by and large match those observed for Hausa *ex situ* and *in situ* focus. In general, the presence of *yé* induces a certain degree of stress or emphasis on the focus constituent (Maina Gimba, p.c.), as would be appropriate, for instance, in corrective statements.

(40) a. (= 11a) *O-focus realized*
         Léngì   *à*   *jìi*   *kàpp-à*   *yé*   **mòrɗó**
         Lengi   3AGR   PROG plant-NOM   PRT   millet
         'It is MILLET that Lengi is planting.'
   b. (= 1c) *O-focus unrealized*
         Léngi   *à*   *jìi*   *kàpp-à*   **mòrɗó**
         Lengi   3AGR PROG plant-NOM   millet
         'Lengi is planting MILLET.'

As focus on nonsubjects is not syntactically realized in Bole, the difference in focus interpretation cannot be captured in terms of different syntactic positions. Rather, the relevant factor seems to be whether or not focus is grammatically realized by means of a noncanonical structure. If it is not, we get the interpretation as information focus. If it is, the focus constituent receives a stronger, pragmatically more marked interpretation as contrastive focus.

Summing up, the explicit realization of focus in Hausa and Bole is optional only in so far as it is not required by the grammatical systems of these languages.

Rather, the grammatical marking of focus in these languages typically indicates the pragmatic function of contrastive focus. By contrast, a focus that is not grammatically realized will receive a weaker discourse-semantic interpretation as information focus. The present account crucially differs from existing accounts in that the interpretation of information foci is not linked to a particular syntactic focus position at the left edge of the VP (Belletti 2002, Aboh 2007), but to the fact that the focus status of the constituent is not marked by any special grammatical means.

Notice, finally, that there is at least one West Chadic language that exhibits two different formal devices for the realization of focus and for the expression of discourse markedness: In Gùrùntùm, focus constituents obligatorily carry the focus marker *a*, but, in addition, focused nonsubjects can also occur in a cleft-like relative construction, such as in (41), in which case they introduce an extra amount of contrast or emphasis (Hartmann and Zimmermann 2009):[28]

(41)   Q: *Á*   ***ká̃ã***   *mài*   *tí*   *náa*   *wàlì?*
           FM   what   REL   3SG   catch   farm
           'What did he catch at the farm?'

     A: *Á*   ***fúl***   *mài*   *tí*   *náa*   *wálì*
           FM   cow   REL   3SG   catch   farm
           'It was a COW that he caught at the farm.'

The obligatory presence of the focus marker *a* in the contrastive cleft construction in (39A) brings out nicely the unified semantic nature of information and contrastive foci as relating to a set of focus alternatives (see also Delin and Oberlander 1995): Information foci pick an alternative from a set evoked by a (possibly implicit) question (Beaver and Clark 2008), whereas contrastive foci pick an alternative and signal that it is unexpected in some way (see Section 1.3). The clefting-strategy in (39A) is reminiscent of focus fronting or focus clefting in English or German. In these languages, the focus status of the fronted/clefted constituent is indicated by the nuclear pitch accent, whereas the contrastive interpretation is induced by the noncanonical syntactic realization.

4.   Grammatical underdetermination of focus and contextual resolution

This section discusses the emergence of focus ambiguities in West Chadic. It is shown that the IS-category *focus* is heavily underdetermined by the grammatical systems in the languages under discussion, even more so than in intonation languages. From a theoretical perspective, it thus provides strong evidence in favor of pragmatic theories of focus on which focus must be contextually resolved; see, for instance, Rooth (1992, 1996), Büring (2006, 2007), Féry (2008), among others. There are various reasons for the observed underdetermination of focus. It may either be due to the optional absence of focus mark-

ing discussed in Section 3.1, or it may result from general structural constraints on focus marking in certain syntactic environments that were discussed in Section 3.2. Both cases are briefly taken up again in Section 4.1. Even more interestingly, focus may be underdetermined even in the presence of explicit focus marking. In such cases, we deal with genuine focus ambiguities that arise from structural constraints on focus marking, and which are in need of contextual resolution. These form the topic of Section 4.2. Section 4.3 presents a particularly interesting instance of focus ambiguity in Tangale and Gùrùntùm, which is not attested in European intonation languages, and which receives no explanation on standard accounts of focus projection (Selkirk 1984, 1995), which appear to be custom-tailored for such languages. The ambiguity in question concerns the identical realization of narrow verb and narrow object focus. These are both marked on the object DP, casting doubt on the assumption that syntax mediates between the information-structural focus domain, on the one hand, and its grammatical realization on a particular constituent, on the other, for instance by means of projection rules. Rather, the observable grammatical patterns observed are better viewed as a compromise between an information-structural constraint requiring foci to be prominent and general structural constraints on the placement of grammatical markers of prominence.

