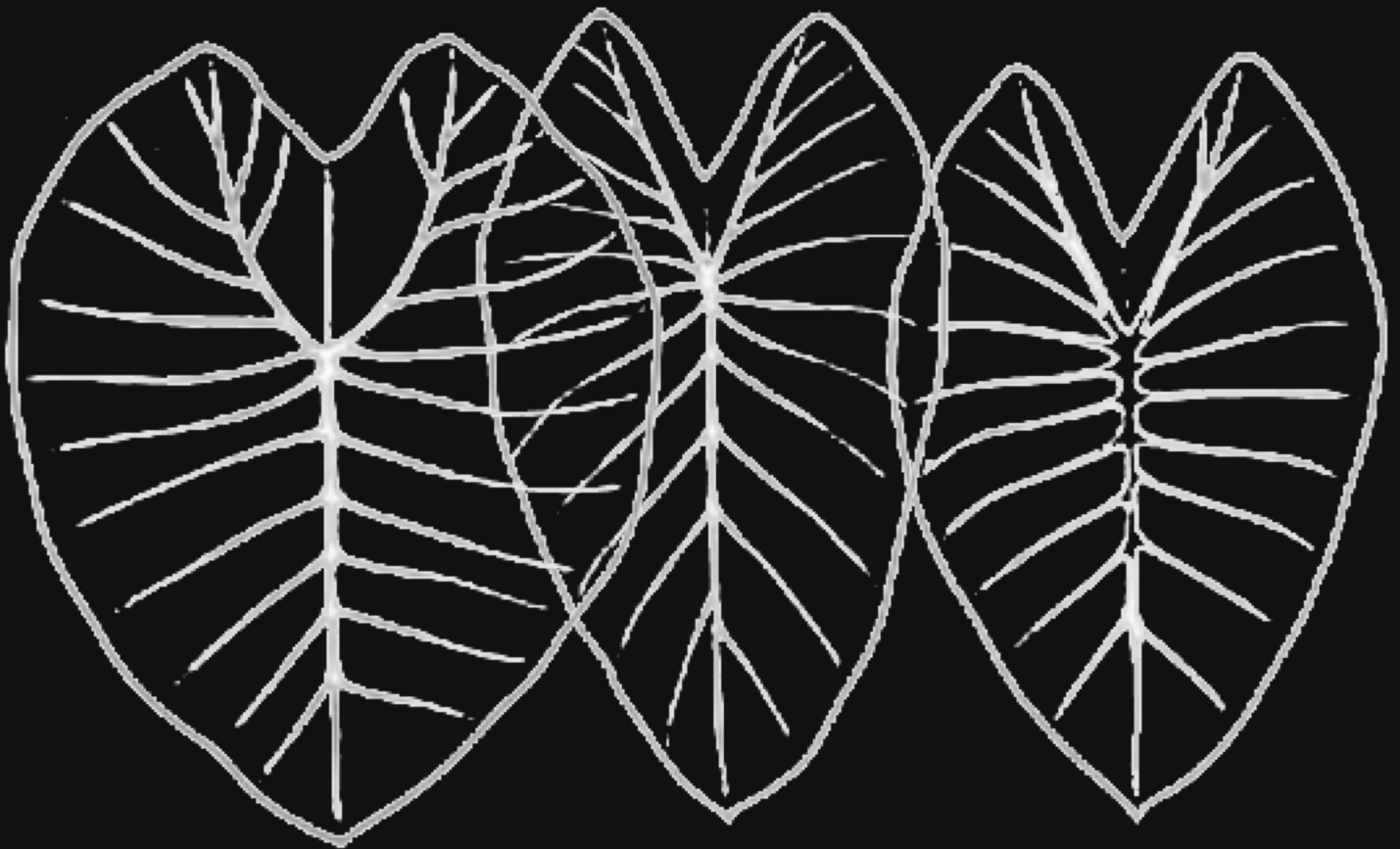


Proceedings of TripleA 3

Fieldwork Perspectives on the
Semantics of African, Asian and Austronesian Languages



Ed. by Vera Hohaus & Wanda Rothe

*Proceedings of TripleA 3:
Fieldwork Perspectives on the Semantics of African, Asian and Austronesian Languages*

Edited by Vera Hohaus & Wanda Rothe
2017 Universitätsbibliothek Tübingen, Publikationssystem

<https://publikationen.uni-tuebingen.de/xmlui/handle/10900/73437>

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Taro illustrations from Leo D. Whitney, F. A. I. Bowers & M. Takahashi (1939),
"Taro Varieties in Hawaii", *Hawaii Agricultural Experiment Station Bulletin* 84, Fig. 2, p. 15.
<https://scholarspace.manoa.hawaii.edu/handle/10125/4327>

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Reduplicated Indefinites in Gã: Concord or Polarity?¹

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Abstract. In Gã, indefinite DPs can undergo reduplication in the presence of negation. On the basis of a number of diagnostics, we argue that reduplicated indefinites in Gã pattern more closely with negative polarity items than with negative concord. Since they are only licensed by clausemate negation, we conclude that reduplicated indefinites are best analyzed as (super)strong, strict NPIs.

