

From reduplication to polarity in Gã

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1 Introduction

Claim: There are instances in Gã (Kwa: Niger-Congo) where two indefinite DPs are repeated in succession. Interestingly, these DPs have typical NPI properties. On the surface, they seem to be ordinary cases of morphological doubling i.e. reduplication. But I will argue that:

- ☞ they may as well be an instance of pronouncing two adjacent copies of the same syntactic object, and thus this surface doubling could be wholly derived in narrow syntax, without recourse to PF.
- The quest to have the [*POL:□*] and [*INDEF:□*] features valued leads to the creation of multiple copies.
- In the case of object NPIs, all copies of the indefinite DP are pronounced as if they are linearly adjacent, and this is what appears to be reduplication on the surface.

1.1 Structure of talk:

- 2 Reduplication/NPIs in Gã
- 3 Analysis
- 4 An alternative analysis
- 5 Conclusion

2 Reduplication & NPI-hood

- (1) typifies the relevant data in this discussion. First, it shows a repetition of a morpho-syntactic unit (1-a). Second, it seems it is illicit to have this doubling without negation (1-b).

(1) *Indef DP NPIs*

- a. Kwei é-ná-áá **mɔko-mɔko**.
K NEG-see-NEG someone-RED
'Kwei didn't see anybody.'
- b. *Kwei na **mɔko-mɔko**.
K see someone-RED

- But when we compare (1-a) and (2), we observe that the former shows reduplication of constituents that otherwise do not require negation before they can occur in constructions e.g. (2-a).

(2) *Non-NPIs indef DPs*

- a. Kwei na **mɔ-kɔ**.
K see person-INDEF
'Kwei saw somebody.'
- b. Kwei é-ná-áá **mɔ-kɔ**.
K NEG-see-NEG person-INDEF
'Kwei didn't see anybody.'

- They display properties of both reduplication and NPI.

2.1 A case for reduplication

- Reduplication is a productive morphological process in Gã. It may be total(3-a) or partial (3-c), and as in many languages e.g. see Balusu & Jayaseelan (2013); Frampton (2009), it may be used to instantiate various semantic effects e.g. intensity and pluractionality, as illustrated in (3).

(3) *Other kinds of reduplication in Ga*

NON-RED	GLOSS	RED	GLOSS
a. oyá	'quick'	oyá-oyá	'quickly'
b. tsélé	'torn'	tsélé-tsélé	'totally torn'
c. mǎ	'build'	mǎ-mǎ	'build severally'

2.2 A case for NPI-hood

- The data so far suggest that this kind of reduplication is only possible in the context (in the scope) of negation. I would thus treat them as an NPIs.
- This is also possible when we compare them to the *any* series in English (4).

(4) *NPIs in Ga*

INDEF DP	NPI
a. mɔ ko 'a person/ someone'	mɔko-mɔko 'anybody/ nobody'
b. nɔ ko 'a thing/ something'	nɔko-nɔko 'anything/ nothing'
c. hé kó 'a place/ somewhere'	hékó-hékó 'anywhere/ nowhere'
d. bee ko 'a time/ sometime'	beeko-beeko 'anytime/ notime'
e. gbi ko 'a day/ someday'	gbiko-gbiko 'anyday/ noday'

- But unlike NPIs in languages like English e.g. **Anybody didn't see John* Gã has both object and subject (5) NPIs. In this respect i.e. having subject NPIs, Gã may be likened to Basque, Hindi (Lahiri, 1998), Japanese, Korean, and Tamil.

(5) *Subject NPIs*

- a. **Mɔko-mɔko** é-ná-áá Kwei.
 someone-RED NEG-see-NEG K
 ‘Nobody saw Kwei.’
- b. ***Mɔko-mɔko** na Kwei.
 someone-RED see K
- c. **Mɔ-ko** é-ná-áá Kwei.
 person-INDEF NEG-see-NEG K
 ‘Nobody saw Kwei.’
- d. **Mɔ-ko** na Kwei.
 person-INDEF see K
 ‘Somebody saw Kwei.’

- A strong case for their NPI-hood can also be established based on the downward entailing (DE) test (Ladusaw, 1979). (6) exemplifies DE outside the scope of NPI.

(6) *Non-NPIs and DE*

- a. John owns a red bike → John owns a bike.
 b. John owns a bike ↗ John owns a red bike.

- According to Ladusaw (1996), in the contexts of NPIs, the DE relationship is reversed. e.g. compare (7-a) and (7-b). The Gã data shows similar properties as in (8).