4.1. *Underdetermination of focus in the* absence *of explicit marking*

As discussed at length in Section 3, focus on nonsubjects need not be grammatically realized in Hausa and Bole, and it is never realized in Tangale imperfective sentences for general structural reasons. It follows directly that such unmarked clauses are ambiguous between various (nonsubject) focus readings. The linear surface strings in Hausa (23a) and (24), for instance, can be interpreted with focus on the object DP, on the VP, on the verb, or even on the entire clause. In addition to these readings, the surface string in (23b) allows for an additional reading with focus on the locative adjunct.[29] Parallel facts hold for the Bole sentences in (26) to (28), and for the imperfective Tangale sentences in (30) and (31) above. In all these cases, the burden of focus resolution lies exclusively on the pragmatic component.

4.2. *Underdetermination of focus in the* presence *of explicit marking*

Another source of focus ambiguities in West Chadic are general structural constraints on the grammatical mechanisms employed in the realization of focus, such as, for instance, on A′-movement in Hausa, and on the placement of prosodic boundaries (Tangale) and morphological markers (Bole, Gùrùntùm).

In Hausa, focus is realized syntactically in form of A′-movement (Section 2.1), and focus movement is subject to general syntactic restrictions, such

as island constraints (Tuller 1986) and the *structure preservation principle*
(Emonds 1976). The latter requires that only full XPs be moved to the focus
position, and consequently nonphrasal constituents, such as the transitive verb
in (42), cannot move to the focus position on their own. Instead, the nominal-
ized verb must pied-pipe its immediately dominating maximal projection; see
Hartmann and Zimmermann (2007a) for more details on focus fronting in
Hausa, and Roberts (1998) on focus pied-piping in Hungarian:

(42) Q: *Mèenéenèe*   *yá*   *yí dà*   *wàsíikàa?*
          what   3SG.PERF.REL do with   letter
          'What did he do with the letter?'

      A: *[Kàr̃àatú-n   wàsíikàa]₁   née*   *yá*   *yí*   *t₁.*
          reading-of   letter   PRT   3SG.PERF.REL do
          'He READ the letter.'

In Tangale, phonological phrase boundaries cannot be inserted inside complex
DPs, such as associative N_1-of-N_2 constructions, as these form a close syntac-
tic unit; see Section 3.2. It follows that focus on such complex DPs and on their
N_2-part are marked alike by means of a prosodic boundary preceding the com-
plex DP (Kenstowicz 1985, Hartmann and Zimmermann 2007b). This is illus-
trated in (43), where the prosodic boundary precedes the complex DP, even
though only the question word *noŋ* 'who' is focused. The prosodic boundary is
indicated, again, by the blocking of VE on the verb *múdúdgó*:

(43) *(múdúd-gó)φ [láw(*o)   nóŋ]*
      die-PERF   child   who
      'Whose child died?'
      (Kenstowicz 1985: 87, ex. 22c)

While the question in (43) is unambiguous because of the *wh*-expression, cor-
responding answers of the form 'X's child died' will also feature the prosodic
boundary before the complex DP. For this reason, they can be ambiguously
interpreted as answers to the question 'Who died?', with focus on the complex
DP, or to the question 'Whose child died?', with focus on N_2. Entirely parallel
facts are observed for Gùrùntùm in (45) and Bole in (46). In both languages,
the morphological markers *yé* and *a* cannot be inserted inside complex N-of-
N-constructions, as illustrated schematically in (44):[30]

(44)   * [DP N₁ yé/a N₂]

Because of (44), *yé* and *a* will have to precede the complex DP, irrespective of
the focus structure of the clause. As a result, the syntactic structures in (45A)
and (46A) can serve as answers to either Q1 (focus on complex DP) or Q2
(focus on N_2):

(45) Gùrùntùm

    Q1: *Á* **kɑ̆̃ɑ̃** *mài tí bà pí méerè?*
        FM what REL 3SG PROG do theft
        'What is he stealing?'

    Q2: *Á [dòoré-i* **kwá]** *mài tí bà pí méerè?*
        FM goat-DEF who REL 3SG PROG do theft
        'Whose goat is he stealing?'

    A: *Á [dòoré-i rèená] (mài tí bà pí méerè)*
       FM goat-DEF king (REL 3SG PROG do theft)
       'He is stealing [the king's GOAT]$_F$. / He is stealing THE KING's
       goat.'

(46) Q1: *Léngì bòkk-ák* **(yé)** **lè?**
        Lengi burn-PERF.F PRT what
        'What did Lengi burn?'

    Q2: *Léngì bòkk-ák* **(yé)** *káuyèe* **(*ye)** **lò?**
        Lengi burn-PERF.F PRT village PRT who
        'Whose village did Lengi burn?'