1 Introduction

In Gã (Niger-Congo: Ghana), indefinite DPs can occur with or without negation as shown in (1a). However, when an indefinite is reduplicated as in (1b), negation becomes obligatory.

- (1) a. Kwei tsé-(éé) mɔ-ko.
 Kwei call-NEG person-INDEF
 ‘Kwei did(n’t) call someone.’
 b. Kwei tsé-*(éé) mɔ-ko mɔ-ko.
 Kwei call-NEG person-INDEF person-INDEF
 ‘Kwei didn’t call anybody.’

In this paper, we are interested in the nature of the unidirectional dependency between reduplication and negation. Given what we know cross-linguistically about negative constructions, there are two plausible analyses of reduplicated indefinites (RIs): either reduplication is triggered by negative concord or reduplicated indefinites are actually negative polarity items (NPIs). Based on a number of diagnostics introduced by Giannakidou (2000a,b, 2006), we show that the quantificational force of RIs is existential, rather than universal. Furthermore, RIs fail a number of crucial n-word diagnostics such as the fragment answer test, leading to the conclusion that these are polarity items. It will be shown that RIs differ from weak *any*-type NPIs with regard to NEG-raising, but appear to require a anitomorphic licensers, suggesting that they superstrong, strict NPIs.

2 Background on Gã

2.1 Morphophonology of Gã

Gã is a Kwa language spoken by about five hundred thousand people in southern Ghana, particularly in Accra the capital region. It has two phonemic tones: high (2a) and low tones (unmarked here) (2b) and basic SVO order.

¹For comments, suggestions, discussion and criticism, we would like to thank Chris Collins, Leland Kusmer, Jason Merchant, Sandhya Sundaresan and Hedde Zeijlstra as well as the participants of the ‘Replicative Processes in Grammar’ workshop in Leipzig, GLOW 39 in Göttingen, ACAL 47 at the University of California, Berkeley and TripleA 3 at the University of Tübingen.

- (2) a. Kwei na **lá**.
Kwei see blood
'Kwei saw blood.'
- b. Kwei na **la**.
Kwei see fire
'Kwei saw fire.'

Tense/aspect/mood (TAM) is realized by inflection on the verb. Uninflected verbs generally have aorist readings/past-like reading.

(3) TAM marking in *Gã*

TAM	AFFIX	EXAMPLE	GLOSS
Aorist/Past		tsáké	'changed'
Habitual		tsáke-ɔ	'changes'
Progressive		(m)ii-tsáké	'is changing'
Future		baá-tsáké	'will change'
Perfective		é-tsáké	'has changed'
Imperative		tsáké-mɔ	'change!'
Subjunctive		á-tsáké	'should change'

2.2 Negation in *Gã*

Clausal negation in *Gã*, just like many of its neighbours, is marked via affixation on a verbal element. In constructions where there is only one verbal element, negation is marked on the sole verb in the clause, as in (4).

- (4) a. Kwei é-ná shía.
Kwei PERF-get house
'Kwei has got a house.'
- b. Kwei ná-ko shía.
Kwei get-NEG.PERF house.
'Kwei hasn't gotten a house.'

However, in constructions where there is an 'auxiliary verb', such as *nyɛ* in (5), the marking of negation is possible only on the auxiliary verb.

- (5) a. Kwei é-nyé é-ná shía.
Kwei PERF-able 3SG.NOM-get house
'Kwei has been able to get a house.'
- b. Kwei nyé-ko é-ná(*ko) shía.
Kwei able-NEG.PERF 3SG.NOM-get-NEG.PERF house
'Kwei hasn't been able to get a house.'

The morphology of the negation marker seems to interact with the tense, aspect, and mood (TAM) properties of the construction. The table in (6) presents a general picture of the relevant affixes for marking negation in *Gã* (see Kropp Dakubu 2008:96, Renans 2016:42).

(6) *Clausal negation affixes in Gã*

TAM	AFFIX	EXAMPLE	GLOSS
Aorist/Past	-ǂǂ	ná- ǂǂ	‘didn’t get’
Habitual	-ǂǂ	ná- ǂǂ	‘doesn’t get’
Progressive	-ǂǂ	ná- ǂǂ	‘isn’t getting’
Future	-ŋ	ná- ŋ	‘won’t get’
Perfective	-ko	ná- ko	‘hasn’t got’
Imperative	kaá-	kaá -ná	‘don’t get’
Subjunctive	áká-	áká -ná	‘shouldn’t get’

2.3 Reduplicated Indefinites

Indefinite DPs may also be reduplicated. This interestingly results in (what we think) is the formation of negative polarity items .