(7) *NPIs and DE*

- a. Nobody owns a red bike ↗ Nobody owns a bike.
 b. Nobody owns a bike → Nobody owns a red bike.

(8) *DE in Gã NPIs*

- a. **Mɔko-mɔko** é-ná-áá tso wulu ko.
 someone-RED NEG-see-NEG tree big INDEF
 ‘Nobody saw a big tree.’
- b. ↗**Mɔko-mɔko** é-ná-áá tso ko.
 someone-RED NEG-see-NEG tree INDEF
 ‘Nobody saw a tree.’
- c. **Mɔko-mɔko** é-ná-áá tso ko.
 someone-RED NEG-see-NEG tree INDEF
 ‘Nobody saw a tree.’
- d. →**Mɔko-mɔko** é-ná-áá tso wulu ko.
 someone-RED NEG-see-NEG tree big INDEF
 ‘Nobody saw a big tree.’

2.3 Related morpho-syntactic properties

(9) *Some morpho-syntactic properties*

INDEF DP		NPI	
a. shía ko	‘a house’	*shía ko-shia	
b. shía ko	‘a house’	shía ko-shia ko	‘no house’
c. dátrefónyo ko	‘a doctor’	dátrefónyo ko-dátrefónyo ko	‘no doctor’
d. shía agbo ko	‘a big house’	shía agbo ko-shía agbo ko	‘no big house’
e. shía agbo ko	‘a big house’	*shía agbo ko-shía ko	
f. shía le	‘the house’	*shía-le-shia-le	
g. shía-i ko-mei	‘some houses’	*shíai komei-shíai komei	

- From (9), the following can be observed:
 - Only indefinite DPs allow this process(9-f).
 - Plural indefinite DPs are blocked (9-g).
 - Syntactic constituents are targeted (9-a&e).
- (i) is consistent with observations in the literature i.e. that indefiniteness is usually associated with negative polarity given that what marks indefiniteness in many languages is usually morphologically akin to the marker for the numeral "one". Thus indefiniteness in some languages mean *not even one*. (See also Haspelmath (1997)).
- This perhaps explains why plural indefinite DPs (in this case) may be blocked from becoming NPIs. Crucially, it may thus not be trivial that the form of the indefinite marker here i.e. *ko*, may be comparable to the numeral *e – ko* ‘one’ in the language.
- (iii) speaks to the issue of syntactic reduplication (Kimper, 2008). Constituents bigger than a word e.g. (9-e) may undergo such processes as a unit.
- Another interesting observation is that the form of the negative marker depends on the tense/aspect, and all are inflected on the verb. So we get SV(-tense.negation)O. This is not exclusive to NPIs. Thus compare (10-a) (in the future) with (10-) (in the perfective aspect).

- (10) a. Kwei **é-ná-ŋ** moko-moko.
 K NEG-see-NEG someone-RED
 ‘Kwei won’t see anybody.’
- b. Kwei **é-ná-ko** moko-moko.
 K NEG-see-NEG someone-RED
 ‘Kwei hasn’t seen anybody.’

- There are other NPIs in Gã that are not formed via indef. DP reduplication.

- (11) a. Kwei **hã-aa** Aku shéleŋ.
 K give-NEG A. shilling
 ‘Kwei didn’t give Aku a dime.’
- b. *Kwei **hã** Aku sheleŋ.
 K give A. shilling
 ‘#Kwei gave Aku a dime.’

- A similar phenomenon is reported in Dholuo, spoken in south-western Kenya.

- (12) *NPI-reduplicatioin in Dholuo* Cable (2009, 12)
- a. Ok achámo **réch a-réch-a**
 NEG I.eat fish RED-fish-RED
 ‘I didn’t eat any fish.’
- b. Ok achámo gi **.mo(o) a-mor(o)-a**
 NEG I.eat thing some RED-some-RED
 ‘I didn’t eat anything.’

Questions

- If it is all about NPI-hood, what is the connection with syntax given that the process cares about syntactic constituency.) How are the NPIs licensed?
- How does one syntactically account why for instance definite DPs are never licensed while indefinites are not.
- Given the dependency relations between the verb, the negation and the tense/aspects properties of constructions in which these nominal elements are used, how are these derived by the syntax?