    A: *Bòkk-ák* **(yé)** *[káuyèe* **(*yé)** *Bámói]*
       burn-PERF.F PRT village PRT Bamoi
       'She burnt [Bamoi's VILLAGE]$_F$. / She burnt BAMOI's village.'

Such focus ambiguities are not found in intonation languages with free pitch accent placement, such as German or English, but they are reminiscent of DP-ambiguities observed in intonation languages with more restricted accent placement, such as, for instance, Italian (Krahmer and Swerts 2004).

4.3. *A special case: $V_{FOC} = O_{FOC}$*

The most intriguing kind of focus ambiguity, both from a crosslinguistic and from a theoretical perspective, shows up in Tangale and Gùrùntùm, where narrow focus on the verb, on the object DP, and likewise on the VP, are realized in identical fashion. In all three cases, the prosodic or morphological focus marker precedes the object DP, and not the verb; cf. Zimmermann (2006b), Hartmann and Zimmermann (2007b), and Hartmann and Zimmermann (2009). Consequently, the sentences in (47ab) are focus ambiguous and can serve as answers to *wh*-questions about the object, the VP, and the verb, respectively:

(47) a. Tangale
      Làk wái-gó)φ lándà
      Laku sell-PERF dress
      'Laku sold A DRESS. / Laku SOLD a dress. / Laku [sold A DRESS]$_F$.'

b.   Gùrùntùm

Tí   bà   ròmb   á   gʷéì
3SG   PROG gather   FM   seeds
'He is gathering THE SEEDS / GATHERING the seeds/ [gathering THE SEEDS]ꜰ'

The patterns of focus realization in (45ab) are remarkable for two reasons: First, narrow focus on the verb is realized on the object DP, a pattern totally unknown from intonation languages, where the focus accent must be placed within the focus domain. Second, VP-focus is realized by means of a VP-internal prosodic boundary. Both phenomena are not predicted by standard accounts of focus ambiguity, such as Selkirk's (1995) *Basic Focus Rule*, or by current theories of focus prominence; see, for instance, Selkirk (2004) and Büring (2010).

That we are indeed dealing with focus ambiguity in Tangale is confirmed by Hartmann and Zimmermann (2007b), who show that the prosodic realization of (45a) is identical under all three focus conditions. The same appears to hold for Gùrùntùm (45b), as shown in figures 7 to 9 for focus on object DP, V, and VP respectively.[31]
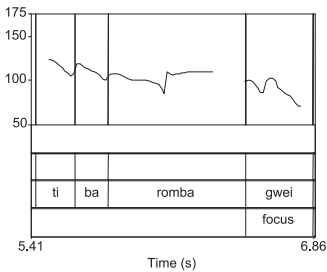
Figure 7.   *OBJ-Focus: 'He's gathering the SEEDS.'*
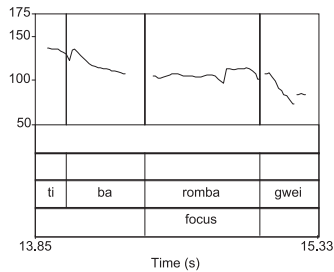
Figure 8.   *V-Focus: 'He's gathering the SEEDS.'*
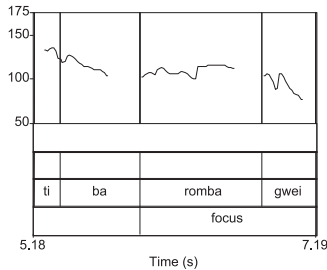
Figure 9.   *VP-Focus: 'He's [gathering the SEEDS]ꜰ.'*

As for why the structural realization of focus on object DP, V, and VP in (45ab) should be identical, Zimmermann (2006b) and Hartmann and Zimmermann (2007b) argue that the focus ambiguity follows from a categorial restriction on the realization of focus. It has been observed that many Chadic languages, including Hausa, display a certain bias for focus realization on nominal constituents (Hartmann and Zimmermann 2007b). Extending this observation to Tangale and Gùrùntùm, Zimmermann (2006b) assumes the constraint in (48) to be active in both languages:[32]

(48)   FocNP: No focus realization on [−nominal] constituents

Now assume that narrow focus on the verb or the VP needs to be realized in Tangale and Gùrùntùm, since focus prominence must be grammatically expressed in these languages, same as in intonation languages.[33] At the same time, it cannot be realized on the verb itself because of (48). Given this conflict, focus will be realized on the structurally closest constituent complying with (48), i.e., on the direct object DP, if one is present.[34] The actual placement of the focus-marking elements in (47a) and (47b) thus constitutes a compromise between the IS-requirement to make the focus constituent grammatically prominent, on the one hand, and a general categorial restriction on the placement of the focus marking elements, on the other.