- (7) a. Kwei tsé*(-ǂǂ) *gbékéko-gbékéko*.
Kwei call-NEG child.INDEF-RED
‘Kwei didn’t call any child.’
- b. *Gbékéko-gbékéko* tsé*(-ǂǂ) Kwei.
child.INDEF-RED call-NEG Kwei
‘No child called Kwei.’

In (7), the negation suffix cannot be omitted because of the reduplicated DPs. Note however that negation may occur with an unreduplicated indefinite DP (8).

- (8) Kwei tsé(-ǂǂ) *gbéké ko*.
Kwei call-NEG child INDEF
‘Kwei did(n’t) call some (particular) child.’

This NPI formation strategy is as productive as other reduplication strategies in the language. For instance, any indefinite DP may be reduplicated for this effect i.e. by combining a bare noun and the indefinite determiner.

(9) *Productivity of reduplicated NPIs in Gã*

BASE	GLOSS	RED	GLOSS
<i>mɔ ko</i>	‘a person/someone’	<i>mɔko-mɔko</i>	‘anybody/nobody’
<i>nó kó</i>	‘a thing/something’	<i>nókó-nókó</i>	‘anything/nothing’
<i>hé kó</i>	‘a place/somewhere’	<i>hékó-hékó</i>	‘anywhere/nowhere’
<i>bee ko</i>	‘a time/some time’	<i>beeko-beeko</i>	‘anytime/ no time’
<i>gbi ko</i>	‘a day/some day’	<i>gbiko-gbiko</i>	‘anyday/ no day’
<i>shía ko</i>	‘a house/some house’	<i>shíako-shíako</i>	‘any house / no house’

Indefinites are often formed by the reduplication of wh-words (Haspelmath 1997). However, it is relatively rare that negative polarity items are formed by reduplicating indefinites. Cable (2009)

gives the following example from the Nilotic language Dholuo, however.

- (10) Ok achámo gi mo(o) a-mor(o)-a
 NEG I.eat thing some RED-some-RED
 ‘I didn’t eat anything.’ (Dholuo; Cable 2009:12)

2.4 Analytical Options

There are essentially two analytical options when it comes to reduplicated indefinites in Gã. The first would be to claim that reduplication is a case of negative concord (NC) where the reduplication is a reflex of morphosyntactic agreement (11). The alternative would be to treat reduplicated indefinites as negative polarity items requiring negation as a licenser (12).

- (11) *RIs as negative concord:*
 [NEG ... [DP RED_[NEG] wolo ko]]
 ↑ Negative concord ↑
- (12) *RIs as polarity sensitivity:*
 [NEG ... [DP wolo ko wolo ko]_[NPI]]
 NPI licensing

3 Negative Concord

Let us first consider the possibility that RIs are instances of negative concord. The literature on negative concord typically distinguishes between two types of negative concord languages: strict vs. non-strict NC languages (cf. Laka 1990; Zanuttini 1991; Haegeman and Zanuttini 1991; Haegeman 1995; Giannakidou 1998, 2000a,b, 2006; Zeijlstra 2004; Penka 2011). There are some core properties distinguishing strict NC languages such as Polish from non-strict NC languages such as Italian and Spanish. If RIs in Gã were indeed instances of negative concord, we would expect them to pattern with either strict or non-strict NC languages. In fact, we will see that if anything they are more akin to the former.

Unlike in non-strict NC languages, sentential negation is obligatory in subject n-words in strict NC languages such as Polish. Furthermore, n-words do not trigger double negative readings (Blaszczak 2001). We also see that this is the case for Gã, RIs subjects require verbal negation but do not contribute additional negation (13).

- (13) *Nuu-ko nuu-ko bá*(-áá).*
 man-INDEF man-INDEF come-NEG
 ‘No man came.’ (≠ ‘No man didn’t come.’)

The same is also true for clauses with multiple RIs (14).

- (14) *Mɔ-ko mɔ-ko ná*(-áá) nɔ-kó nɔ-kó.*
 person-INDEF person-INDEF get-NEG thing-INDEF thing-INDEF
 ‘Nobody got anything.’

Finally, only strict NC languages do not allow n-words to occur in non-negated polar interrogatives (Giannakidou 2000b:488). Gã RIs also share this property (15).

- (15) Ani o-ná shía-ko (*shía-ko) ?
 Q 2SG.NOM-get house-INDEF house-INDEF
 ‘Did you get a/#any house?’

Thus, if Gã RIs are n-words, then it seems that Gã patterns with strict NC languages such as Polish. However, there are a number of diagnostics showing that n-words in strict NC languages typically involve universal quantificational force (Richter and Sailer 1999; Giannakidou 2006:374). In what follows, we will show that Gã RIs fail most of these diagnostics.