3 Analysis

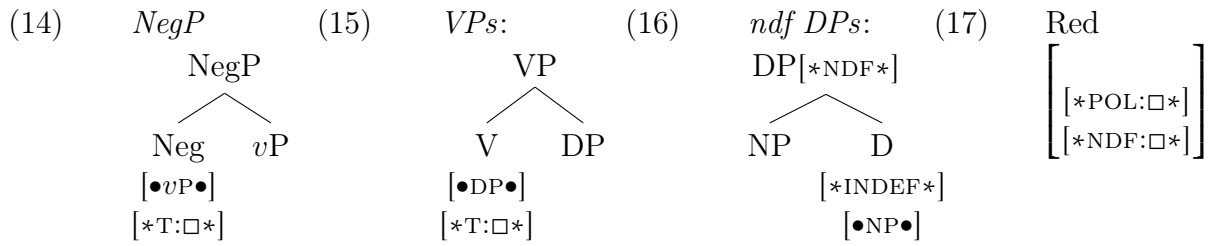
3.1 Basic assumptions

- Following (Zejlstra, 2013; Ladusaw, 1996; Uribe-Extebarria, 1995; Laka, 1990) among others, I assume that NPIs in this context are indefinites, they are only licensed under the scope of negation. (See Collins & Postal (2014) who treat NPIs as negative quantifiers where NEG always modifies a covert SOME as in (13) for an alternative proposal).

- (13) *Classical Neg-raising* (Collins & Postal, 2014)
- a. I saw nobody →[[NEG SOME]body]
- b. I didn’t see anybody →[[<NEG> SOME]body]

- All indefinite DPs have an inherent indefiniteness feature, [$*_{\text{NDF}}$]. This implies that they can be attracted by heads with a matching [$*_{\text{NDF}}:\square$] feature.¹
- *v*P and CP are phases.
- Neg and V have an unvalued tense feature [$*_{\text{T}}:\square$], where T refers to tense, and thus can only be valued by [$*_{\text{T}}$]. Recall that the form of the negation depends on the tense, and both tense and negation are marked on the verb.
- So I assume the following structures:

¹The notation here follows Heck & Müller (2007).