4.4.   *Summary*

In the West Chadic languages under discussion, focus is heavily underdetermined and hence in even more need of contextual resolution than in European intonation languages. The observed underdetermination is in part due to the absence of focus realization, as is the case with information foci on nonsubjects in Hausa and Bole. In such cases, there are no grammatical clues for focus resolution at all. This option is not available for intonation languages of the English or German type, which must realize focus by means of a nuclear pitch accent on the focus constituent. In addition, there are instances of focus ambiguity where focus is grammatically realized, but not in the expected position, but on an adjacent or structurally dominating element. Here, we find certain resemblances between West Chadic and intonation languages. The focus ambiguity with complex DPs (4.2) resembles the focus ambiguity found with complex DPs in intonation languages of the Romance type, where the nuclear pitch is always realized on the same element, irrespective of the focus structure of the DP. The observed focus ambiguity between VP and object DP in Tangale and Gùrùntùm is also familiar from many other languages, including Germanic and Romance, where it is usually explained in terms of focus projection from the grammatically marked object DP to the VP. What has not been attested in other

languages so far, though, is the focus ambiguity between narrow verb focus and focus on the object DP in Tangale and Gùrùntùm. The grammatical realization of narrow verb focus on the following object DP is in obvious violation of the interface condition that grammatical focus marking be manifest on the focus constituent itself and appears to be special to West Chadic. It was suggested that this remarkable pattern, which is not predicted by Selkirk's projection rules, results from the interaction of an IS-constraint requiring grammatical focus marking *on or as close as possible* to the focus constituent, on the one hand, and a general structural constraint blocking the insertion of inherently adnominal focus markers on verbal categories, on the other. From a crosslinguistic perspective, it will be interesting to see whether other languages impose comparable categorial restrictions on their respective prosodic, morphological, or syntactic focus markers.

5.   Theoretical implications and conclusion

The discussion of focus and the realization of focus in West Chadic have delivered the following results.

First, we observed wide crosslinguistic variation in the grammatical expression of focus, even across closely related languages. West Chadic languages realize focus by a variety of means, making use of syntactic, prosodic, and morphological strategies, or combinations of these. It follows that the grammatical realization of focus in West Chadic does not qualify as a characteristic property of the language group as a whole.

Second, there are two pragmatic types of focus, *information focus* and *contrastive focus*, which do not differ in their underlying semantics, but which differ in terms of their grammatical realization. The assumption of a shared underlying semantics of information focus and contrastive focus as involving alternatives is supported by Gùrùntùm, which marks both focus types in the same way, namely by inserting a morphological focus marker. The pragmatic difference between information focus and contrastive focus is witnessed by the fact that the languages under discussion make a categorical distinction when it comes to the realization of both focus types on *nonsubjects*. Information focus on nonsubjects is typically not explicitly marked in the grammar, but will be contextually resolved instead. By contrast, the special discourse-semantic function of contrastive focus requires explicit grammatical marking, in line with the *Contrastive Focus Hypothesis*. It is worthwhile stressing again that the notion of contrast used here differs in important ways from the one that is typically found in the literature: Contrastive focus on a constituent does not so much signal the exclusion of alternative semantic values for this constituent, but rather marks the meaning or the focus status of the constituent as unexpected

for the hearer, and hence as potentially controversial. It was also shown that there is not so much a correlation between a designated syntactic position and a marked contrastive focus interpretation per se, but more generally between a marked, i.e., noncanonical, syntactic, prosodic, or morphological realization, and a marked interpretation of focus as contrastive. This makes the special discourse-semantic properties of *ex situ* foci, which have met with a lot of attention in the syntactic literature, come out as a special subcase of the more general pattern.

Third, three of the four languages discussed exhibit an interesting subject/nonsubject asymmetry when it comes to focus realization. Unlike focused non-subjects, focused subjects must be grammatically marked as such, whether or not they occur in answers to *wh*-questions or as contrastive foci. According to the picture developed here, the special status of subjects with regard to focus realization follows from the fact that the West Chadic SVO-languages encode the topic-comment distinction in their grammatical systems, where the subject in preverbal position functions as the default topic of the utterance. It follows that focused subjects, which do not serve this default function, require extra marking in order to facilitate discourse integration and information update. Focused subjects in West Chadic are thus generally contrastive in the sense that their discourse-semantic function as focus is taken to be unexpected by the hearer. Since focused subjects are contrastive by definition in West Chadic, the Contrastive Focus Hypothesis correctly predicts them to be mandatorily marked as such, which is borne out by the facts. Finally, notice that the special status of focused subjects is not restricted to West Chadic, but has been ob-served for other West African languages (Fiedler et al. 2010), for Northern Sotho (Zerbian 2006, 2007), and also for Romance languages like (Quebecois) French, where focus on subjects typically induces clefting, irrespective of focus type; see Lambrecht (2001) and Skopeteas and Fanselow (2009) on European French and Quebecois French, respectively. This suggests that the special behavior of focused subjects is a widespread phenomenon in natural languages, and future crosslinguistic studies of focus should hence pay par-ticular attention to the existence of subject/nonsubject asymmetries.