3.1 Diagnostics for n-Words

As discussed by Zeijlstra (2004), there are two denotations for sentences with n-words that are logically equivalent, one involving existential quantification (16a) and the other involving universal quantification (16b).

- (16) Nobody came
 a. $\neg\exists x. \text{person}(x) \wedge \text{came}(x)$
 b. $\forall x. \text{person}(x) \rightarrow \neg\text{came}(x)$

Giannakidou (2000a,b, 2006) claims that both types of n-words exist, and Greek makes the distinction between them. What she calls emphatic n-words (with prominent stress) behave like universal quantifiers, whereas non-emphatic ones do not.

If reduplication were negative concord, we would expect RIs to behave like n-words in a strict NC language (involving universal quantification). (Giannakidou 1998, 2000a,b, 2006) discusses a number of tests that can be used to see whether an n-word is a universal, or an existential quantifier. In the following sections, we will apply some of them to Gã RIs and show that they clearly have existential quantification force and pattern closely with negative polarity items of the *any*-type.

3.1.1 *almost*-Modification

One diagnostic for existential vs. universal n-words is so-called *almost*-modification (Zanuttini 1991; Giannakidou 1998, 2000b). Whereas universal quantifiers such as *everything* can be modified by *absolutely* or *almost* (17a), existential quantifiers such as *something* cannot (17b).

- (17) a. Electra was willing to accept {*absolutely/almost*} everything.
 b. *Electra was willing to accept {*absolutely/almost*} something.

Zanuttini (1991) observes that n-words in Italian can be modified by *quasi* (‘almost’) (18a), whereas NPIs cannot (18b). Thus, n-words seem to pattern with universal quantifiers (Zanuttini 1991:117).

- (18) a. Non ha detto **quasi** niente.
 NEG has said almost n-thing
 ‘He said almost nothing.’
 b. *Non ha detto **quasi** alchunché.
 NEG has said almost anything
 ‘He didn’t say almost anything.’

Giannakidou (2000b, 2006) shows that emphatic n-words in Greek can be modified by *absolutely*, suggesting that they are universal quantifiers:

- (19) Dhen idha **apolitos** {KANENAN/*kanenan}.
 NEG saw.1SG absolutely n-person
 ‘I saw absolutely nobody.’ (Giannakidou 2000b:472)

In Gã, *almost*-modification is difficult since the construction is periphrastic. Furthermore, the *almost*-test itself is potentially problematic for a number of reasons (see Dayal 1998; Blaszczak 2001, 2005; Penka 2006). However, the *absolutely*-modification test is applicable and we observe that RIs in Gã resist modification by *kwataa* (‘absolutely’).

- (20) *absolutely-modification in Gã*
- a. E-bí-í lɛ yóó-ó mɔ-féé-mɔ **kwátáá.**
 3SG.POSS-child-PL DEF recognize-NEG person-all-person absolutely
 ‘His children didn’t recognize absolutely everybody.’
- b. *E-bí-í lɛ yóó-ó mɔ-ko **kwátáá.**
 3SG.POSS-child-PL DEF recognise-NEG person-INDEF absolutely
- c. *E-bí-í lɛ yóó-ó mɔ-ko mɔ-ko **kwátáá.**
 3SG.POSS-child-PL DEF recognise-NEG person-INDEF person-INDEF absolutely

This strongly suggests that RIs have existential quantification force and therefore pattern with NPIs rather than universal n-words in this regard (21).

- (21) *I didn’t see absolutely any student.

3.1.2 Donkey Anaphora

One of Giannakidou’s (1998; 2000b) arguments for n-words being universal quantifiers pertains to their inability to license ‘donkey anaphora’ as in (22) (Lewis 1975; Heim 1982).

- (22) If a farmer owns a donkey_i, he beats it_i.

Greek (emphatic) n-words behave like universal quantifiers (and unlike existentials) in that they cannot bind donkey pronouns.

- (23) I fitites pu exun kati_i / TIPOTA_j na pun, as to_{i/*j} pun tora.
 the students that have something n-thing SUBJ say let it say now
 ‘The students that have anything /*nothing to say should say it now.’

In Gã, the situation is similar. Whereas indefinites can license donkey anaphora (24a), reduplicated indefinites cannot (24b).

- (24) *Donkey anaphora in Gã*
- a. Kéjǐ o-sumó-óó mɔ-kó_i lɛ, kɛé-mó lɛ_i.
 if 2SG.NOM-like-NEG person-INDEF CD, tell-IMP 3SG.ACC
 ‘If you don’t like someone, tell him/her.’
- b. *Kéjǐ o-sumó-óó mɔ-ko mɔ-kó_i lɛ, kɛé-mó lɛ_i.
 if 2SG.NOM-like-NEG person-INDEF person-INDEF CD, tell-IMP 3SG.ACC
 ‘If you don’t like anybody, tell him/her.’

