Focus, exhaustivity and existence in Akan, Ga and Ngamo

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Abstract

This paper discusses the relation between focus marking and focus interpretation in Akan (Kwa), Ga (Kwa), and Ngamo (West Chadic). In all three languages, there is a special morpho-syntactically marked focus/background construction, as well as morpho-syntactically unmarked focus. We present data stemming from original fieldwork investigating whether marked focus/background constructions in these three languages also have additional interpretative effects apart from standard focus interpretation. Cross-linguistically, different additional inferences have been found for marked focus constructions, e.g., contrast (e.g., Vallduví and Vilkuna 1997; Hartmann and Zimmermann 2007b; Destruel and Velleman 2014), exhaustivity (e.g., É. Kiss 1998; Hartmann and Zimmermann 2007a), and existence (e.g., Rooth 1999; von Fintel and Matthewson 2008). This paper investigates these three inferences. In Akan and Ga, the marked focus constructions are found to be contrastive, while in Ngamo, no effect of contrast was found. We also show that marked focus constructions in Ga and Akan trigger exhaustivity and existence presuppositions, while the marked construction in Ngamo merely gives rise to an exhaustive conversational implicature and does not trigger an existence presupposition. Instead, the marked construction in Ngamo merely indicates salience of the backgrounded part via a morphological background marker related to the definite determiner (Schuh 2005; Güldemann 2016). The paper thus contributes to the understanding of the semantics of marked focus constructions across languages and points to the cross-linguistic variation in expressing and interpreting marked focus/background constructions.

Keywords: focus, cleft, contrast, exhaustivity, existence presupposition, salience

1 Introduction

There are often various ways to realize focus within a language, differing in their markedness. In this paper, we compare the different focus marking strategies shown in (1)–(3)[1] for the

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1The example glosses follow the Leipzig Glossing Rules (https://www.eva.mpg.de/lingua/resources/glossing=rules.php). The following glosses are used: 1/2/3 = first/second/third person, BM = background marker, COMP = complementizer, COMPL = completive, DEF = definite, DET = determiner, DEM = demonstrative, F = feminine, HAB = habitual, ICP = intransitive copy pronoun, INA = inanimate, IPFV = imperfective, LINK = linking morpheme, OBJ = object, M = masculine, NEG = negation, PFV = perfective, PL = plural, PRT = particle, Q = question marker, REL = relativizer, SBJ = subject, SG = singular, TOP = topic marker. High tones are marked with an acute accent (á), low tones with a grave accent (à), and falling tones with a circumflex (â). Following standard practice, '*' and '#' are used for cases for which we assume that the sentence was unacceptable due to ungrammaticality, or semantic/pragmatic reasons, respectively. '?' is used for marginal acceptability. *(X) means 'ungrammatical without X' and (*X) 'ungrammatical with X'.

languages Akan (Kwa), Ga (Kwa), and Ngamo (West Chadic) in order to test whether different focus realization also leads to a different interpretation. Specifically, we test the hypothesis that the morpho-syntactically marked realization of the focus/background distinction in the respective answer (A2) also introduces a more marked interpretation. In (1)–(3), the focus is the part replacing the *wh*-element in the answer, whereas the background is the part of the utterance which is the same in the question and the answer.

(1) AKAN:
  Q: *Who did Owura beat*?
  A1: *Owura   hwè-è   **Akwasi**.*
      Owura   beat-COMPL   Akwasi
      'Owura beat AKWASI.'
  A2: ***Akwasi** nà   Owura   hwé-è   nó.*
      Akwasi PRT   Owura   beat-COMPL   DET
      'It was AKWASI that Owura beat.'

(2) GA:
  Q: *What does Kofi read*?
  A1: *Kòfí kánè-ɔ̀   **àdèsáwòlò**.*
      Kofi read-IPFV   newspaper
      'Kofi reads a NEWSPAPER.'
  A2: ***Àdèsáwòlò** nì   Kòfí kánè-ɔ̀.*
      newspaper   PRT   Kofi read-IPFV
      'It is a NEWSPAPER that Kofi reads.'

(3) NGAMO:
  Q: *What did Mammadi give to Dimza*?
  A1: *Màmmádì ònkò   **àgóggò** kì Dímzâ.*
      Mammadi give.PFV   watch   to Dimza
      'Mammadi gave A WATCH to Dimza.'
  A2: *Mámmádì ònkò   kì Dímzâ=ì   **àgóggô**.*
      Mammadi give.PFV   to Dimza=PRT   watch
      'Mammadi gave A WATCH to Dimza.'

We adopt an alternative semantics account of focus, under which any instance of focus signals that there are certain alternatives under discussion (Rooth 1985, Rooth 1992, Rooth 1996). For example, both sentence (4a), where focus is marked by intonational prominence, and sentence (4b), where the focused constituent is the pivot of a cleft, are assumed to have alternatives of the kind shown in (4c).

(4) *Mary cooked the beans.*
  a. *No, JOHN cooked the beans.*

     b.   *No, it was JOHN who cooked the beans.*

     c.   {*Mary cooked the beans, John cooked the beans, ...*}

English *it*-clefts like (4b)/(5) have however been suggested to have further pragmatic or semantic properties not shared by focus examples like (4a). First, they have been argued to be more contrastive, see e.g., Destruel and Velleman (2014), who provide the paraphrase in (5a) for the contrastive meaning component. Second, English clefts have been shown to give rise to a stronger exhaustive inference than intonational focus, i.e. a stronger inference that other focus alternatives are false (É. Kiss 1998), see (5b). Third, English clefts, unlike simple focus examples, have been shown to trigger an existence presupposition (5c), see e.g., Horn (1981), Atlas and Levinson (1981), and Rooth (1999).

(5)   *It was JOHN who cooked the beans.*
     a.   *The fact that John cooked the beans contrasts with something in the discourse context.*   (CONTRAST)
     b.   *Nobody else cooked the beans.*   (EXHAUSTIVITY)
     c.   *Somebody cooked the beans.*   (EXISTENCE)

This paper concentrates on the question of whether the marked focus/background constructions in Akan, Ga, and Ngamo shown in (1)–(3) have a stronger contrastive and/or exhaustive inference than their unmarked counterparts and/or introduce an additional existential inference.

The structure of the paper is as follows: After an introduction to the languages in our sample and the methodology used to obtain our data in Section 2, we provide a brief introduction to focus/background realization in these three languages in Section 3. Sections 4–6 present the results of our main investigation. First, Section 4 discusses the results of a forced choice experiment, suggesting a tendency for marked focus to be contrastive in Akan and Ga, but not in Ngamo. Section 5 shows that, in all three languages, narrow focus gives rise to an exhaustive inference. In marked focus constructions in Akan and Ga, this exhaustive inference is argued to be a presupposition, while in Ngamo, it is merely a conversational implicature. Section 6 then presents our results concerning existential presuppositions. Marked focus constructions in Akan and Ga are shown to trigger an existence presupposition, whereas marked focus/background constructions in Ngamo do not. Instead, the =*i/ye* marker in Ngamo is a background marker which marks the preceding part of the utterance as salient, i.e., as attended to by the hearer, which is discussed in Section 7. Based on the empirical observations discussed in Sections 2–7, we propose in Section 8 that the particles *nà* and *nì* in Akan and Ga, respectively, should be analyzed as introducing a cleft structure. Section 9 concludes the paper.

2   The languages and methodology

Akan and Ga are Kwa languages of the larger Niger-Congo phylum and they are both spoken in Ghana. Akan is spoken by forty percent (40%) of Ghana's population as a first language, making it the dominant indigenous language in the country (Guerini 2006). Akan has many mutually intelligible dialects, such as Fante, Akuapem, Asante, Akyem, among others. The data for this study are taken from the Asante dialect spoken in the Ashanti region. Ga is estimated to have 745,000 speakers (Lewis 2009), primarily in the Greater Accra region of Ghana. Ngamo is a West Chadic language of the Afro-Asiatic phylum spoken in the Yobe and Gombe states of northeastern Nigeria. It is estimated to have over sixty thousand (60,000) speakers (Lewis 2009). There are two main dialects, Gudi and Yaya Ngamo (Schuh 2009); the data shown here are from the Gudi dialect. All three languages have SVO as the dominant word order in simple sentences and are register tone languages with two tones, Low and High.

All the data, unless marked otherwise, stem from the authors' field research in Accra and Kumasi (Akan and Ga) as well as in Potiskum and Abuja (Ngamo). Data for Akan were primarily provided by the third author, who is a native speaker of Akan. However, twenty Akan speakers (12 females, 8 males, age 20–27) responded to questionnaires in writing on contrast and existence presupposition in morpho-syntactically marked focus. Further, acceptability judgments of the data were orally elicited from two Akan native speakers (both male, ages 40 and 67). The research on Ga was mainly conducted with seven Ga native speakers (five women and two men) in oral elicitation sessions over five field trips in 2012–2016 (apart from a questionnaire study on contrast conducted in 2017 with ten speakers) and with one language consultant in Berlin in 2012–2015. All of the language consultants grew up in a Ga speaking community and they all speak Ga in their families. At the time of conducting the fieldwork, the language consultants in Ghana were students at the University of Ghana and one of them had a background in linguistics. The Ngamo data presented here were collected in Yobe State in two field trips in 2009 and 2010/2011, and in Abuja in two further field trips in 2013 and 2014/2015. Most of the data were elicited orally with two main language consultants (both male, in their early forties), apart from a written questionnaire testing predictions concerning the effect of contrast, exhaustivity, existence, givenness, i.a., which were tested with six further Ngamo speakers (all male, ages 33–50, mean age 44.6) in 2013.

The data from all three languages were obtained by implementing the fieldwork methodologies presented in Matthewson (2004). For the most part, acceptability judgment tasks were used. The language consultants were asked to judge whether a grammatical test sentence can be uttered in a certain context or not. The context was presented either in the target language or in English, depending on which language was the most practical and least likely to introduce any unintentional confounds for the specific task, see AnderBois and Henderson (2015) for a discussion. If the sentence was judged as being acceptable in the given context, we assumed that the sentence is true and felicitous in this context. If the sentence was rejected, we hypothesized that it was rejected for pragmatic/semantic reasons. The comments made by language consultants were treated as important clues for formulating

the hypotheses regarding the semantics of the respective elements and therefore are also presented, where available.

3   Focus/background realization

All three languages under consideration have some morpho-syntactic means of expressing focus. Akan marks focus morpho-syntactically with the use of the *nà* construction, in which the focused XP appears in sentence initial position, followed by the particle *nà*, and optionally preceded by a copula (Schachter 1973; Boadi 1974; Saah 1988; Kobele and Torrence 2006; Ofori 2011). For subject foci in Akan, some researchers report that they are obligatorily marked morpho-syntactically with *nà* (ex situ), as shown in (6A1) (e.g., Fiedler et al. 2010). Others, however, find that subject foci are possible without *nà* (in situ), as presented in (6A2) (e.g., Duah 2015 and Pfeil et al. 2015, who note that focused subjects that are not (strongly) exhaustive can remain in situ. See Genzel 2013: 184–185 for a similar observation). In non-subject focus, the focused XP (a direct object or an adjunct) may either be marked with *nà*, as in (7A1), or expressed without *nà*, as in (7A2). Focused objects are normally realized in situ but appear ex situ if the focus is contrastive (Ermisch 2006; Genzel and Kügler 2010) or (strongly) exhaustive (Duah 2015). In the ex situ strategy, there is a resumptive pronoun (a subject pronoun after *nà* in subject focus and an object pronoun at the erstwhile position of an extracted direct object) which is co-indexed with their respective coreferent nouns (Boadi 1974; Marfo and Bodomo 2005; Ofori 2011).[2] Also, in the *nà*-focus sentence, the verb always bears a high tone (Schachter 1973; Boadi 1974; Bearth 2002; Genzel and Duah 2015).