Fourth, the frequent absence of explicit focus realization in the West Chadic languages discussed shows that focus is heavily underdetermined by the grammatical systems of these languages. In light of this, West Chadic lan-guages provide strong empirical support for a pragmatic view of focus as an information-structural category, which *may* be grammatically marked under certain circumstances, but which is in dire need of contextual resolution. The underdetermination of focus can come about in different ways. First, informa-tion focus need not be grammatically marked on nonsubject constituents that form part of the comment. Apparently, the focus potential of such constituents is sufficiently licensed by their positioning inside the (vP-) comment part of the

clause. Second, there are general structural constraints on the grammatical operations required for focus marking, namely syntactic A′-movement in Hausa, the insertion of morphological markers in Bole and Gùrùntùm, or the insertion of prosodic boundaries in Tangale. To be concrete, A′-movement can only target maximal projections, and morphological markers cannot be inserted inside complex DPs. Finally, morphological and prosodic focus markers are often subject to categorial restrictions, as is the case in Tangale and Gùrùntùm, which do not allow for explicit focus marking on verbal categories. As a result of this, narrow verb focus must be expressed on the following object DP, giving rise to a focus ambiguity that is not attested in intonation languages, and which is not predicted to exist on standard accounts of focus and focus realization. More generally, the observed focus ambiguity between V_F and O_F argues for an analysis of focus ambiguity as resulting from the interaction of conflicting constraints; see also Büring (2001) and Büring and Gutierréz-Bravo (2001) for proposals along the same lines. This weakens the theoretical status of Selkirk's (1984, 1995) *focus projection rules* as the central means of mediating between the focus domain and its grammatical realization in natural languages, in general, but also in intonation languages such as German and English, for which the empirical adequacy of these rules has been independently questioned by Schwarzschild (1999) and Büring (2006).

It is hoped that the foregoing observations on focusing in West Chadic will have an impact on the crosslinguistic study of focus and focus realization, as well as on the theoretical analysis of these phenomena.

Notes

1. *All-new clauses* in this sense may still manifest a *topic-comment* structure, and are thus not to be confused with thetic statements, which are used to present situations or scenes as integrated wholes; see Sasse (1987).

2. Of course, more practical considerations such as the availability of native speakers of the respective languages played a role as well.

3. The approach to contrastive focus advocated here is related to Lambrecht's (1994: 290) discourse-semantic characterization of *contrastiveness* in terms of context-based inferences: "contrastiveness [. . .] arises from particular inferences, which we draw on the basis of given conversational contexts."

4. Often, the use of a marked structure with contrastive focus comes with additional semantic effects, such as exhaustiveness implicatures, corresponding to the semantic effect of *only*, or relative likelihood, corresponding to the semantic effect of *even*, respectively. Crucially, these semantic notions are not directly encoded in the contrastive focus structure, but come about as generalized conversational implicatures: They are generated on the side of the hearer in response to the use of a noncanonical form on the side of the speaker.

5. The central interpretive function of a sentence containing a contrastive topic and a focus, as discussed in Büring (1997), consists in providing information concerning the *pairing* of a list of already established (≈ old) discourse referents, invoked by the contrastive topic, and some (new) properties, which are invoked by the focus constituent, contrastive or not. This accounts for why nonspecific indefinites and quantifiers, which by definition introduce new or no discourse referents, never qualify as topics, contrastive or not.

6. The following abbreviations are used in the glosses: AGR = agreement marker, COP = copula, DEF = definite, F = feminine, FM = focus marker, FUT = future, IPF = imperfective, LOC = locative, M = masculine, NOM = nominalizer, PERF = perfective, PERF.REL = relative perfective, PL = plural, PROG = progressive, PROG.REL = relative progressive, PRT = particle, REL = relative marker, SG = singular, VPF = ventive perfect.

7. Other prosodic processes that are blocked before φ-boundaries, and which can therefore be taken as diagnostics for them, are *right-line delinking*, *p-lowering* from H to L, and *final decontouring* (Kidda 1993). The process of final decontouring (FD) simplifies falling HL-contour tones to simple H tones, except before prosodic boundaries: HL X)φ → HHX)φ. The nonapplication of FD in pre-boundary position is illustrated in (9), where the HL-contour tone is not reduced to a simple H tone before the)φ-boundary preceding the focus constituent.