Thus, it would seem that Gã patterns like (universal) n-words, rather than NPIs, in this respect:

(25) *The students that didn't receive any book_i today, will get it_i tomorrow.

There is a slight complication with this, however. Giannakidou (2000b:476) points out that the problem with (25) is that there is no discourse referent that the pronoun can refer to. She points out that there are examples of English negative directives in English, in which *any* can bind a pronoun:

(26) Don't check out any book_i from that (Satanic) library; reading it_i might warp your mind!

However, Greek emphatic, universal n-words do not license them (Giannakidou 2000b:476):

(27) ***Min** agorasis KANENA vivlio_i ; bori na apodixti *pro*_i epikindino
 NEG buy.2SG n-DET book may SUBJ prove dangerous
 'Buy no books: it might be dangerous (if you buy).'

RIs in Gã differ from Greek n-words as they can bind donkey pronouns in negative directives:

(28) a. **Kaá-jwεɪŋ** niyenii le_i he, e_i-hoo-mɔ baá-wá.
 IMP.NEG-think food DEF about 3SG-cook-NOML FUT-hard
 'Don't think about the food, cooking it will be difficult.'
 b. **Kaá-jwεɪŋ** niyenii-ko niyenii-ko_i he, e_i-hoo-mɔ baá-wá.
 IMP.NEG-think food-INDEF food-INDEF about 3SG-cook-NOML FUT-hard
 'Don't think about any food, cooking it will be difficult.'

Again, they differ from universal n-words in this regard. Instead, they pattern with NPIs and existential n-words (cf. Surányi 2008:259 for the same result for Hungarian n-words).

3.1.3 Existential Commitment

Another test involves the fact that universal quantifiers give rise to an existential inference, i.e. their restriction must involve a non-empty set. In a world where unicorns do not exist, it is odd to utter (29) in Greek.

(29) #I Cleo dhen idhe *kathe monokero*.
 the Cleo not saw every unicorn
 'Cleo did not see every unicorn.'
 ⇒ There are unicorns. (Giannakidou 2006:346)

Furthermore, (emphatic) n-words in Greek behave like universal quantifiers in that they cannot have an empty restriction.

(30) #I Cleo dhen idhe *KANENAN monokero*.
 the Cleo not saw n-DET unicorn
 'Cleo didn't see any unicorns.'
 ⇒ There are unicorns. (Giannakidou 2006:346)

In Gã, the situation is different. Whereas universal quantifiers have an existential commitment for

their restriction (31a), reduplicated indefinites do not (31b).

- (31) a. #Mí-ná-áá sísa-féé-sisa, sísa bé jeŋ.
 1 SG-see-NEG ghost-all-ghost ghost LOC.NEG world
 ‘I didn’t see every ghost, ghosts don’t exist.’
 b. Mí-ná-áá sísa-ko sísa-ko, sísa bé jeŋ.
 1 SG-see-NEG ghost-INDEF ghost-INDEF ghost LOC.NEG world
 ‘I didn’t see any ghosts, ghosts don’t exist.’

As such, RIs in Gã do not pattern like universal quantifiers/n-words, but rather like NPIs.

- (32) a. John did not see every unicorn, #because unicorns don’t exist.
 b. John did not see any unicorns, because unicorns don’t exist.

3.1.4 Clause Boundedness

As shown in (33) and (34), negative concord is typically assumed to be clause-bound:

- (33) *No dije [CP que había nada en el frigorífico].
 NEG said.1SG that there.was n-thing in the fridge
 ‘I didn’t say that there was anything in the fridge.’ (Spanish; Penka 2011:26)
 (34) *Paula nu a spus [CP ca ii place nimic].
 Paula NEG has said that CL.DAT likes nothing
 ‘Paula didn’t say that she likes anything’ (Romanian; Fălăuș 2007:146)

Giannakidou claims that this is because the relevant n-words are universal quantifiers which have to undergo quantifier raising (QR) (a process that is also clause bound). In Gã, RIs in an embedded clause are not licensed by matrix negation (35).

- (35) Kwei le-éé [CP áké Dede ná shí-ako (*shía-ko)].
 Kwei know-NEG COMP Dede get house-INDEF house-INDEF
 ‘Kwei didn’t know that Dede got a /#any house.’

This makes RIs unlike *any*-NPIs, which can be licensed by negation across a clause boundary:

- (36) I didn’t say [CP that John bought *anything*].