(6)   AKAN:
Q: *Who went home*?
A1:   ***Ama*** *nà*   *ɔ̀-kɔ́-ɔ̀*   *fíé.*
        Ama PRT   3SG.SBJ-go-COMPL   home
        'It was AMA who went home.'
A2:   ***Ama***   *kɔ̀-ɔ̀*   *fíé.*
        Ama   go-COMPL home
        'AMA went home.'

(7)   AKAN:
Q: *Who did Owura beat*?
A1:   ***Akwasi*** *nà*   *Owura*   *hwé-è*   *nó*
        Akwasi PRT   Owura   beat-COMPL   3SG.OBJ
        'It was AKWASI that Owura beat.'
A2:   *Owura*   *hwè-è*   ***Akwasi.***
        Owura   beat-COMPL   Akwasi
        'Owura beat AKWASI.'

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2 See Saah (1988), Saah (1995) for a non-movement account of focus marking with *nà*.

In Ga, focus may be morpho-syntactically marked or unmarked. The morphologically unmarked focus constituent stays in situ, as presented in (8A2) and (9A2) (Kropp Dakubu 1992). In the marked focus realization strategy, on the other hand, a focused constituent is marked morphologically by the particle *nì* which induces a structural bi-partition in which the focused constituent is to its left and backgrounded material is to its right, as illustrated in (8A1) and (9A1). Just like in Akan, there is disagreement in the literature whether subject foci can remain unmarked. While some authors report that they are obligatorily marked (e.g., Kropp Dakubu 2005; Ameka 2010), others note that unmarked focus constructions are equally acceptable for focused subjects and focused non-subjects (Kropp Dakubu 1992; Renans 2016).

(8) GA:
  Q: *Who read a book*?
  A1: ***Kòfí nì káné wòlò.***
    Kofi PRT read book
    'It is KOFI who read a book.'
  A2: ***Kòfí*** *káné wòlò.*
    Kofi read book
    'Kofi read a book'

(9) GA:
  Q: *What does Kofi read*?
  A1: ***Àdèsáwòlò nì*** *Kòfí káné-ɔ̀.*
    newspaper PRT Kofi read-IPFV
    'It is a NEWSPAPER that Kofi reads.'
  A2: *Kòfí káné-ɔ̀ **àdèsáwòlò.***
    Kofi read-IPFV newspaper
    'Kofi reads a NEWSPAPER.'

Unlike in Akan, there is no resumptive pronoun in morpho-syntactically marked DO focus constructions in Ga and the resumptive pronoun is optional with subject foci (Kropp Dakubu 2005)[3], as presented in (10). However, there is one exception. Namely, in marked focus constructions with a focused pronoun, a resumptive pronoun is required, as shown in (11) (Kropp Dakubu 2005):

(10) GA:
  Tɛ̀te ni *(e)-jwa plɛ́te.*
  Tɛ̀te PRT 3SG-break plate
  'It is TƐTE who broke the plate.'
  (Kropp Dakubu 2005: 3)

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3 Kropp Dakubu writes that the resumptive pronoun in the morpho-syntactically marked focus construction is "optional (and for many speakers not preferred) with a focused Subject" (Kropp Dakubu 2005:4)

(11) GA:

> **Bò** nì *(o)-nà yòó lɛ.
> 2SG PRT 2SG-see woman DET
> 'It is YOU who saw the woman.'
> (Kropp Dakubu 2005: 4)[4]

In Ngamo, there are at least three ways to answer a *wh*-question like (12Q). First, focus on a (non-subject) term can be unmarked, as shown in (12A1). Second, the focus/background divide can be marked by a morphological marker *=i*, as in (12A2), or its variant *=ye*.[5] Third, it can additionally be syntactically marked by displacement of the focus to a sentence-final position, see (12A3).

(12) NGAMO:

> Q: *What did Mammadi give to Dimza*?
> A1: *Màmmádì ònkò **àgóggò** kì Dímzâ.*
> Mammadi give.PFV watch to Dimza
> A2: *Mámmádì ònkò=ì **àgóggò** kì Dímzâ.*
> Mammadi give.PFV=PRT watch to Dimza
> A3: *Mámmádì ònkò kì Dímzâ=ì **àgóggô**.*
> Mammadi give.PFV to Dimza=PRT watch
> 'Mammadi gave A WATCH to Dimza.'

However, examples with focused subjects show that the position which the focused constituent moves to is not obligatorily sentence-final: it can be any position after the direct object, preceding or following any adjuncts or indirect objects, as illustrated in (13). It is reported for Ngamo in the literature that focused subjects are standardly morpho-syntactically marked, whereas focused non-subjects are often unmarked (Schuh 2005: 92; see also Fiedler et al. 2010; Schuh 1971, Schuh 1982 on subject/non-subject asymmetry in other West-Chadic languages of the Yobe state area).[6]

(13) NGAMO:

> Q: *Who built a house in Nigeria last year*?
> A1: **Sàlkò=ì **Kúlè** bànò à Nìjéríyà mànò.*
> build.PFV=PRT Kule house at Nigeria last.year
> A2: *Sàlkó bànò=ì **Kúlè** à Nìjéríyà mànò.*

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4 Glosses, tone marking, and translation are ours. Kropp Dakubu (2005) translates (11) as "YOU saw the woman," (p.4) with the second person singular pronoun in focus.

5 Which variant is used depends on the preceding word: if it ends with a consonant, *-ye* is used, if it ends with a vowel, both are possible, but *-i* is more frequent; *-ye* is seen to be more insistent or emphatic in these cases.

6 In elicitation, marked DO-focus was accepted and even indicated to be preferred, but production tasks using storyboards seem to confirm Schuh's claim that they are usually unmarked. Initial subjects were also marginally accepted in subject focus contexts in judgment tasks, but their interaction with focus-sensitive particles suggest that initial subjects are not in focus (Grubic 2015).

<div style="margin-left:2em">

    build.PFV house=PRT Kule at Nigeria last.year

A3: *Sàlkó   bànò   à   Nìjéríyà=ì   **Kúlè** mànò.*

    build.PFV house at Nigeria=PRT Kule last.year

A4: *Sàlkó   bànò   à   Nìjéríyà mànò=ì   **Kúlè**.*

    build.PFV house at Nigeria last.year=PRT Kule

    'KULE built a house in Nigeria last year.'

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As noted by Schuh (2005: 93), the suffix *=i/ye* does not mark focus per se but marks backgrounded information (see also Grubic and Zimmermann 2011; Genzel and Grubic 2011; Güldemann 2016). According to Schuh, this background marking is an areal feature: in contrast to the syntactic focus marking in Ngamo, which is shared by other languages at the eastern edge of the West Chadic region, only the neighboring languages spoken in the Potiskum area have a morphological background marker. These morphemes all stem from definite or demonstrative determiners and are related to similar morphological markers used for conditionals and temporal adverbial clauses, see Schuh (2005: 91).

Apart from the formal similarity to the definite determiner, there are other properties of *=i/ye* that support an analysis of *=i/ye* as a background marker rather than a focus marker. First, in contrast to languages with morphological focus marking like Yom (Oti-Volta, cf. Fiedler 2006), and Ga (14), the background marker in Ngamo does not occur in short answers to *wh*-questions (15).[7,8]

(14) GA:

    Q: *Who read a book yesterday*?

    A: *Kòfí **nì***

        Kofi PRT

        'KOFI'

(15) NGAMO:

    Q: *Who answered*?

    A: *(*Ì/*Yè) Jàjêi*

        BM   Jajei

        'JAJEI'

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7 In Akan, the particle *nà* is not possible in short answers to questions, either (this was confirmed by an anonymous reviewer in own fieldwork in Akan). This difference between Ga and Akan is unexpected and should be tested in further work.

8 An anonymous reviewer suggested that *=i/ye* might be an enclitic, and unacceptable here for this reason.

Further evidence for analyzing *=i/ye* as a background marker is that *=i/ye* can occur twice in a clause but with only one focus, as demonstrated in (16), unlike in Akan and Ga, where such sentences are unacceptable, as shown in (17)–(18).[9,10]

(16)　Ngamo:

　　Q:　*I know that Kule built a house in Kano, but what did he build in Potiskum*?

　　A:　*Kúlè sàlkò=**ì**　　bánò　à　Pàtìskùm　**yé'è**.*
　　　　Kule build.PFV=BM　house　at　Potiskum　BM
　　　　'Kule built A HOUSE in Potiskum.'

(17)　Akan:

　　# ***Nà*** *Kumasi dèὲ, Adoma* ***nà*** *ò-sí-ì　　　dáń　wɔ̀　hɔ́.*
　　　PRT　Kumasi TOP　Adoma　PRT　3SG.SBJ-build-COMPL　house　at　there
　　　intended: 'As for Kumasi, it is ADOMA who built a house there.'

(18) Ga:

　　# ***Nì*** *Accra lɛ, Kòfí* ***nì*** *mà shíá yὲ　jέmέ.*
　　　PRT　Accra DET　Kofi　PRT　build house be.at　there
　　　intended: 'As for Accra, it was KOFI who build a house there.'

Crucially, if *nà* and *nì* were background rather than focus markers, then they would attach to the element to their right. Therefore, to show that *nì* and *nà* have different properties from the *=i/ye* marker, it was crucial to show that they cannot occur twice in the sentence, attaching to the backgrounded part, as we demonstrate in examples (17) and (18).

In the sections that follow, we examine the interpretation of marked focus sentences by means of standard tests for the meaning of focus proposed in the literature (see, for example, Szabolcsi 1981a; É. Kiss 1998; Rooth 1999; Hartmann and Zimmermann 2007a; Beaver and Clark 2008; among others) and discuss the status of the meaning components found for the three languages.

4　Contrast

The first property investigated for marked focus/background constructions in the three languages is contrast. We understand a focus/background construction as contrastive if it is most felicitous in a contrastive context: for example, English *it*-clefts are contrastive because they are not entirely felicitous as answers to *wh*-questions, as illustrated in (19) (Destruel and Velleman 2014), but are felicitous in corrections, as shown in (20). Various proposals have been made to explain contrastive focus, e.g., it was proposed that a corrective context like

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9 The final *yé'è* is not a definite determiner in example (16), even though proper nouns like *Pàtìskùm* can occur with definite determiners in Ngamo: *Pàtìskùm* is a feminine noun and would thus occur with the determiner *sè*.