8. In addition, the presence of φ-boundaries is frequently marked by the absence of High Tone Spreading (or Low Tone Raising); see Schuh and Gimba (2005) for a detailed discussion.

9. As pointed out by Gimba (2005), the background marker *yé* can apply at various syntactic levels. If it applies at the DP-level, it marks the DP-denotation as definite or aforementioned.

10. Unlike in (15bA), where the sentence-final *yê* could also be analyzed as a marker of definiteness on the preceding NP *kori* 'farm' (see Note 9), the background marking nature of *yé* is quite clear in (16A), since the temporal adverb *nzònó* 'tomorrow' does not take a definite determiner in other environments, such as, for instance, in the all-new sentence in (i):

    (i) *Léngì kàpp-ák   mòrɗő nzònó*
        Lengi plant-PERF.F.   millet yesterday
        'Lengi planted millet yesterday.'

11. Interestingly, the subject of the added clauses, *tiju*, need not be focus inverted although it appears to function as the associate of the additive particle *takịn*. This is consistent with findings for other Chadic languages, such as Bura (Hartmann and Zimmermann 2008) and Ngamo (Grubic and Zimmermann, forthcoming), where additive particles cannot associate with focused constituents either. See Grubic and Zimmermann (forthcoming) for a theoretical account of these patterns according to which additive particles associate only freely with

focus in the sense of Beaver and Clark (2008). As a result, the apparent association of additive particles with subjects can be either analyzed as an instance of free association with sentential focus and a given VP, or else as association with a given VP in a topic-focus configuration à la Büring (1997).

12. As pointed out by an anonymous reviewer, postposing of focused subjects is restricted geographically to a strip of languages along the eastern edge of West Chadic which, moreover, do not comprise a genetic subgroup. Bade, Ngizim, and Duwai, for instance, form a subgroup with North Bauchi languages, which do *not* postpose focused subjects. Likewise, Kanakuru, Bole, and Tangale form a subgroup with Kirfi, Gera, and other languages to the West, which also do not do this.

13. Interestingly, this morphological marker cannot occur with focused nonsubjects in Duwai, Ngizim and Bade, unlike in Bole, where its presence is optional and indicates contrastive focus; see Section 3.

14. A reason for the *ex situ* occurrence of nonsubject information foci in answers to *wh*-questions could be that there are additional well-formedness constraints on discourse, such as, e.g., a structural parallelism constraint on questions and answers: Since *wh*-expressions in Hausa are generally realized *ex situ* (Newman 2000, Jaggar 2001, 2006), structural parallelism would license the optional *ex situ* realization of plain information foci in answers as well.

15. Leben et al. (1989) identify three such processes: *Low raising* raises the L-tone in an HLH-sequence and is blocked by prosodic phrase boundaries. *High raising* raises the second H-tone in an HHL-sequence and is also blocked by prosodic boundaries. *High Base Value Resetting*, in contrast, only applies at prosodic boundaries and resets the pitch of the first H tone in a prosodic phrase independently of the pitch of the preceding H tone.

16. The tight link between IS-prominence and prosodic prominence has been formally implemented by means of constraints like FocusPROMINENCE (Büring 2001, 2010, Selkirk 2004), according to which focus is maximally prominent, or Schwarzschild's (1999) FOC, according to which a focus-marked phrase contains an accent. For an early reference see Jackendoff (1972), according to whom the strongest stress in the sentence has to fall within the constituent marked F.

17. A uniform grammatical licensing mechanism of marked and unmarked foci might, for instance, involve a notion of *relative* or *positional* prominence, similar to what is found in some Bantu languages (Kanerva 1990, Kula 2008), and according to which nonsubject constituents in SVO-languages are licensed by default in their base-generated position towards the right edge of the clause. For Hausa and Bole, such a uniform focus rule could take the form in (i):

(i)   A focused constituent α, or (if α is a syntactic head) the XP immediately dominating α, must be right-aligned with the edge of some prosodic phrase boundary φ.

Assuming, first, that left-dislocated material is mapped onto a φ-phrase of its own, second, that the first right φ-boundary must come after the verb, and third, that V and O must never be separated by a φ-boundary, the major facts concerning the realization of focus in Hausa and Bole fall out directly: Nonsubjects are licensed *in situ* (as they can be followed by a φ-boundary; left-dislocated foci in Hausa are licensed because they are followed by a φ-boundary; focused subjects in Hausa must vacuously move to the left and focus subjects in Bole must invert for subjects cannot be followed by a φ-boundary in their default position immediately preceding the verb.