However, as we will see in Section 4, this may also indicate that RIs are a different class of NPIs with stronger licensing requirements. This is supported by the fact that embedded RIs are possible under NEG-raising predicates:

- (37) Dede súsú-úú [CP áké Kwei na wolo-ko wolo-ko].
 Dede imagine-NEG COMP Kwei see book-INDEF book-INDEF
 ‘Dede didn’t imagine that Kwei saw any book.’

This is problematic under the view that RIs are (universal) n-words since we would not expect NEG-raising to affect clause-boundedness of quantifier raising.

3.1.5 Fragment Answers

The possibility for an n-word to occur as a fragment answer is regarded as one of the primary diagnostics for n-wordhood (Zanuttini 1991; Bernini and Ramat 1996; Haspelmath 1997). Both strict and non-strict NC languages allow for n-words as fragment answers. The ability for an n-word to appear as a fragment answer clearly distinguishes it from NPIs, as seen in the following Spanish examples from Herburger (2001:300):

- (38) A: A quién viste? B: A *nadie* B': *A *un alma*
 to who sag.2SG to n-person to a soul
 'Who did you see?' 'Nobody.' 'A soul.'

Revealingly, Gã does not allow for RIs to occur as fragment answers:

- (39) A: Námɔ ni Kwei na? (40) A: Méni ni laájé?
 who FOC Kwei see what FOC lose
 'Who did Kwei see?' 'What got lost?'
 B: *mɔ-ko* (**mɔ-ko*) B: *nó-kó* (**nó-kó*)
 person-INDEF person-INDEF thing-INDEF thing-INDEF
 'Someone.' / *'No-one.'

This behaviour is parallel to *any*-NPIs which are also impossible as fragment answers (41).

- (41) A: Who did John see?
 B: *Anybody.

Once again, RIs pattern with *any*-NPIs rather than n-words regarding this crucial diagnostic.

3.2 Interim Summary

The broader picture, based on Giannakidou's (2006) diagnostics for n-words vs. NPIs, gives the following results for reduplicated indefinites in Gã:

- (42) *Summary of properties of RIs in Gã:*

DIAGNOSTIC	N-WORDS		Gã	<i>any</i> -NPIs
	∃	∀		
clause boundedness	✗	✓	✓	✗
existential commitment	✗	✓	✗	✗
<i>almost</i> -modification	✗	✓	✗	✗
donkey anaphora	✓	✗	✓	✓
predicate nominal	✓	✗	N/A	✗
fragment answer	✓	✓	✗	✗
island sensitivity	✗	✓	✓	✓

As is clear from the table in (42), RIs do not pattern neatly with either type of n-word (existential or universal). In addition, since Gã would have to be a strict NC languages, there is no evidence for reduplicated indefinites bearing negative features at all (e.g. that could give rise to double negative readings). Furthermore, they fail the fragment answer test, which is the crucial diagnostic for n-words. As such, it seems reasonable to conclude that it is unlikely that RIs are instances of negative concord.² Instead, they show a number of similarities to *any*-NPIs. In the following section, we argue for the view that reduplicated indefinites are actually negative polarity items.

4 Gã Reduplicated Indefinites as Superstrong, Strict NPIs

We saw previously that RIs in Gã pattern very closely to NPIs of the *any*-type with the exception of clause-boundedness. Unlike English *any*, RIs seem to require a strictly local, clausemate licenser:

- (43) a. Kwei le-éé [CP ákɛ Dede ná *shí-ako* (**shía-ko*)].
 Kwei know-NEG COMP Dede get house-INDEF house-INDEF
 ‘Kwei didn’t know that Dede got a /#any house.’
 b. Kwei le [CP ákɛ Dede ná-áá *shía-ko shía-ko*].
 Kwei know COMP Dede get-NEG house-INDEF house-INDEF
 ‘Kwei knows that Dede didn’t get any house.’

In this way, they are more similar to so-called ‘strict’ NPIs such as *at all* in English, which are also not licensed by negation in a higher clause (44b).

- (44) a. I didn’t claim that John liked *anything* about her performance.
 b. *I didn’t claim that John liked her performance *at all*.

Furthermore, strict NPIs in English are licensed by negated variants of certain NEG-raising predicates such *think* and *believe* (45) (see Gajewski 2005, 2007; Collins and Postal 2014).

- (45) I didn’t think that John liked her performance *at all*.

Interestingly, NEG-raising also seem to exist in Gã. NR-predicates such as *imagine* and *think* can license an RI in the embedded clause, which strongly suggests that they are in fact strict NPIs (46).

- (46) Dede súsú-úú [CP áké Kwei na *wolo-ko wolo-ko*].
 Dede imagine-NEG COMP Kwei see book-INDEF book-INDEF
 ‘Dede didn’t imagine that Kwei saw any books.’