10 Note however that (17) and (18) are acceptable if the first *nì/nà* is interpreted as a conjunction, not a focus marker.

(20) gives rise to contrastive focus because the number of focus alternatives is "limited" (Chafe 1976) or because the focus alternatives are fully known to speaker and hearer, i.e. explicit rather than implicit (É. Kiss 1998). Other accounts have suggested that contrastive focus is used to contest the public commitment of a discourse participant (Krifka 2008; cf. Repp 2010 for a variant), or to mark that the speaker expects the hearer to object (Zimmermann 2008; Destruel and Velleman 2014).

(19) A: *Who drank tea? / ?Who was it who drank tea?*
    B: *?It was John who drank tea.*

(20) A: *Mary drank tea.*
    B: *No, it was John who drank tea.*

Empirically, these accounts predict that a contrastive focus/background construction is judged to be more acceptable and/or occurs more frequently in corrective contexts than in answers to *wh*-questions. We have already demonstrated in Section 1 above that marked and unmarked focus/background constructions in all three languages are in fact both entirely felicitous in answers to *wh*-questions. Therefore, we concentrate here on the question whether there are any preferences with respect to the realization of focus in contrastive and non-contrastive contexts in Akan, Ga and Ngamo.

4.1 Marked focus is contrastive in Akan and Ga, but not in Ngamo

In Akan and Ga, we conducted a forced choice test with ten participants each. The Akan questionnaire was filled out by 4 women and 6 men, aged 18–27 (mean age 23.8), and the Ga questionnaire by 9 women and one man, aged 20–25 (mean age 22.4). The participants were presented with a context and two different possible answers, and were asked to mark the answer they considered best. There were four different kinds of contexts: (i) *wh*-questions, as illustrated in (21a), (ii) disjunctive questions, as in (21b), (iii) false statements, as in (21c), and (iv) *wh*-questions questions with a false presupposition, as in (21d).

(21) a. *Frema asks Yaw: 'What did Antwi buy?'*
    b. *Frema asks Yaw: 'Did Antwi buy shoes or a shirt?'*
    c. *Yaw knows that Antwi bought a shirt, not shoes. But Frema says: 'Antwi bought shoes.'*
    d. *Yaw knows that Antwi didn't buy shoes, he bought a shirt. But Frema asks: 'Why did Antwi buy shoes?'*
    Which answer should Yaw give?

Answers to *wh*-questions are generally assumed to be non-contrastive. Under an account assuming that contrastive focus arises in a context where the focus alternatives are limited, or are all mutually known by the discourse participants, all other contexts would be contrastive. Accounts suggesting that contrast has to do with the addressee being committed to a different focus alternative, or with possible hearer objections would predict that disjunctive questions

are non-contrastive, too, but that both kinds of corrections are contrastive. These contexts were thus chosen in order to find out, if contrast plays a role for Akan, Ga and Ngamo, which of the two prominent theories of contrast is best suited to explain the data.

The answers that the participants were asked to choose from were either an unmarked or a marked answer, shown in (22) for Akan.

(22) AKAN:
   a. *Antwi tɔ̀-ɔ̀ àtà`àdéέ*.
       Antwi buy-COMPL shirt
       'Antwi bought A SHIRT.'

   b. *Àtà`àdéέ nà Antwi tɔ́-ɔ̀έ*.
       shirt   PRT Antwi buy-COMPL
       'It was A SHIRT that Antwi bought.'

The ranking tasks was presented as a written questionnaire with sixteen questions (4 contexts x 4 items). The results of this test are shown in Table 1. Table (1a) shows the results for Akan. The numbers represent the amounts of times that a construction was judged to be better than the other construction in the respective context. For example, unmarked answers to *wh*-questions were preferred over the *nà*-construction in twenty-five out of forty answers. The test allowed speakers to formulate different answers if they considered them to be better. These cases are included in Table 1 where the provided answer either involved an unmarked or marked focus construction. If the participant forgot to answer, or proposed an answer that didn't involve either of the two constructions – e.g., a short answer ('a shirt'), or an answer that signaled that the question was misunderstood – this answer is missing from Table 1.

Table 1: Results of the ranking task for Akan and Ga

(a) Results Akan				(b) Results Ga		
	unmarked	marked			unmarked	marked
wh-question	25/40	15/40		*wh*-question	36/40	4/40
disjunctive question	20/40	19/40		disjunctive question	30/40	10/40
correction	16/40	23/40		correction	17/40	23/40
presupposition correction	17/40	22/40		presupposition correction	18/40	21/ 40

In both languages, there appears to be a tendency for the unmarked focus construction to appear in less contrastive contexts like answers to *wh*-questions and disjunctive questions, and for *nà/nì*-constructions to appear more often in more contrastive contexts like corrections of assertions and presuppositions. However, *nà/nì*-constructions are not prohibited in non-contrastive contexts. We take this to suggest that contrast cannot be part of the conventional meaning of the marked focus constructions in Akan and Ga, either truth-conditional or

presuppositional, otherwise these constructions would only be licit in contrastive contexts. We conclude, therefore, that these constructions are pragmatically contrastive. In addition, while the Akan results are not conclusive in this respect, accounts of contrast as contesting the addressee's commitment (e.g., Krifka 2008; Zimmermann 2008; Destruel and Velleman 2014) are better suited to explain the Ga results in Table (1b) than the competing accounts. This view is motivated by the observation that disjunctive questions pattern like *wh*-questions, and not like corrections or presupposition corrections.

In Ngamo, the test was conducted as a ranking test with eight participants (male, aged 33–50, mean age: 44.6) who were asked to rank four different DO-focus constructions with respect to their appropriateness in the context provided. Examples for the focus constructions are shown in (23): unmarked, as in (23a), morphologically marked via background marking, as in (23b), morpho-syntactically marked via background marking and movement, as in (23c), and movement without background marking, as in (23d). The last one is an option which is judged to be ungrammatical.

(23) NGAMO:

    a.   *Màmmádì ònkò*   ***àgóggò***   *kì* *Dímzâ.*
         Mammadi give.PFV   watch   to   Dimza

    b.   *Mámmádì ònkò=ì*   ***àgóggò*** *kì* *Dímzâ.*
         Mammadi give.PFV=PRT   watch   to   Dimza

    c.   *Mámmádì ònkò*   *kì* *Dímzâ=ì*   ***àgóggô.***
         Mammadi give.PFV   to   Dimza=PRT   watch

    d. * *Mammadi onko*   *ki* *Dimza* ***agoggo.***
         Mammadi give.PFV   to   Dimza   watch

       'Mammadi gave A WATCH to Dimza.'

These sentences were presented in the same contexts as discussed above, i.e., (i) as answer to a *wh*-question (24a), (ii) as answer to a disjunctive question (24b), (iii) as correction of an assertion (24c), and (iv) as correction of a presupposition (24d). Again, a preceding elicitation task had established that the sentences (23a–c) were judged to be acceptable in all of these contexts, and the ranking test was merely conducted to find out whether there were any preferences, e.g., preferences for the marked constructions in (23b) and (23c) to be used in the more contrastive contexts.

(24) a.   *What did Mammadi give to Dimza?*
      b.   *Did Mammadi give a ball or a watch to Dimza?*
      c.   *Mammadi gave a ball to Dimza.*
      d.   *When did Mammadi give a ball to Dimza?*

For each of these contexts, the participants were asked to rank the answers in (23a–d) from best to worst. The ranking tasks was presented as a written questionnaire with sixteen questions (4 contexts x 4 items). The results are presented in Table 2, where 4 is the best rank

and 1 is the worst. Each kind of context-word order pairing was ranked 32 times. The results show that independently of the context, answers like (23b) were judged best, see Table (a), followed by answers like (23c), see Table (b). The unmarked focus/background construction in (23a) was third, see Table (c), followed, unsurprisingly, by the ungrammatical construction in (23d), see Table (d).

Table 2: Results of the ranking task for Ngamo

(a) SV=iOA word order

	1	2	3	4
wh-question	1	2	6	23
disjunctive question	2	1	3	26
correction	3	2	1	26
presupposition correction	0	3	5	24

(b) SVA=iO word order

	1	2	3	4
wh-question	1	1	17	3
disjunctive question	0	6	22	4
correction	0	8	19	5
presupposition correction	0	4	21	7

(c) SVOA word order

	1	2	3	4
wh-question	0	18	8	6
disjunctive question	1	23	6	2
correction	0	22	9	1
presupposition correction	3	23	5	1

(d) SVAO word order

	1	2	3	4
wh-question	30	1	1	0
disjunctive question	29	2	1	0
correction	29	0	3	0
presupposition correction	29	2	1	0

We conclude that while contrast does seem to play a role in Akan and Ga, it does not play a role for the realization of the focus/background distinction in Ngamo.

5 Exhaustivity

The second property tested for the marked focus/background constructions was whether these constructions give rise to a stronger exhaustivity inference than is usually found with focus, i.e., a stronger inference that other focus alternatives are false. In the literature on focus, cross-linguistically, it is found that narrow focus conversationally implicates that all other alternatives not entailed by the sentence are false (see e.g., Rooth 1992: 83). This is a standard quantity implicature (Grice 1975). Consider example (25a), which, due to the focus on *apple*, has the alternatives in (25b). A cooperative speaker, following the first Gricean maxim of quantity "Make your contribution as informative as is required" and the second maxim of quality "Do not say what you believe to be false" (Grice 1975: 45–46) always provides the most informative true answer. Therefore, the hearer can conclude that Mary didn't eat anything in addition, leading to the exhaustive inference in (25c).

(25) (Context: *What did Mary eat*?)
    a.   *Mary ate an* APPLE.
    b.   {*Mary ate a pear, Mary ate an apple, Mary ate a mango...*}(FOCUS ALTERNATIVES)
    c.   *Mary didn't eat anything other than an apple*   (EXHAUSTIVITY)

A standard test for exhaustivity – which works for any kind of exhaustive inferences, also conversationally implicated exhaustive inferences – has been proposed by É. Kiss (1998: 250), Szabolcsi (1981a: 148), and Szabolcsi (1981b: 519). In this test, a test sentence is paired with a context which makes clear that the test sentence cannot be understood exhaustively. Participants are asked to judge whether the sentence is appropriate in this context or not, see (26)–(27). It is expected that a narrow focus test sentence like (27) is rejected when the context provides information that it is non-exhaustive.[11]

(26) Context: *Mary and Sue ate an apple.*
    Mary ate an apple.   ← appropriate, true.

(27) Context*: Mary and Sue ate an apple. Peter asks who ate an apple, and John answers:*
    #MARY *ate an apple.*   ← not appropriate, though true.

However, since the exhaustivity in these cases is merely a conversational implicature, it is expected to be cancellable by the same speaker, see (28), and to not arise in answers to so-called mention-some contexts, like (29), since in mention-some contexts the addressee does not require an exhaustive answer. The exhaustive inference thus does not arise in all instances of narrow focus.