While this approach in terms of prosodic alignment is attractive, it is not entirely free of problems. To begin with, it is not clear whether φ can be consistently identified with the intermediate level of *phonological phrases*, or rather with the higher level of *intonation phrases*. Likewise, it is not clear whether *in situ* foci are always right aligned with a φ-boundary at the relevant level when followed by additional material. Finally, a syntax-

prosody correspondence rule, such as (i), needs to be grounded in a comprehensive prosodic analysis of Hausa and Bole sentences, which is lacking so far; apart from Leben et al. (1989), see also Miller and Tench (1980, 1982) and Inkelas et al. (1990) on Hausa prosody, and Schuh and Gimba (2005) and Schuh et al. (2010) on prosodic aspects of Bole. A thorough discussion of uniform focus licensing in Hausa and Bole would thus go well beyond the scope of this article and is hence deferred to future research.

18. Concerning the possibility of (optional) prosodic focus marking in these language, Russell Schuh (p.c.) comes to the conclusion — based on recordings — that there is no prosodic marking of focus at least in Ngizim, and almost certainly not in Bade and Duwai either. As pointed out by Russell Schuh (p.c.), though, Bole and Ngizim provide some (weak) indirect evidence for the presence of narrow information focus on nonsubjects: Whenever a nonsubject constituent is narrowly focused, it is impossible to have auxiliary focus marking in form of a morphological totality marker on the verb, even with those verbs that regularly take the totality marker in all-new clauses.

19. Crucially, all the other corpus instances of nominalized verbs before *w*h-objects in progressive clauses exhibit vowel elision, too. Apart from two other instances of object *w*h-questions with the verb *yaaz(i)* 'doing', there are two further instances with the verb *uz(ei)* 'crying for', showing that vowel elision in (29) is not triggered by an idiosyncratic property of the deverbal noun *yaazi*. Conversely, vowel elision is never attested with perfective verbs preceding a questioned constituent in the corpus, in full parallel with the observations from the main text.

20. This claim is at odds with observations in Kidda (1993: 127), according to which VE in imperfective clauses is blocked before focused (questioned) objects, same as in the perfective. However, since the elicited data in (31) are backed up by the corpus data in (29), I will assume that focus on nonsubjects is not realized in the imperfective aspect, at least in some dialects of Tangale, delegating the issue to further research.

21. This pattern is widespread in West Chadic. See Schuh (1982) on parallel facts in Duwai, Ngizim, and Bade.

22. The reason for keeping the syntactic structure in (36a) apart from the information-structural configuration in (36b) is that the canonical preverbal subject position can also be occupied by nonreferring expressions, such as the non-specific indefinite DPs in (iab) from Tangale, which do not qualify as sentence topics:

(i) a. Mu   tayu-g   Binta.
         person greet-PERF Binta
         'Someone greeted Binta.'
     b. Mu   tayu-g   Binta-m.
         person greet-PERF Binta-NEG
         'Nobody greeted Binta.'

The grammaticality of nontopical expressions in the preverbal subject position shows that the information-structural category of topic is not directly coded in the syntactic structure of West Chadic. Because of this, the default mapping procedure from preverbal subject to topic referred to in the main text is applicable only to a (significant) subset of preverbal subject expressions, namely to referential subject expressions, such as proper names, definite descriptions, and kind terms, all of which denote into D_e, the type of referential entities; cf. also Skopeteas and Verhoeven (2009) for similar findings on Yucatec Maya (Mesoamerican). Alternatively, one might also consider the possibility, based on the observation that nonspecific indefinite subjects in preverbal position must be interpreted in the scope of negation, cf. (ib), that nonreferring subjects must reconstruct at LF, such that the remaining referential preverbal subjects can be consistently interpreted as topics at LF. Either way, as argued above, the filling of the preverbal subject position with (nonfocused) subjects seems conditioned by

grammatical factors, such as agreement or the presence of EPP-features in Spec,TP, and not by IS-factors.

23. Also see Frazier (1999) for psycholinguistic evidence concerning the status of subjects as default topics.

24. For instance, the noncanonical realization of the object in sentence-initial position in the Tangale OVS-sentence (34A) indicates its unexpected topic status, since objects — same as other nonsubjects — typically form part of the comment. Likewise, the obligatory presence of the VP-final morphological markers with (inverted) focused subjects in Bole, Duwai, Ngizim, and Bade in (12) and (18) to (20) above seems to be required for marking the unexpected information-structural status of the VP, which typically constitutes new information, as backgrounded (or topical). The semantic analysis of these markers as background or topic markers of the event denoted by the VP squares well with their diachronic origin as definite determiners (Schuh 2005).