Following Ladusaw (1980), *any*-NPIs are also classified as ‘weak’ NPIs that are licensed in so-called ‘downward entailing’ environments (the so-called *Ladusaw/Fauconnier Generalization*):

²Sometimes, the possibility for an item to occur in ‘preverbal’ (i.e. subject) position is used a diagnostic for n-words (see e.g. Vallduví 1994; Watanabe 2004). However, since there are languages with subject NPIs such as Hindi, Japanese and Korean (see Nakao and Obata 2007; Mahajan 1990), we will not be able to reliably distinguish between NPIs and negative concord on the basis of this property.

- (47) A function f is *downward entailing* iff for all X, Y in the domain of f :
 $X \subseteq Y \rightarrow f(Y) \subseteq f(X)$

In (48), we see that NPIs involving *any* are licensed in the canonical downward entailing contexts discussed in Lahiri (1998) (but cf. von Stechow 1999):

- (48) a. *Polar questions*:
 Are they are *any* questions?
 b. *Surprise-predicates*:
 I was surprised that *any* students came.
 c. *before-clauses*:
 I left before *any* of my friends noticed.
 d. *Restriction of a universal quantifier*:
 Every student who knows *any* economics will tell you that this is a bad idea.
 e. *Scope of only*:
 Only JOHN read *any* papers on negative concord.
 f. *Antecedent of a conditional*:
 If you hear *anything* about Jane, let me know.

However, the following examples show that none of these contexts are able to license RIs in Gã:

- (49) *Polar questions*

Ani o-ná shía-ko (*shía-ko)?
 Q 2SG.NOM-get house-INDEF house-INDEF
 ‘Did you get a/#any house?’

- (50) *Surprise-predicates*

E-feé mi naakpɛɛ áké o-ná shía-ko (*shía-ko).
 3SG.NOM-do 1SG surprise COMP 2SG.NOM-get house-INDEF house-INDEF
 ‘It surprised me that you got a /#any house.’

- (51) *Before-clauses*

Kwei hé shikpónj lé dání e-ná shía-ko (*shía-ko).
 Kwei buy land DEF before 3SG.NOM-get house-INDEF house-INDEF
 ‘Kwei bought the land before he got a /#any house.’

- (52) *Restriction of a universal quantifier*

Mɔ-féé-mɔ ní ná shía-ko (*shía-ko) lé jɛ La.
 person-all-person REL get house-INDEF house-INDEF CD be.from La
 ‘Everybody who got a /#any house comes from La.’

- (53) *Scope of ‘only’*

La-bíí pé ni ná shía-ko (*shía-ko).
 La-folks only FOC get house-INDEF house-INDEF
 ‘Only La folks got a /#any house.’

(54) *Antecedent of a conditional*

Ké jí o-ná shía-ko (*shía-ko) lé, kéé-mó mí.
 if 2SG.NOM-get house-INDEF house-INDEF CD tell-IMP 1SG
 ‘If you get a/#any house, tell me.’

The conclusion we can draw from this is that RIs additionally differ from weak, *any*-type NPIs in having stronger licensing requirements. Following van der Wouden (1997); Zwarts (1998), we can categorize NPIs by the ‘strength’ of the negation required to license them based on the additional definitions of *anti-additive* (55) and *antimorphic* contexts (56).

(55) *Anti-additive:*

$f(X \cup Y) \leftrightarrow f(X) \cap f(Y)$
 (nobody, no student, nothing)

(56) *Antimorphic:*

$f(X \cup Y) \leftrightarrow f(X) \cap f(Y) \wedge$
 $f(X \cup Y) \leftrightarrow f(X) \cup f(Y)$
 (not)

Together with downward entailment, these contexts form the hierarchy of the licensing contexts for NPIs shown in Figure 1. These are in a containment relation such that the DE contexts are a superset of anti-additive and antimorphic contexts. As such, weak NPIs are licensed in DE contexts which are also licensed in anti-additive and antimorphic contexts.

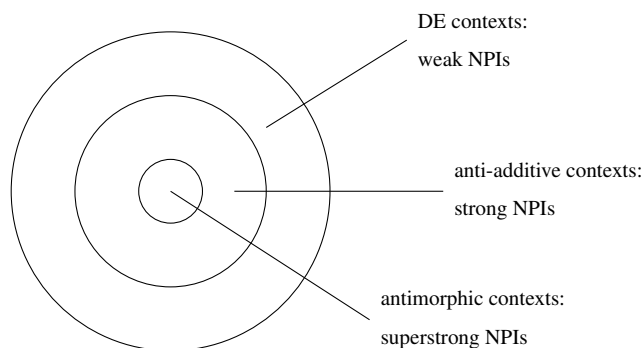


Figure 1: Classes of NPI (Penka 2011:25)

On the other hand, strong NPIs such as ‘punctual *until*’ are licensed in anti-additive environments (with the negative quantifier *no students*) (57a), but not in DE environments (*few students*) (57b).