(28) *Who ate an apple*?   MARY *ate an apple, and* SUE *ate an apple, too.*

(29) *Who can sell me an apple*?
    MARY *can sell you an apple.*

In this section, we test the following hypotheses. First, the hypothesis that the "unmarked" focus in Akan, Ga, and Ngamo only gives rise to an exhaustivity implicature, the underlying assumption being that the Gricean maxims and the implicatures drawn from them are universal. And second, that the exhaustive inference found in marked focus/background constructions is stronger, e.g., a presupposition (as is suggested for English clefts in, e.g., Percus 1997; Velleman et al. 2012; Büring 2011; Büring and Križ 2013) or even part of the asserted meaning of the sentence (as suggested by É. Kiss 1998, among others, for Hungarian marked focus).

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11 Gryllia (2009: 14) observed that it is the form of the test sentence rather than that of the context sentence which plays a role. Following this observation, our test differs from the original in that the form of the context sentence does not mirror that of the test sentence. When testing this in Akan, Ga, and Ngamo, we also diverge from the standard test by enforcing narrow focus in morpho-syntactically unmarked sentences with a preceding *wh*-question. This is needed, in our opinion, in order to discourage a broad focus reading of the test sentence.

5.1 Exhaustivity in Akan, Ga, and Ngamo

In all three languages, marked focus constructions are exhaustive, i.e., they cannot be used in a sentence that is true but does not exhaustively describe the context situation, i.e., in a sentence like (27) above (É. Kiss 1998; Szabolcsi 1981a). This is empirically supported by the data in (30)–(32). For example, the view that the marked focus construction in Ngamo gives rise to an exhaustive interpretation correctly predicts an unacceptability of this construction in the context in which Kule called both Shuwa and Dimza, as illustrated in (30). Importantly, the unacceptability is caused by the clash between the information provided by the context (that Kule called Shuwa and Dimza) and the exhaustive interpretation triggered by the marked focus construction (that Kule called nobody but Dimza).

(30) NGAMO: (Context: *Kule called Shuwa and Dimza*.)
　　# *Kúlé èshà=ì　　Dímzâ.*
　　　Kule call.PFV=BM Dimza
　　　'Kule called DIMZA.'
　　　(Comment: Not possible, because it is like saying that Kule only called Dimza)

(31) GA: (Context: *It was banku and plantain that Kofi ate yesterday*.)
　　# ***Bàṅkú nì　　Kòfí yè　　nyÈ̀.***
　　　Banku PRT Kofi eat　　yesterday
　　　'It was BANKU that Kofi ate yesterday.'

(32) AKAN: (Context: *Antwi bought a shirt and shoes*)
　　# ***ÀtààdéÉ nà　　Antwi tó-ɔ̀É.***
　　　shirt　　PRT Antwi buy-COMPL
　　　'It was A SHIRT that Antwi bought.'
　　　(Duah 2015: 10)

Moreover, in a context that enforces narrow focus, unmarked focus constructions are also interpreted as exhaustive (see also Onea and Beaver 2011 for German), see examples (33)–(35). For example, (33) shows that when an unmarked focus construction in Ngamo is preceded by an overt *wh*-question which imposes a narrow focus interpretation of (33A), (33A) is interpreted exhaustively. Analogous to the example discussed above, the unacceptability of (33A) is due to the clash between the context, in which Kule called Shuwa and Dimza, and the exhaustive interpretation of the target sentence that Kule called Dimza and nobody else.

(33) NGAMO: (Context: *Kule called Shuwa and Dimza*.)
　　Q:　*Who did Kule call?*
　　A: # *Kúlé èshá　　Dìmzà.*
　　　　Kule call.PFV Dimza
　　　　'Kule called DIMZA.'

(Comment: This does not convey the real answer to the question, except if the
questioner is after Dimza alone.)

(34) GA: (Context: *Dede ate corn and groundnuts*.)
   Q: *What did Dede eat?*
   A: # *Dede kepe   **abele**.*
        Dede chew corn
        'Dede ate CORN.'

(35) AKAN: (Context: *Abena ate corn and groundnuts*)
   Q: *What did Abena eat?*
   A: # *Abena dì-ì   àbùró.*
        Abena eat-COMPL corn
        'Abena ate CORN.'

To sum up, the data in this section show that both marked and unmarked focus constructions
are exhaustive. Now, the question that arises immediately is whether there are any differences
in the status of the exhaustive inference in marked focus constructions, on the one hand, and
unmarked focus constructions, on the other.

5.2   What is the status of the exhaustive inference?

Concerning the status of exhaustive inferences, there are different proposals for different
constructions, cross-linguistically. For example, it was claimed to be part of the assertion for
Hungarian focus (É. Kiss 1998) and English *it*-clefts (É. Kiss 1998; Atlas and Levinson 1981),
a conversational implicature for focus (e.g., Rooth 1992) or clefts (Horn 1981, Horn 2013) in
English, or a presupposition for English clefts (Percus 1997; Velleman et al. 2012; Büring
2011; Büring and Križ 2013; i.a.). We claim that in all three languages the exhaustive
inference is not asserted. Whereas the exhaustive inference is conversationally implicated in
Ngamo, it is a presupposition in Akan and Ga.

5.2.1   The exhaustive inference is not asserted

If the exhaustivity in the marked focus constructions in Ngamo, Ga, and Akan were truth-
conditional (as it was suggested, for example, for marked constructions in Hungarian and
clefts in English by É. Kiss 1998), it should be visible to negation. However, the marked focus
sentences in (36)–(38) show that negation cannot negate the exhaustive inference. Consider
(37). The test relies on the anaphoricity of additive particles like *hu* 'also': these particles are
only felicitous in contexts that entail their anaphoric antecedents. For example, in (37), *hu*
requires a context which entails that somebody other than Gord was invited. The fact that *hu*
'also' is unacceptable in (37a) suggests that negation does not target the exhaustive inference
but the prejacent, i.e., the proposition that Fred was invited. For that reason, the additive
particle *hu* in the second clause lacks an anaphoric antecedent and therefore cannot be
felicitously used. By contrast, if the negation targeted the exhaustive inference, keeping the
prejacent intact, as is the case in the 'only' sentence in (37b), (37a) would have obtained the
interpretation that Fred was invited (the prejacent) and he was not the only invited person (the

negated exhaustive inference). Importantly, in that case, *hu* would have an anaphoric antecedent and thus should be acceptable, contrary to fact. These observations suggest that these constructions do not have an *only*-semantics, in which the prejacent is not-asserted and the exhaustive meaning component is.[12]

(36) NGAMO:
   a. *Njèlù èshà(=ì)   Sàmá bù nzònò, (#ke) èshá   Hàwwâ.*
      Njelu call.PFV=BM Sama NEG yesterday also call.PFV Hawwa.
      'Njelu didn't phone Sama yesterday. He (#also) phoned Hawwa.'
   b. *Njèlù èshà(=ì)   Sàmá yàk'i bù nzònò,   #(ke) èshá   Hàwwâ.*
      Njelu call.PFV=BM Sama only   NEG yesterday also   call.PFV Hawwa
      'Njelu didn't only phone Sama yesterday. He also phoned Hawwa.'

(37) GA:
   a. *Jèèè **Fred nì** è-fɔ̀   nìnè è-tsɛ́. È-tsɛ́ Gord (#hú).*
      NEG Fred PRT 3SG-throw hand 3SG-call 3SG-call Gord also
      'It wasn't Fred she invited. She (#also) invited Gord.
   b. *Jèèè **Fred pɛ́** è-fɔ̀   nìnè è-tsɛ́. È-tsɛ́ Gord #(hú).*
      NEG Fred only 3SG-throw hand 3SG-call 3SG-call Gord also
      'She didn't only invite Fred. She also invited Gord.'

(38) AKAN:
   a. *Ɛ̀-ǹ-yɛ́   **mìpàbòá nà** Owura tɔ́ -ɔ̀èɛ́,   ɔ̀-tɔ̀-ɔ̀   wɔ́kyè (#ǹsó)*

      3SG.INA-NEG-be shoes   PRT Owura buy-COMPL 3SG-buy-COMPL watch   too
      'It was not SHOES that Owura bought, he (#also) bought a watch.'
   b. *Arko á-ǹ-tɔ́   **àsòmàdéɛ́ ńkóáá** ɔ̀-tɔ̀-ɔ̀   àhwènéɛ́ #(ńsó)*
      Arko COMPL-NEG-buy earrings   only 3SG-buy-COMPL beads   too
      'Arko did not buy only earrings, she bought beads too.'
      (Duah 2015: 18)

The second test presented below (the reason clause test by Beaver and Clark 2008: 217) is based on the observation that only the truth-conditional (asserted) content of the embedded clause is understood to be the cause of the main clause.[13] For illustration, consider the Ngamo examples in (39). For the *only*-sentences in (a), the exhaustive inference that Kule and nobody

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12 For further information on exclusive focus-sensitive particles in these languages, see Renans (2014) and Renans (t.a.) on Ga, and Grubic (2011), Grubic (2012), Grubic (2015), and Grubic and Zimmermann (2011) on Ngamo and the closely related language Bole.

13 This test is more convincing than the test shown in (36)–(38), because the latter also relies on the status of the prejacent of *only*, e.g., in (37), the meaning component *She invited Fred*. In *only*-sentences, but not in marked focus/background constructions, this meaning component projects. Due to the reliance of the test shown in examples (36)–(38) on prejacent projection in addition to negation of the exhaustive meaning component, it is not a fully convincing test, since these meaning components might in principle be independent of each other.

else passed was understood as the reason for repeating the exam, as suggested by the language consultants' comments that the teacher doesn't want other students to fail. By contrast, for the marked focus/background constructions in (b), the exhaustive inference was not part of the reason why the exam had to be repeated. Quite to the contrary, the reason was that Kule passed, which explains why a language consultant comments that the teacher doesn't want Kule to pass.

(39) NGAMO: (Context: *The teacher had to repeat the exam, …*)
    a. *kìkà   tùkò=ì   Kúlè yàk'î*
        because eat.PFV=BM Kule   only
        'because only KULE passed.'
        (Comment: he doesn't want the other students to fail.)
    b. *kìkà   tùkò=ì   Kúlè*
        because   eat. PFV=BM Kule
        'because KULE passed'
        (Comment: he doesn't want Kule to pass!)

(40) GA: (Context: *The teacher will repeat the exam, ...*)
    a. *éjààkɛ́   Kòfí pɛ́ páásí*
        because Kofi only pass
        'because only KOFI passed'
        (Comment: the teacher wants everybody to pass, so he will repeat the exam.)
    b. *éjààkɛ́   Kòfí nì   páásí*
        because   Kofi PRT   pass
        'because it was KOFI who passed'
        (Comment: the teacher didn't want Kofi to pass, so he will repeat the exam, it's racism!)

(41) AKAN: (Context: *The teacher will repeat the exam,…*)
    a. *èfisɛ́   Yaw ǹkóáá/pɛ́ nà ɔ̀-twá-à   ǹsɔ́hwɛ́ nó.*
        because Yaw only   PRT 3SG.SBJ-pass-COMPL exam   DET
        'because only YAW passed the exam'
        (Comment: the teacher wants everybody to pass, and since Yaw is the only one who passed, the teacher will repeat the exam)
    b. *èfisɛ́   Yaw nà   ɔ̀-twá-à   ǹsɔ́hwɛ́ nó*
        because Yaw PRT 3SG.SBJ-pass exam   DET
        'because it was YAW who passed the exam'
        (Comment: the teacher doesn't want Yaw to pass the exam, so he will repeat the exam.)