   More generally, the fact that the West Chadic languages under discussion employ different formal means for indicating unexpected subject foci (inversion), unexpected nonsubject topics (left dislocation), and unexpected background/topical VPs (morphological marking), respectively, shows that there are no all-purpose markers of contrast in these languages, where contrast is understood as relating to *any* kind of unexpected IS-partitioning. Leaving open the possibility that other languages may exhibit a general marking of contrast, independent of focus or topic (see, e.g., Vallduví and Vilkuna (1998) on Finnish, and Neeleman and Titov (2009) on Russian), I am only concerned with the formal marking of contrastive (= unexpected) focus constituents and focus denotations in West Chadic.

25. In technical terms, Aboh (2007) assumes a competition between an EPP-feature and a formal focus feature in the case of focused subjects. Assuming that the EPP-feature is checked in the canonical preverbal subject position in the languages under discussion, the different behavior of focused [−EPP] subjects and nonfocused [+EPP] preverbal subjects follows directly. Moreover, the fact that the preverbal subject position can be occupied by nontopics, see Note 22, suggests that the presence of an EPP-feature does not necessarily imply topicality, pace Rizzi and Shlonsky (2007), but that this implication only holds for the specific case of referring subject expressions.

26. This look-up procedure would inevitably fail with all instances of nonactivated new information subject foci, which do not denote into the set of salient (activated) entities under debate at the current discourse stage, from which the sentence topic must be selected.

27. Notice that the present proposal leaves open the possibility for corrective foci to be realized *in situ*. This is possible whenever a corrective focus is pragmatically unmarked in the sense that a correction is expected. Such cases do indeed exist in the corpus, as shown by the following bargaining exchange from Hausa discussed in Zimmermann (2008).

(i) A: You will pay 20 Naira.

   B: *A'a,*   *zâ-n*   *biyaa*   **shâ bìyar**   *nèe*
       no   FUT-1SG   pay   fifteen   PRT
       'No, I will pay FIFTEEN.'

Since corrections of the price are the norm in bargaining situations, they can be taken to be expected, hence pragmatically unmarked, and hence not in need of grammatical marking. The existence of apparent counterexamples thus turns out to provide additional support for the analysis proposed.

   Applying the same logic to other discourse contexts, one would expect corrective foci in negative answers to biased negative *Yes/No*-questions, as in (iia), to be (preferably) unmarked, whereas they should be marked in negative answers to positive *Yes/No*-questions with additional focus marking, as in (iib).

(ii) a. Q: Didn't Mary invite JOHN?
      A: No, she invited BILL.
   b. Q: Did Mary invite JOHN?
      A: No, she invited BILL.

     Hopefully, future research will show whether these predictions are indeed borne out.

28. The subject/nonsubject asymmetry observable with this focus-marking strategy does not constitute a violation of the FMI in (38), given that the implication relation is relativized to grammatical categories, and assuming that the clefting strategy is illicit for subject foci for general structural reasons, same as in other Chadic languages; cf., e.g., Hartmann and Zimmermann (to appear) for a thorough discussion of parallel facts in Bura (Central Chadic).

29. Zimmermann (2006a) shows that these different focus readings actually exist, as they play a crucial role in the association of foci with adverbial quantifiers.

30. It is possible that the absence of DP-internal *yé*-markers in Bole is due to prosodic factors. Recall that *yé* is prosodically restricted to occur at the right edge of phonological phrases. Now, if Bole resembled Tangale in that phonological phrase boundaries cannot be inserted inside DPs, the ban on DP-internal yé would follow directly.

31. The following pitch tracks show the F0-contours of single recordings by a single speaker and are shown for illustrative purposes only. We will have to leave it open whether the F0-breaks before the objects in Figs. 7 and 9 and the slightly different shape of the F0-contour in Figs. 7 and 9 vs. Fig. 8 are significant and perceptually salient.

32. In Hartmann and Zimmermann (2009), the relevant constraint is recast as (i) in order to account for the fact that [−nominal] PPs can be focus marked as well.

    (i)   *FocV: No focus marking on verbal categories.

33. Unless the realization of focus is blocked by independent grammatical factors, as is the case in Tangale imperfective sentences; see Section 3.2.

34. The structural dependency of the morphological focus marker *a* on a nominal constituent in Gùrùntùm is evidenced by the fact that it cannot occur when the object complement is left implicit, as shown in (ia) and (ib); see Hartmann and Zimmermann (2009) for additional discussion.

    (i) Gùrùntùm
        Q: What is he doing to the car?
     a. A: Tí   bà   krí   / # kr-**á**
            3SG PROG repair repair-FOC
            'He is repairing it.'
     b. A: Tí   bà   kr-**á**   dùsó-ì
            3SG PROG repair-FOC car-DEF
            'He is repairing the car.'

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