- (57) a. No students left *until* their birthday.
 b. ??Few students left *until* their birthday. (Gajewski 2011:112)

The relevant question for RIs in Gã would then be whether they are licensed by anti-additive contexts (under negative quantifiers and clausal negation) or antimorphic contexts (only clausal negation). Unfortunately, this is impossible to test since anti-additive negative quantifiers such as *nobody* or *no student* are expressed by clause negation and a reduplicated indefinite subject (58).

- (58) *Mɔ-ko mɔ-ko ná*(-áá) nɔ-kó nɔ-kó.*
 person-INDEF person-INDEF get-NEG thing-INDEF thing-INDEF
 ‘Nobody got anything.’

Thus, the distinction between anti-additive and antimorphic environments is not relevant in Gã.³ The fact that reduplicated indefinites are only licensed by sentential negation means we can safely classify them as NPIs of the superstrong type.

While it may seem strange to explain the dependency of RIs on negation as polarity if only negation is a licenser, it can be shown that Gã imposes the same licensing requirements on other (non-reduplicated) NPIs. Consider *péŋ*, the equivalent of the English weak NPI *ever*:

- (59) *Kwei yé*(-ko) ótsí yɛ maŋ néé mli péŋ.*
 Kwei spend-NEG.PERF one.week at town DEM inside ever
 ‘Kwei hasn’t ever spent a week in this town.’

What we see is that this NPI, despite being a weak NPI in English, is not licensed in typical DE environments such as polar questions (60a) or the antecedent of conditionals (60b).

- (60) a. *Ani Kwei yóó julɔ lɛ (*pɛŋ)?*
 Q Kwei recognise thief DEF ever
 ‘Did Kwei ever recognise the thief?’
 b. *Kɛji e-yóó julɔ lɛ (*pɛŋ), kɛ-mɔ mi.*
 if 3SG-recognise thief DEF ever tell-IMP 3SG.ACC
 ‘If he ever recognises the thief, tell me.’

Instead, it is only licensed by the strong possible negative context (antimorphic) just like reduplicated indefinites. We can therefore conclude that Gã lacks weak NPIs altogether (cf. Collins et al. 2015 for the same claim for Ewe).

5 Conclusion and Open Questions

This paper has investigated the properties of reduplicated indefinites in Gã, which are only licit in the presence of clausal negation. Given two possible hypotheses about the nature of this dependency, concord and polarity, we have shown that RIs are best understood as negative polarity items. On the basis of a number of traditional diagnostics for n-words, we have shown that RIs do not share the core properties of n-words in negative concord languages. Instead, we have argued that RIs are superstrong, strict negative polarity items and therefore are only licensed in the presence of clausemate negation.

There are a number of other interesting restrictions on reduplicated indefinites that were not addressed here. For example, while indefinite plurals are possible in conjunction with negation (61a), their reduplicated NPI counterparts are not (61b).

³However, we have seen that Gã has NEG-raising. If one follows Gajewski (2005, 2007) in assuming that negated NEG-raising predicates create an anti-additive context, then this may be a clue to their licensing conditions. However, there are a number of alternative syntactic approaches to NEG-raising involving movement (e.g. Guerzoni 2007; Collins and Postal 2014) and binding (e.g. Progovac 1994).

- (61) a. Kwei ná-áá kwakwé-i ko-mei.
 Kwei get-NEG mouse-PL INDEF-PL
 ‘Kwei didn’t get some mice.’
- b. *Kwei ná-áá kwakwé-i ko-mei kwakwé-i ko-mei.
 Kwei get-NEG mouse-PL INDEF-PL mouse-PL INDEF-PL
 ‘Kwei didn’t get any mice.’

This is a rather puzzling restriction that we think may be related to the fact that indefinite plurals in Romance languages such as Spanish have been argued to be positive polarity items that are not possible in the scope of negation (see Martí 2008).

Finally, there is still the question of how reduplication is linked to polarity. One option is that whatever additional structure turns an indefinite into an NPI could be realized as the RED morpheme (McCarthy and Prince 1995), however there are other feasible approaches. In sum, reduplicated indefinites in Gã still pose a number of interesting questions for both the syntax/semantics and syntax/phonology interface.

Abbreviations Used in Glosses

1,2,3	First/Second/Third Person	NOML	Nominalizer
ACC	Accusative	NOM	Nominative
CD	Clausal Determiner	PST	Past
CL	Clitic	IMP	Imperative
COMP	Complementizer	INDEF	Indefinite
DAT	Dative	PERF	Perfective
DEF	Definite	PL	Plural
DEM	Demonstrative	POSS	Possessive
DET	Determiner	Q	Question Particle
FOC	Focus	REL	Relativizer
FUT	Future	SG	Singular
LOC	Locative	SUBJ	Subject
NEG	Negation		

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