This section showed that the exhaustive inference of the marked focus/background constructions is not targeted by negation, and is not understood as the cause of the main clause in reason clause constructions. For these reasons, we conclude that the exhaustive

inference of the marked focus/background constructions is not truth-conditional. In the next subsection, we investigate whether it is a conversational implicature or a presupposition.

5.2.2 The exhaustive inference is a conversational implicature in Ngamo and a presupposition in Ga and Akan.

Whereas assertions are never cancellable and presuppositions are not cancellable in positive sentences (but they are cancellable in negative sentences), conversational implicatures are always cancellable. Therefore, if the exhaustive inference of the marked focused/background constructions is a conversational implicature, it should be cancellable. The data in (42)–(44)[14] show that while in Ngamo the inference is easily cancellable in both marked and unmarked constructions and in unmarked focus constructions in Ga and Akan, this is not possible in marked focus constructions in Ga and Akan. This strongly suggests that while the exhaustive inference in the unmarked focus constructions and in the marked construction in Ngamo is a conversational implicature, in Ga and Akan marked focus constructions it is not.[15,16]

(42) NGAMO: (Context: *What did Burba buy in the village?*)
 Kàjà (=ì) *fárì*   *kì gárgù, kè kàjà* *àyàbà.*
 buy.PFV=BM watermelon at village also buy.PFV banana
 'She bought a WATERMELON in the village, and she also bought a banana.'

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14 The tone marking indicated in example (42) is for the marked construction. Without the background marker, *fàrì* ('watermelon') is realized with all low tones.

15 Renans et al. (in prep.) conducted quantitative questionnaire studies on the *nì*-structure in Ga and found out that the continuation cancelling the exhaustivity effect triggered by the *nì*-structure is possible under some circumstances:

(i) GA:
 Tɛtɛ bà shíá. **Bàǹkú nì** *è-yè.* *È-yè* *bÌ ɖ ɔ́mɛ́hú.*
 Tɛtɛ come home banku PRT 3SG-eat 3SG-eat pineapple also
 'Tɛtɛ came back home. It was banku that he ate. He also ate a pineapple.'

An anonymous reviewer pointed out that the acceptability of (i) might be due to the fact that the participants understood the event of eating banku and the event of eating a pineapple as occurring at two different times. In that case the exhaustification would apply to the entities eaten at time t_1 (when banku was eaten) but not to the entities eaten at time t_2 (when a pineapple was eaten.) The authors of the study argue instead that it is due to the fact that the not-at-issue meaning component triggered by the *nì*-structure is in the scope of a covert meta-linguistic negation induced by the second sentence, see Renans et al. (in prep.) for a discussion.

16 An anonymous reviewer suggested that the unacceptability of (43-A1) might be due to *àmádàá* ('plantain') being topicalized. However, since we do not know whether *àmádàá* is in fact topicalized in (43-A1) – typically, topicalization requires fronting of the topicalized element followed by the particle *lɛ* (Kropp Dakubu 1992; Renans 2016b) – and in addition we do not have conclusive data regarding the interaction between topicalization and cancellation, we hesitate to formulate any claims about this.

(43) GA:
   Q: *What did Kofi eat yesterday?*
   A1: # ***Bàǹkú nì*** *Kòfí yè nyɛ̀.*   *Nì àmádàá hú Kòfí yè nyɛ̀.*
       Banku PRT Kofi eat yesterday and plantain also Kofi eat yesterday
       'It was BANKU that Kofi ate yesterday. And he also ate plantain yesterday.'
   A2: *Kòfí yè bàǹkú nyɛ̀.*   *Nì Kòfí yé àmádàá hú nyɛ̀.*
       Kofi eat banku yesterday and Kofi eat plantain also yesterday
       'Kofi ate banku yesterday. And Kofi ate also plantain yesterday.'

(44) AKAN:
   Q: *What did you buy*?
   A1: # ***Àtààdéɛ́ nà*** *mè-tɔ́-ɔ̀ɛ́*   *ɛ́nà mè-tɔ̀-ɔ̀*   *m̀pàbòá ńsó.*
       shirt   PRT 1SG-buy-COMPL and 1SG-buy-COMPL shoes   also
       'It was a SHIRT that I bought and I bought SHOES also.'
   A2: *Mè-tɔ̀-ɔ̀*   ***àtààdéɛ́*** *ɛ́nà mè-tɔ̀-ɔ̀*   *m̀pàbòá ńsó*
       1SG-buy-COMPL shirt   and 1SG-buy-COMPL shoes   also
       'I bought a SHIRT and I bought SHOES also.'

In (45)–(47), the same is shown for (animate) subject foci: neither subjecthood nor animacy plays a role concerning the cancellation of the exhaustive inference.

(45) NGAMO: (Context: *Who built a house?*)
   *Sàlko   bànò=**ì** **Dímzà**, Umàr kè sàlkó   bànò.*
   build.PFV house=BM Dimza Umar also build.PFV house
   'DIMZA built a house, and Umar built a house, too.'

(46) GA: (Context: *Who read a book?*)
   # ***Felix nì*** *káné wòlò nyɛ̀.*   *Nì Kòfí hú   káné wòlò nyɛ̀.*
   Felix PRT read book yesterday and Kofi also read book yesterday
   'It was FELIX who read a book yesterday. And Kofi also read a book yesterday.'

(47) AKAN: (Context: *Who went to school yesterday?*)
   # ***Nti nà*** *ɔ̀-kɔ́-ɔ̀*   *sùkúù ɛ̀nórà.*   *Ɛ́nà Yaw ńsó kɔ́-ɔ́   sùkúù.*
   Nti PRT 3.SG.SBJ-go-COMPL school yesterday and Yaw also go-COMPL school
   'It was NTI who went to school. And Yaw also went to school.'

The second test for checking whether the exhaustive inference in the marked focus constructions is conversationally implicated is the (un)acceptability of these constructions as an answer to a mention-some question. In Ngamo, marked answers to mention-some questions were possible. For example, (48) was accepted in a situation where the discourse participants are just talking about the closest place to buy a newspaper (even though there are further newspaper sellers), suggesting that the exhaustive inference is not asserted or presupposed. If it were asserted or presupposed, then due to the non-cancellable exhaustive inference, the non-exhaustive (mention-some) answer to the question would be infelicitous.

(48) NGAMO: (Context: *The person asking the question wants to know the closest place to buy a newspaper.*)

   Q: *Who sells newspapers?*

   A: *À   bò'ytà   járídà=ì   ngô wòmmí'ì.*

       3SG.HAB sell. HAB newspaper=BM man DEM

       'THAT MAN sells newspapers.'

       (Comment: okay in a context where you just want to know the closest place to buy a newspaper.)

By contrast, in Ga and Akan this was not possible, as illustrated below: the comment in (49) suggests that the answer can only be understood exhaustively, not as a mention-some answer.

(49) GA: (Context: *We're at Makola market. There are many people who sell newspapers here but I want to find the closest one. I ask:*)

   Q: *Who sells newspapers?*

   A: # *Kofi ni   hɔ́ɔ̀ adafitswawoji.*

      Kofi PRT sell newspapers

      'It is KOFI who sells newspapers.'

      (Comment: it sounds like it's only Kofi who sells newspapers at Mokola)

(50) AKAN: (Context: *The person asking the question wants to know the closest place to buy mangoes*)

   Q: *Who sells mangoes?*

   A: *Ama   tɔ̀nè bì.*

      Ama sell some

      'AMA sells some (mangoes).'

   A1: # *Ama nà   ɔ̀-tɔ́nè   bì*

      Ama PRT 3SG.SBJ-sell some

      'It is AMA who sells some (mangoes).'

      (Comment: the addressee will think that only Ama sells mangoes)

Since the exhaustive inference in Akan and Ga is not asserted and not conversationally implicated, we propose that it is a presupposition.

In the remainder of this section, we briefly discuss how such an exhaustivity presupposition should be formalized. A well-known problem with the simplified exhaustive inferences assumed so far is that it does not make the correct prediction for projection tests. As a presupposition, the exhaustive inference should project when the sentence is embedded under negation, modals, questions and antecedents of conditionals (Langendoen and Savin 1971; Karttunen 1973; among others). This means that the presupposed material should not be visible to negation, modals, questions, etc. This is exemplified in (51), which shows that the presupposition triggered by the possessive pronoun, i.e., the information that the speaker has a sister, is invisible to negation, i.e., it follows from both the positive and negative sentence.

(51) a. ***My sister*** *came to Berlin yesterday.*   → I have a sister.
　　　b. *It's not the case that **my sister** came to Berlin yesterday.* → I have a sister.

If it is assumed, as we did up to now, that the exhaustive inference triggered by the cleft in (52a) is *She didn't invite anybody else*, this inference clearly does not survive when the test sentence is negated: It does not follow from (52b) that she didn't invite anybody else (see e.g., Velleman et al. 2012 for discussion).

(52) a. *It was Fred she invited.*
　　　b. *It wasn't Fred she invited (it was Peter and Paul)*

Some other formulations of the exhaustive inference have the same problem, e.g., the inferences in (53a–b) do not follow from (52b) (see e.g., Velleman et al. 2012: §2.3 and Büring and Križ 2013: §1.2 for discussion). The more complex proposals in (53c-d), however, make the correct predictions for (52a–b): they explain why (52a) is infelicitous in a context where she invited additional people apart from Fred, but have no effect in cases like (52b) where she didn't invite Fred at all.

(53) *It wasn't FRED that she invited (it was Peter and Paul).*
　　　a.　*If she invited somebody, this person is Fred.*　　　(Percus 1997: 340)
　　　b.　*She invited at most one person.*　　　(Halvorsen 1978)
　　　c.　*Fred is not a proper part of the sum of people invited by her.*

　　　　　　　　　　　　　　　　　　　　　　　　(Büring and Križ 2013: 4)
　　　d.　*If she invited Fred, then she didn't invite anybody else.*　　(Büring 2011: 3)

For the exhaustive inference in Akan and Ga, we follow Büring (2011) and Renans (2016b) and adopt the inference in (53d). For example, both (54a) and (54b) presuppose (53d): *If she invited Fred, then she didn't invite anybody else*, and (55ab) have the corresponding conditional presupposition *If he invited Amo, then he didn't invite anybody else*.

(54) GA:
　　　a.　***Fred nì***　è-fɔ̀　　nìnè　è-tsé　lɛ.
　　　　　Fred PRT　3SG-throw hand　3SG-call PRT
　　　　　'It was FRED she invited.'
　　　b.　***Jèèè Fred nì***　è-fɔ̀　　nìnè　è-tsé　lɛ.
　　　　　NEG　Fred PRT　3SG-throw hand　3SG-call PRT
　　　　　'It wasn't FRED she invited.'

(55) AKAN:
　　　a.　***Amo　nà***　ɔ̀-frɛ́-ɛ̀　　　　nó.
　　　　　Amo　PRT　3SG.SBJ-call-COMPL　3SG.OBJ
　　　　　'It was AMO that he called/invited.'
　　　b.　*Ɛ̀-ǹ-yɛ́*　　　　***Amo　nà***　ɔ̀-frɛ́-ɛ̀　　　　　nó.
　　　　　3SG.SBJ.INA-NEG-be　Amo　PRT　3SG.SBJ-call-COMPL　3SG.OBJ

'It wasn't Amo he invited.'

Importantly, the conditional presupposition makes the correct prediction regarding projection: the conditional presupposition stays true when the sentence is negated. The proposed presupposition has the form of a conditional *if p then q.* Crucially, if the antecedent of the conditional is false, then the whole conditional is true, irrespective of the truth of the consequent. And this is precisely the case in (54b). The antecedent of the conditional presupposition *If she invited Fred, then she didn't invite anybody else* is false (Fred was not invited) and therefore the whole conditional is true. Thus the presupposition, as expected, projects out of the scope of negation.

To sum up, this section has shown that while the exhaustive inference found in unmarked focus constructions in Akan and in Ga and in all Ngamo focus/background constructions is a conversational implicature, the exhaustivity effect triggered by the morpho-syntactically marked focus constructions in Akan and in Ga is presupposed.

6 Existence presupposition

The third property of marked focus/background constructions which we investigated was the question of whether these constructions trigger existence presuppositions. This is, for example, standardly assumed for *it*-clefts in English (Horn 1981; Atlas and Levinson 1981; Percus 1997; Rooth 1999; and many more). The cleft in (56a) triggers the presupposition in (56b) that the backgrounded part is true for some focus alternative of the focused constituent. English focus, on the other hand, is not standardly assumed to trigger an existence presupposition (Rooth 1999; Büring 2004; Kratzer 2004, i.a., but cf. Geurts and van der Sandt 2004 for an opposing view). This differs cross-linguistically: for example, in the Salish languages St'át'imcets and Nłeʔkepmxcin, clefts do not introduce an existence presupposition (Davis et al. 2004; von Fintel and Matthewson 2008; Koch and Zimmermann 2010). In Hungarian, in contrast, preverbal focus, which is not standardly analyzed as a cleft construction, appears to introduce an existence presupposition (Bende-Farkas 2006; but cf. Wedgwood et al. 2006 for a different view).

(56) a. *It was FRED'S WIFE who stole the tarts.*
      b. *Somebody stole the tarts.*   (EXISTENCE)

In the following, we use two kinds of tests to test for an existence presupposition. First, we test examples with focus on a negative existential quantifier, as in (57): if the construction gives rise to an existential presupposition (*somebody stole the tarts*), this contradicts the assertion (*nobody stole the tarts*), which leads to a presupposition failure (Jackendoff 1972). In English, this happens with clefts (57a), but not with focus (57b).

(57)   a. # *It was NOBODY who stole the tarts.*
        b.   *NOBODY stole the tarts.*

Second, we test contexts in which speakers are publicly uncommitted to the truth of the existential (Dryer 1996; Rooth 1999; Büring 2004). If the test sentence has an existence presupposition, it should be infelicitous in this context, cf. (58). Here, B is odd because its presupposition (*somebody is playing the trombone*) clashes with the *I don't know*-answer. The test sentence always contains a non-veridical operator − e.g., the negation in (58) − so that it doesn't entail existence; but if the existential inference is a presupposition, it should survive embedding under a non-veridical operator.

(58)   A: *What's that noise? Is anybody playing the trombone?*
       B: # *I don't know, but I'm sure it isn't* BARNEY *who is playing the trombone.*
       B':   *I don't know, but I'm sure* BARNEY *isn't playing the trombone.*

The following subsections investigate whether the marked focus/background constructions in Akan, Ga, and Ngamo give rise to an existence presupposition.

6.1   No existence presupposition in Ngamo, existence presupposition in Akan and Ga

In Ngamo *=i/ye* constructions, there is no existence presupposition, while in the Akan *nà*-construction and the Ga *nì*-construction there is one. This can be seen when looking at sentences with focused negative existential quantifiers, exemplified in (59)–(61). In Ngamo, focused negative existential quantifiers were judged to be perfectly acceptable, independently of the focus/background marking strategy which was chosen (59ab). In contrast, the corresponding pseudocleft in (59c) was judged to be unacceptable.

(59) NGAMO: (Context: *Who did Njelu call yesterday?*)
   a.   *Èshà(=ì)*   **ngô**   **bù**   *nzònò.*
        call.PFV=BM   person   NEG   yesterday
   b.   *Èshá*   *nzònò=ì*   **ngô**   **bù**.
        call.PFV   yesterday=BM   person   NEG
        'He called NOBODY yesterday.'
   c. # *Ngò=ì*   *yò*   *Njèlù*   *èshá*   *nzònò=ì*   **ngô**   **bù**.
        person=LINK   REL   Njelu   call.PFV   yesterday=DET   person   NEG
        'The one that Njelu called was nobody.'

Conversely, in the Akan *nà*-construction and in the Ga *nì*-construction, the sentences with focused negative quantifiers were judged to be unacceptable, as presented in (60) and (61). We argue that this is due to a clash between the existential inference triggered by the *nà*- and *nì*-construction and the information conveyed by the negative quantifier. For example, in (60b), the existential inference that somebody was invited clashes with the information that nobody was invited.

(60) AKAN: (Context: *Who did Kofi invite to the party?*)
   a.   *Ɔ̀-à-m̀-frɛ́*   **òbíárá**.

3.SG.SBJ-COMPL-NEG-invite   everybody/anybody
'He did not invite anybody.'

b. # *Ɛ̀-ǹ-yɛ́*   *òbíárá*   *nà*   *ɔ̀-frɛ́-èɛ́*
3SG.INA.SBJ-NEG-be everybody/anyone PRT 3SG.SBJ-invite-COMPL
'It was NOBODY that he invited.'

(61) GA: (Context: *Who did Kofi call yesterday?*)
 a.   *Kòfí tsɛ́-ɛɛ*   *mòkò*   *mòkò*.
      Kofi call-NEG   somebody somebody
      'Kofi called nobody.'
 b. # *Jèèè mòkò*   *mòkò*   *nì*   *Kòfí tsɛ́.*
      NEG something something PRT Kofi call
      'It was NOBODY that Kofi called.'

The second kind of tests examining the presence or absence of the existential inference are sentences in which embedded focus is uttered in a context where the speakers are publicly uncommitted to the existence inference, such as in (62) and (63) (Rooth 1999: 241). Consider (62). Here, the unacceptability of the answer A2 is caused by the clash between *èkólɛ́ jèèè-nàkàí* 'probably not', suggesting that probably nobody won, and an existential inference that somebody won, triggered by the *nì*-structure. This existential inference, being a presupposition, projects when embedded under *èfɔ̀ɔ̀kàà ákɛ́* 'It is unlikely that.'

(62) GA: (Context: *In my department, a football pool is held each week, where people bet on the outcomes of games. It is set up so that at most one person can win; if nobody wins, the prize money is carried over to the next week:*)
 Q: *Did anyone win the department football pool this week?*
 A1: *Èkólɛ́*   *jèèè-nàkàí éjàákɛ́* *èfɔ̀ɔ̀kàà ákɛ́*   *Màríà yè kùním* *nì* *lɛ̀* *pɛ́*
      perhaps NEG-that because unlikely COMP Maria win victory and 3SG only
      jí-mò-ní   *yè-ɔ̀*   *kùním.*
      be-person-who win-IPFV victory
      'Probably not, because it's unlikely that Mary won it and she is the only person whoever wins.'
 A2: ?*Èkólɛ́*   *jeee- nàkàí éjàákɛ́* *èfɔ̀ɔ̀kàà ákɛ́*   *Màríà nì yè kùním* *nì* *lɛ̀*
      pɛ́
      perhaps NEG-that because unlikely   COMP Maria PRT win victory and 3SG only
      jí-mò-ní   *yè-ɔ̀*   *kùním.*
      be-person-who win-IPFV victory
      'Probably not, because it's unlikely that it was MARIA who won it and she is the
       only person whoever wins.'

Similarly, in Akan, the *nà*-construction is infelicitous in a context where the speaker is fairly certain of the non-existence of a true focus alternative, as demonstrated in (63A2) but the unmarked construction is acceptable in such contexts, as shown in (63A1).
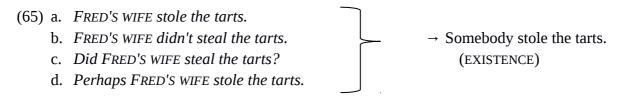
(63) AKAN: (Context: *Ghanaian football fans know that Ghana usually wins matches through penalties and that whenever Ghana has a penalty Asamoah Gyan, the captain, is the one who scores it. Kofi didn't watch the match last night so he asks Kwame who didn't watch it either but knows that Asamoah Gyan is injured*:)

Q: *Òbí   hyɛ̀-ɛ̀   pánátì   ànáá?*
someone   score-COMPL penalty Q
'Did someone score a penalty?'

A1: *Dààbí, èfìsɛ́   mè-ǹ-nyé   ǹ-ní sɛ́   Asamoah Gyan*
no   because 1SG-NEG-take NEG-eat COMP Asamoah Gyan
hyɛ̀-ɛ̀   pánátì.
score-COMPL   penalty
'No, because I don't believe Asamoah Gyan scored a penalty.'

A2: #*Dààbí, èfìsɛ́   mè-ǹ-nyé   ǹ-ní sɛ́   Asamoah Gyan*
no   because 1SG-NEG-take NEG-eat COMP Asamoah Gyan
nà   ɔ̀-hyɛ́-ɛ̀   pánátì.
PRT 3SG.SBJ-score-COMPL   penalty
'No, because I don't believe that it was ASAMOAH GYAN who scored a penalty.'

Furthermore, in Ngamo, the examples with the background marker *=i/ye* were rejected in the context, in which the speaker is uncommitted to the existence inference, as presented in (64).

(64) NGAMO: (Context: *Njelu hates calling, but his father forces him to call one family member per day. Sometimes, his father is not around, so Njelu doesn't call anybody*.)

Q: *Did Njelu call somebody yesterday?*

A: *I don't think so...*

a. *kìká   èshá   **Sàmá** bù   nzònò...*
because call.PFV Sama NEG yesterday

b. # *kìká   éshá=í   **Sámá** bù   nzònò...*
because call.PFV=BM Sama NEG yesterday

c. # *kìká   èshá   nzònò=ì   **Sàmá** bù...*
because call.PFV yesterday=BM Sama NEG
'because he didn't call SAMA yesterday,... "

d. # *kìká   ngó=í   yò   Njèlù èshà=ì   **Sàmá** bù   nzònò...*
because person=LINK REL Njelu call.PFV=DET Sama NEG yesterday
'because the one he called wasn't SAMA yesterday,...'
... and it was Sama's turn to be called.

This seems to suggest, contrary to the results of the test presented in (59), that the *=i/ye* marker triggers an existential inference. We argue that the seemingly contradictory results of the two tests for existential inference in Ngamo actually indicate that the test in (64) is not ideal to test for existence presuppositions, since it involves embedding under a non-veridical operator (here: the negation). As Beaver and Clark (2008) note, these operators standardly give rise to existential inferences themselves, cf. e.g., (65), via a process that they call quasi-association with focus.

(65) a. *FRED'S WIFE stole the tarts.*
    b. *FRED'S WIFE didn't steal the tarts.*
    c. *Did FRED'S WIFE steal the tarts?*
    d. *Perhaps FRED'S WIFE stole the tarts.*
        → Somebody stole the tarts. (EXISTENCE)

Beaver and Clark suggest that this depends on the kind of Question Under Discussion (QUD)[17] that the sentence answers. They assume a discourse rule, the Current Question Rule (Beaver and Clark 2008: 36) which, among other things, states that one of the alternatives in the current QUD is assumed to be true. Even embedded propositions can have focus alternatives corresponding to the current QUD, therefore in (66), Q is a possible QUD for answer A (from Beaver and Clark 2008: 47). Since one of the alternatives is assumed to be true, the inference that Kim studies something else at Northwestern arises in this case. Importantly, when the same sentence A answers the (admittedly less plausible) QUD in (67), it doesn't give rise to an existential inference in this account.

(66) Q: *What does Kim study at Northwestern?*
    A: *Kim doesn't study LINGUISTICS at Northwestern.*
       → Kim studies something else at Northwestern   (EXISTENCE INFERENCE)

(67) Q: *What doesn't Kim study at Northwestern?*
    A: *Kim doesn't study LINGUISTICS at Northwestern.*
       ↛ Kim studies something else at Northwestern   (NO EXISTENCE INFERENCE)

We argue that the existence inference in the context of (64) is not triggered by the semantics of the *=i/ye* marker but arises due to association of the negation with focus, just as in (66). The morpho-syntactic marking enforces either a negative QUD (*Who didn't Njelu call?*), which is dispreferred in this context, or a positive QUD (*Who did Njelu call?*), which leads to an existence inference clashing with the context, making the utterance infelicitous. Thus the conclusion that there is no existence presupposition in *=i/ye* constructions in Ngamo, as shown in (59), can be sustained.

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17 The current QUD is the explicit or implicit hearer-question that the sentence answers, see e.g., Roberts (1998), Roberts (2012); Beaver and Clark (2008); Büring (2003); i.a.. The current QUD denotes a set of alternatives which are congruent to the focus alternatives of the answer. Thus the requirement that one of the alternatives in the current QUD be true amounts to saying that one of the focus alternatives should be true.

As for why this problem does not occur with the corresponding English example in (58) and the unmarked focus examples in Akan, Ga, and Ngamo in (62)–(64), we suggest that they actually answer a different QUD (e.g., *Why [don't you think that Njelu called somebody]?*). In contrast to the *=i/ye* construction (and *nà-* and *nì-*constructions in Akan and Ga, respectively), which clearly identifies the focused part of the utterance, the English examples as well as Ngamo, Akan, and Ga unmarked focus constructions are not as clear concerning the size of the focus: it might in fact be the whole clause, with the subject carrying the main accent in English because the other constituents are given.

7   The marked focus/background construction in Ngamo

The previous section established that while marked focus constructions in Akan and Ga differ from their unmarked counterparts in that they introduce existence and exhaustivity presuppositions, no such difference was found for Ngamo. This section, therefore, discusses whether this construction introduces any other difference in interpretation. We propose that just like the definite determiner *=i/ye*, which is the origin of the background marker, the background marker indicates salience, i.e. that the speaker assumes that the hearer is already attending to the *=i/ye*-marked individual or background. In order to show this, the section first briefly discusses the properties of the definite determiner, and then shows that the background marker also has these properties.

In Ngamo, there are two kinds of definite expressions (see Schwarz 2013 for an overview of other languages with this distinction). First, bare nouns are sometimes interpreted as definite, and sometimes as indefinite. Second, there is a definite determiner *=i/ye* (m./pl.) / *=s/se* (f.) which occurs postnominally, and agrees with the noun in gender and number. When an individual is unique but not prementioned (e.g., *the queen*, *the moon*), then a bare nominal is used in Ngamo, whereas the definite determiner is restricted to prementioned or otherwise salient individuals (cf. e.g., Schuh 2004, who calls this a previous reference marker). This is shown in the following examples (68)–(69): here the determiner can only be used when the referent is salient to both speaker and hearer, i.e. when the hearer is paying attention to it, see Barlew 2014 for similar observations for Bulu (Bantu, Cameroon).

(68)   NGAMO: (Context: *Shuwa is sitting outside in the evening, looking at the sky. A stranger comes up to her and says:*)
   Tèrè=ì   búlínnî.
   moon=DEF.DET.M   shine.ICP
   'The moon is shining.'
   (Comment: He can say this, thinking that she is looking at the moon – if she's not looking at the moon, it is not good.)

(69)   NGAMO: (Context: *Shuwa is sitting outside in the evening, reading a book. A stranger comes up to her and says:*)
   # *Tèrè=ì   búlínnî.*

moon=DEF.DET.M shine.ICP

'The moon is shining.'

(Comment: You have to say *tèrè*, because the moon is not in her mind, she has no business with it.)

The background marker also indicates salience. The prototypical uses are the same as in the case of the definite determiner: it can be used when the background is prementioned or otherwise salient.[18] Example (70) shows an example of a prementioned background.

(70) NGAMO: (Context: *Who did Shuwa call?*)

Shùwá èshà=ì Jájèi.

Shuwa call=BM Jajei

'(Shuwa called) Jajei.'

Even though the background marker often occurs in contexts where the backgrounded material is given, as in (70), it is not a givenness marker in the sense of e.g., Kučerová (2012). Kučerová proposes a covert givenness operator in syntax, marking anything preceding it as given, i.e., "previously introduced into the discourse" (2012: 2), relying on Schwarzschild (1999)'s notion of givenness, where a given constituent needs to be entailed by a suitable antecedent.[19] The *=i/ye* marker, however, is not such a givenness marker: It is neither sufficient nor necessary for the background to be entailed by the preceding linguistic context. This will be shown in the remainder of this section.

First, to see that premention alone is not sufficient to license backgrounding, consider the examples in (71)/(72). Under the assumption that the mention of the funeral / recent loss entail that somebody died, the background in (71)/(72) should be entailed by the preceding linguistic context. However, the acceptability of these examples depends on the way the antecedent is introduced in the context: when it is topical, as, for example, in (71), the focus/background construction was almost obligatory. In contrast, in example (72), where the antecedent is grammatically marked as not-at-issue, the focus/background construction was judged to be far less suitable.

(71) NGAMO: (Context: *As for the funeral I visited yesterday, ...*)

Màtkò=ì   Dáyáyî

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18 Note that when the background or antecedent individual is maximally salient, ellipsis or a (zero) pronoun is actually preferred, respectively, see (i) and (ii).

	(i) (Context: *Who did Shuwa call?*)	(ii)	(Context: *What did Shuwa do to the house?*)
	Jàjêi		*Sàlkô.*
	'Jajei.'		build.PFV
			'(She) built (it).'

19 This is oversimplified for the sake of readability: to be precise, according to Schwarzschild and Kučerová, not the constituent would be entailed, but the existential F-closure of that constituent (after existential typeshifting).

die.PFV=BM Dayayi

'DAYAYI died.'

(72) NGAMO: (Context: *Tunza, who had a recent loss in her family, came for a visit.*)

Màtkò=ì   Dáyáyî

die.PFV=BM Dayayi

'DAYAYI died.'

Second, recent premention is not necessary for the background marker to be licit. Instead, it suffices that the hearer is attending to something. For example, the speaker in (73) can assume that Njelu is asking himself who took the car keys. In (74), the speaker is correcting an expectation that was incorrectly held by the addressee, namely *Kule will call me*, without this expectation being in the preceding linguistic context.[20]

(73) NGAMO: (Context: *Njelu wants to travel. Gimsi sees him looking in his pockets, searching for something. She says:*)

Nàmkó mábúɗí=k   mótà=ì   Kúlè

take.PFV key=LINK.F   car=BM Kule

'KULE took the car keys.'

(74) NGAMO: (Context: *Kule usually asks Jiji to do errands for him after school, Now, after school, Jiji is sitting and waiting, but then a friend comes in and says:*)

Kúlé èshà=ì   Dímzâ

Kule call.PFV=BM Dimza

'Kule called DIMZA.'

(Comment: This is okay, because Jiji is expecting Kule to call him.)

Examples like these, where there is evidence from the non-linguistic context that the addressee is attending to something (73), or where relevance to the addressee's aims and goals play a role (74) also are typical contexts where salience definites can be used (see Barlew 2014 for Bulu, and Grubic 2015 for Ngamo.).

To sum up, the background marker in Ngamo does not contribute any stronger exhaustivity inference, nor does it trigger an existential presupposition. Instead, like the related definite determiner, it triggers a presupposition of salience.

8   Analysis

In the preceding sections, the following empirical observations were made:

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20 A reviewer pointed out that we might unfairly reject a Schwarzschildian account here, since Schwarzschild explicitly refers to salience. In our opinion, it is not entirely clear whether hearer expectations as in (73)-(74) can count as antecedents in a Schwarzschildian system, see Schwarzschild (1999: 148). The main point of this section is to reject an account of *=i/ye* as a marker of givenness understood as recent premention. As Kadmon and Sevi (2011) point out, this might be equally true for deaccenting in English.

- Contrast: While all focus realization patterns were found to be possible in all kinds of contexts, ranging from non-contrastive contexts (e.g., answers to *wh*-questions) to contrastive ones (e.g., corrections), we found a tendency in Akan and Ga for marked focus constructions to be used in contrastive environments.

- Exhaustivity: All focus constructions, marked or unmarked, give rise to an exhaustive inference. Whereas this inference is merely a conversational implicature in unmarked focus constructions and in the marked focus/background construction in Ngamo, it is a presupposition of marked focus constructions in Akan and Ga.

- Existence: In addition, marked focus constructions in Akan and Ga, but not in Ngamo, trigger an existence presupposition. Unmarked focus constructions do not give rise to such a presupposition in any of the three languages[21].

- Salience: In Ngamo, the marked focus/background construction presupposes salience of the backgrounded part of the utterance. It was shown in Section 7 that salience is not identical to givenness.

We derive the different properties of the morpho-syntactically marked focus constructions in Akan, Ga, and Ngamo from the underlying semantics of the particles involved, i.e. of *nà*, *nì* and *=i/ye*. The particles *nà* and *nì* in Akan and Ga were argued to trigger exhaustivity and existence presuppositions. As mentioned in Section 5, we extend the conditional exhaustivity presupposition proposed by Renans (2016b) for Ga to the corresponding Akan examples, see (75b) and (76b). In addition, these examples are proposed to have the existence presuppositions shown in (75c) and (76c), also triggered by the particles *nà* and *nì*.

(75) GA:
    Kòfí ní   *sélé*   *lɛ.*
    Kofi PRT   swim DET
    'It is KOFI who swam'

    a.   ASSERTION: Kofi swam.
    b.   PRESUPPOSITION: If Kofi swam, then nobody else swam
    c.   PRESUPPOSITION: Somebody swam.

(76) AKAN:
    Ama *nà*   *ɔ-dá-àɛ́.*
    Ama PRT 3SG.SBJ-sleep-COMPL
    'It was AMA who slept.'

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21 An anonymous reviewer suggests that exhaustivity entails existence, and that the result that existence patterns like exhaustivity is thus highly expected. We observe, however, that not all researchers agree that this is the case, see e.g. Onea (t.a.); Büring and Križ (2013) for an account assuming independence between existence and exhaustivity presuppositions.

a. ASSERTION: Ama slept.
b. PRESUPPOSITION: If Ama slept, then nobody else slept
c. PRESUPPOSITION: Somebody slept.

Since the exhausitivity effect is a presupposition and presuppositions are not cancellable in unembedded contexts, the presuppositional analysis of these structures explains their unacceptability in mention-some contexts. Modeling the exhaustivity effect in terms of a conditional presupposition also accounts for other exhaustivity data. For example, it explains the unacceptability of the *nì*-structure in the context of (31), repeated below in (77):

(77) GA: (Context: *It was banku and plantain that Kofi ate yesterday*.)
   # ***Bàǹkú nì*** *Kòfí* *yè* *nyɛ̀*.
   Banku PRT Kofi eat   yesterday
   'It was BANKU that Kofi ate yesterday.'

The presupposition triggered by the *nì*-structure in (77) is *If Kofi ate banku, then banku is the maximal thing he ate*. Indeed, Kofi ate banku in the context of (77). However, he also ate plantain. Therefore, banku was not the maximal thing that Kofi ate and thus (77) is unacceptable in this context.

Since exhaustivity and existence inferences are typical for clefts, cross-linguistically[22], and these particles induce a structural bi-partition into a focused constituent to their left and a backgrounded part to their right, we propose to analyze the marked focus constructions in Akan and Ga as clefts (following Kobele and Torrence 2006; Ameka 2010; Ofori 2011; i.a. for Akan).

Concerning the contrastive inference found with the *nà* and *nì* constructions in Akan and Ga, we proposed that this inference is merely pragmatic: If it were part of the conventional meaning of these constructions, e.g., a further presupposition, these constructions would be disallowed in non-contrastive contexts. Since they can however occur in non-contrastive contexts, like answers to *wh*-questions, we conclude that this inference is merely pragmatic. This should thus not be part of the lexical entry of *nà* and *nì*.

For the marked focus/background constructions in Ngamo, we propose that the only meaning contribution made by these constructions is a presupposition triggered by the background marker *=i/ye* that the backgrounded part is salient, i.e. attended to by the hearer. In a sentence like (78), the presupposition triggered by *=i/ye* is shown in (78b).

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22 Note that though we assume that stronger exhaustive inferences and existence presuppositions are typical for clefts, they are not obligatory. For example, St'át'imcets and Nłeʔkepmxcin clefts do not trigger existence presuppositions (Davis et al. 2004; Koch and Zimmermann 2010), nor do all researchers agree that English clefts are strongly exhaustive, see e.g. Horn (1981); Davis et al. (2004); Dufter (2009), or necessarily trigger an existence presupposition, see Büring and Križ (2013).

(78) NGAMO:

Mámmádì ònkò=ì   *àgóggò* *kì* *Dímzâ.*
Mammadi give.PFV=PRT   watch   to Dimza
'Mammadi gave A WATCH to Dimza.'

a.	ASSERTION:	Mammadi gave a watch to Dimza.
b.	PRESUPPOSITION:	That Mammadi gave/might have given something to Dimza is salient.

The *=i/ye* construction is not a cleft construction (e.g., a reduced pseudocleft), as evidenced by the fact that it does not give rise to the existence presupposition which is found with full pseudoclefts in Ngamo; see Grubic (2015: 91) for further arguments against a cleft analysis.

A question that immediately arises is whether the different semantic contribution of *=i/ye*, compared with *nà* and *nì*, might be caused by the fact that *=i/ye* is a background marker, and thus does not mark focus directly. We believe that it is a plausible expectation that background markers, cross-linguistically, contribute inferences concerning the backgrounded part of the utterance (e.g., salience, givenness, possibly existence presuppositions), but do not themselves contribute inferences about the focus (e.g., exhaustivity, contrast), though they may occur in constructions which independently give rise to these inferences. This is a prediction that needs to be checked with background markers in other languages.

To sum up, the particles *nà* and *nì* in Akan and Ga trigger exhaustivity/existence presuppositions, as well as a contrast inference, while *=i/ye* in Ngamo presupposes that the backgrounded part of the utterance is salient. In the next section, we explore and refute a competing analysis of the exhaustivity effect of marked focus construction in Akan and Ga.

8.1 An alternative analysis of exhaustivity: TP/vP determiners (to be refuted)

In *nà-* and *nì-*constructions in Akan and Ga, there is an optional element (homophonous with the respective third person singular pronoun and the definite determiner) which may occur at the clause-final position (79)–(80).[23] For Akan, Boadi (1974) observed that this element, *nó*, is used when "the speaker intends to remind the hearer that the incident has been referred to earlier. This extra information, which makes the incident more specific, is not part of the interpretation [of a focus sentence]." McCracken (2013), in contrast, proposed that *nó* is used when the focused NP, whether subject, object or adjunct, is definite (or familiar, à la Arkoh and Matthewson 2013), non-given and/or exhaustive. The definite determiner *lɛ* in Ga, on the other hand, marks the event as definite or the NP as definite when *lɛ* attaches to VPs or NPs, respectively (Kropp Dakubu 1992, Kropp Dakubu 2005; Renans 2016b, Renans 2016a; Grubic and Renans 2017).

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23 Note however that whereas the definite determiner *lɛ* in Ga is tonally unspecified but comes with a floating high tone which docks on the preceding syllable (Kropp Dakubu 1992), the third person singular pronoun *lɛ* has a low tone.

(79) Akan:
 Q: *Who went home?*
 A: *Ama nà ɔ̀-kɔ́-ɔ̀   fíé **nó**.*
   Ama PRT 3SG.SBJ-go-COMPL home DET
   'It was AMA who went home.'

(80) Ga:
 Q: *Who is swimming?*
 A: *Kòfí nì sèlè-ɔ́ **lɛ**.*
   Kofi PRT swim-IPFV DET
   'It is KOFI who is swimming.'

In this section, we explore the idea, suggested by an anonymous reviewer, that the presence of *lɛ* and *no* may account for the existence and exhaustivity presupposition of marked focus in Akan and Ga. Under this account, such an element would be present (covertly or overtly) in all cases of marked focus in Akan and Ga, and it would be this element – rather than the particles *nà* and *nì* – which triggers the exhaustivity and existence presuppositions. This would be an interesting account since many analyses of English clefts have analyzed the backgrounded part as underlyingly definite (e.g., Jespersen 1928; Akmajian 1970; Percus 1997; Hedberg 2000; Büring and Križ 2013), attributing the exhaustivity/existence presupposition to the maximality/existence presupposition of a covert definite determiner. The existence of languages with overt definiteness marking of backgrounds would thus strengthen these previous accounts. Nevertheless, we believe that at least for Ga, this alternative analysis cannot be correct.

The main argument against a covert definite determiner in all sentences with the *nì*-structure in Ga comes from the aspectual interpretation of cleft sentences. As demonstrated in (81) and (82) below, while clefted imperfective sentences with VP-*lɛ* in Ga invariably obtain a progressive interpretation, the same sentence without VP-*lɛ* invariably obtains a habitual interpretation.[24]

(81) Ga: (Progressive context: *Tom and his family – wife, two sons, and two daughters – are on the beach. Tom and his wife can see a swimming child. Tom's wife says:*)
 a. *Kòfí nì sèlè-ɔ́ **lɛ**.*
   Kofi PRT swim-IPFV DET
   'It is KOFI who is swimming.'
 b. # *Kòfí nì sèlè-ɔ́.*
   Kofi PRT swim-IPFV
   'It is KOFI who swims.'

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24 For the semantic analysis of the definite determiner *lɛ* in Ga, see Renans (2016b); Renans (2016a); Grubic and Renans (2017).

(82) GA: (Habitual context: *Tom's younger son and daughters do not like swimming and they do not do it, but his oldest son, Kofi, loves swimming and he does it regularly*.)

    a. # *Kòfí nì   sèlè-ɔ́   **lɛ**.*
       Kofi PRT   swim-IPFV DET
       'It is KOFI who is swimming.'

    b. *Kòfí nì   sèlè-ɔ́.*
       Kofi PRT   swim-IPFV   'It is KOFI who swims.'

If there were a covert definite determiner in all clefted sentences, then (81a) and (81b) as well as (82a) and (82b) would have the same semantics and, therefore, they should be acceptable in the same contexts, contrary to fact. The fact that the presence of the overt VP-*lɛ* changes the aspectual interpretation of the sentence together with the observation that sentences without an overt VP- *lɛ* also trigger an exhaustive inference, as it was presented in many examples throughout the paper, make the analysis of the exhaustivity effect triggered by the *nì*-structure as coming from the semantics of *lɛ* untenable.

As for Akan *nà*-structure, the preliminary data show that the clausal determiner *no* in Akan does not interact with the aspectual interpretation of the sentence in the same way as the definite determiner *lɛ* in Ga does.[25] Note, however, that nevertheless the presence of the *no*-clausal determiner is not obligatory in the *nà*-structure. Therefore, we propose that the analysis of the exhaustivity of this structure as being induced by the presence of *nà* is more parsimonious than the idea that the exhaustivity effect comes from a covert clausal determiner.

Furthermore, the *=i/ye* marker in Ngamo could, in principle, also be seen as a kind of VP- or TP-determiner, since it stems from the homophonous definite determiner *=i/ye*, and forms a constituent with the backgrounded part of marked focus/background constructions in Ngamo (Schuh 2005). Nevertheless, these constructions do not trigger exhaustivity/existence presuppositions, even though the definite determiner in the nominal domain gives rise to maximality and existence presuppositions (see Grubic and Renans 2017 for a discussion of this).

9 Summary

In this paper, we discussed the semantics of the morpho-syntactically marked focus/background constructions in Akan, Ga, and Ngamo. Our findings suggest that the marked focus/background construction is contrastive in Akan and Ga, but not in Ngamo. We also observed that in all three languages the marked construction triggers an exhaustive inference. However, closer scrutiny reveals that this effect is not alike in the languages under consideration. The implemented diagnostics suggest that whereas the exhaustive inference in Akan and Ga is presupposed, it is conversationally implicated in Ngamo. Moreover, while the

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25 However, in order to draw definite conclusions regarding the aspectual reference in Akan and the semantics of *no* more field research has to be conducted which we plan to do in our future research.

Akan *nà*-construction and the Ga *nì*-construction trigger an existence presupposition, the Ngamo *=i/ye* construction does not.

The paper provides empirical evidence for the variety of different ways in which focus can be expressed and interpreted, cross-linguistically. It also identifies and discusses different empirical diagnostics designed for examining exhaustivity and existence inferences, with the aim of contributing to the understanding of the semantics of focus constructions in under-studied languages.

Acknowledgments

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