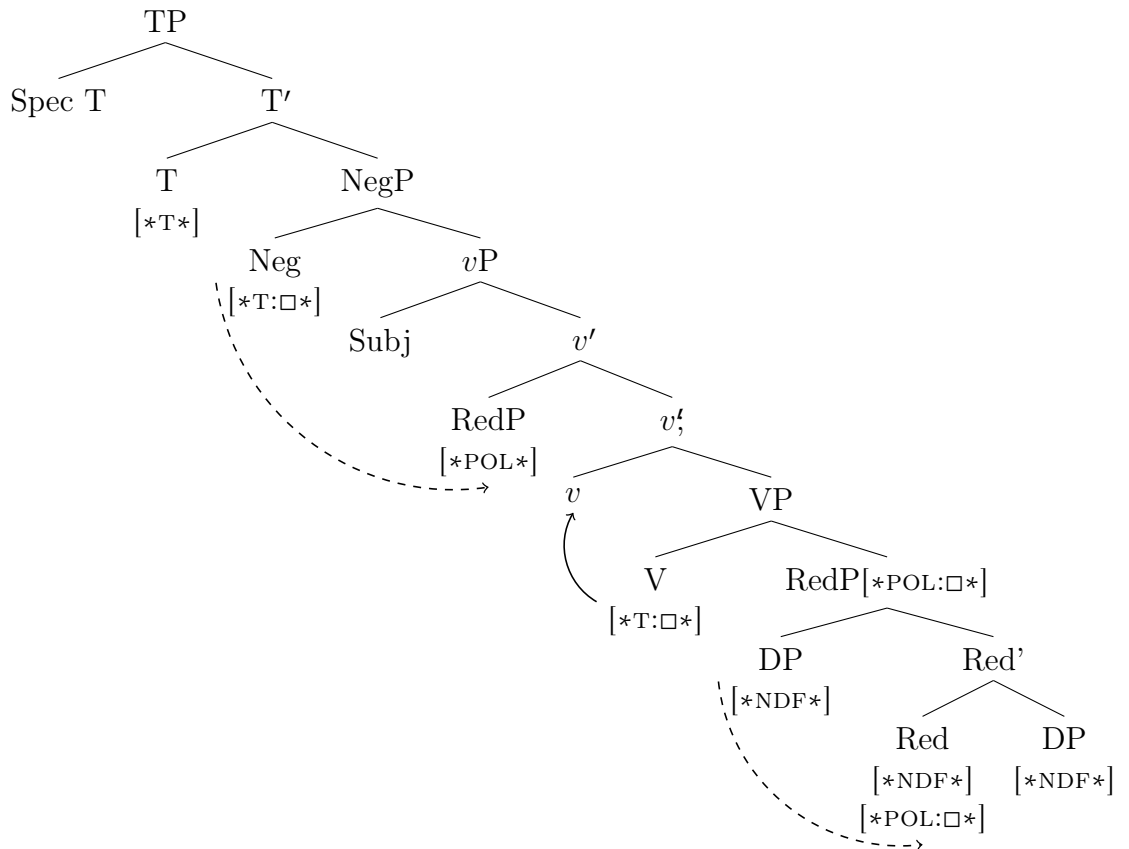


- Note in (17). that the features are the main driving force for the doubling/reduplication phenomenon. [*NDF:□*],[*POL:□*] i.e. (18).
- There may be a number of possible ways to implement this in syntax, one obvious way is (19).
Dashed arrows are for agreement purposes.

3.1.1 Objects NPIs

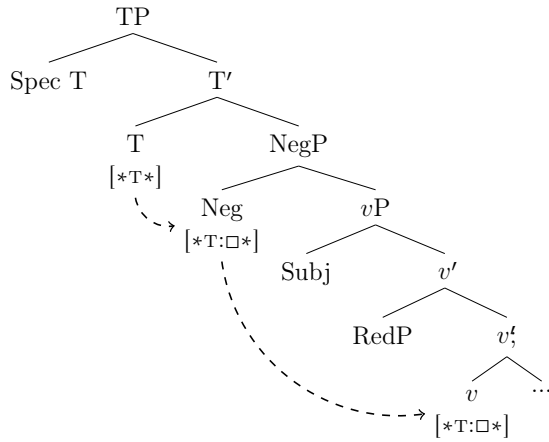
(18) Kwei é-ná-áá mǎko-mǎko.
 K NEG-see-NEG someone-RED
 ‘Kwei didn’t see anybody.’

(19) *Deriving object NPIs:*

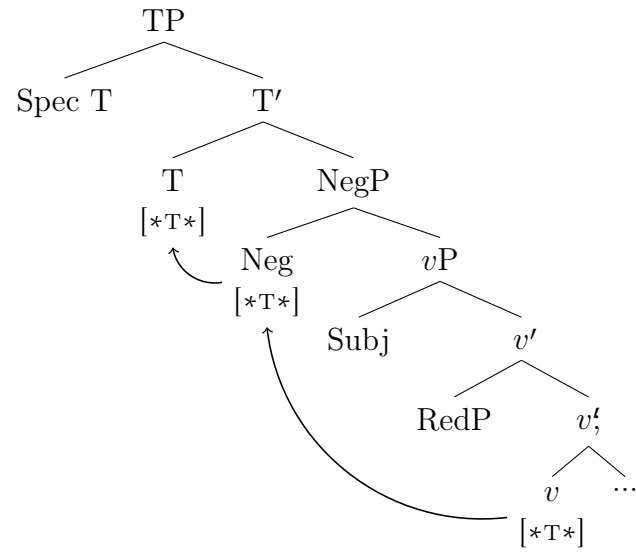


- i DP moves to Spec-RedP.
- ii RedP moves to Spec-*v*'.
- iii [**POL:□**] on RedP is valued.

(20) Valuation of tense feature:



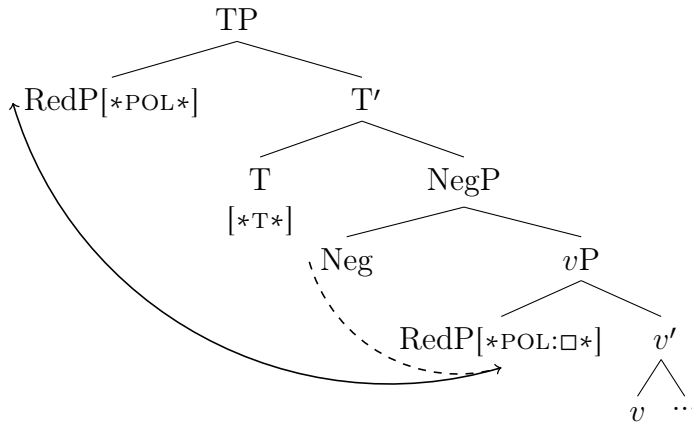
(21) Spellout of *V+neg+tense*:



3.1.2 Subjects NPIs

- (22) **M̀oko-m̀oko** é-ná-áá Kwei.
 someone-RED NEG-see-NEG K
 ‘Nobody saw Kwei.’

(23) Deriving subject NPIs:



- Advantages of this approach:

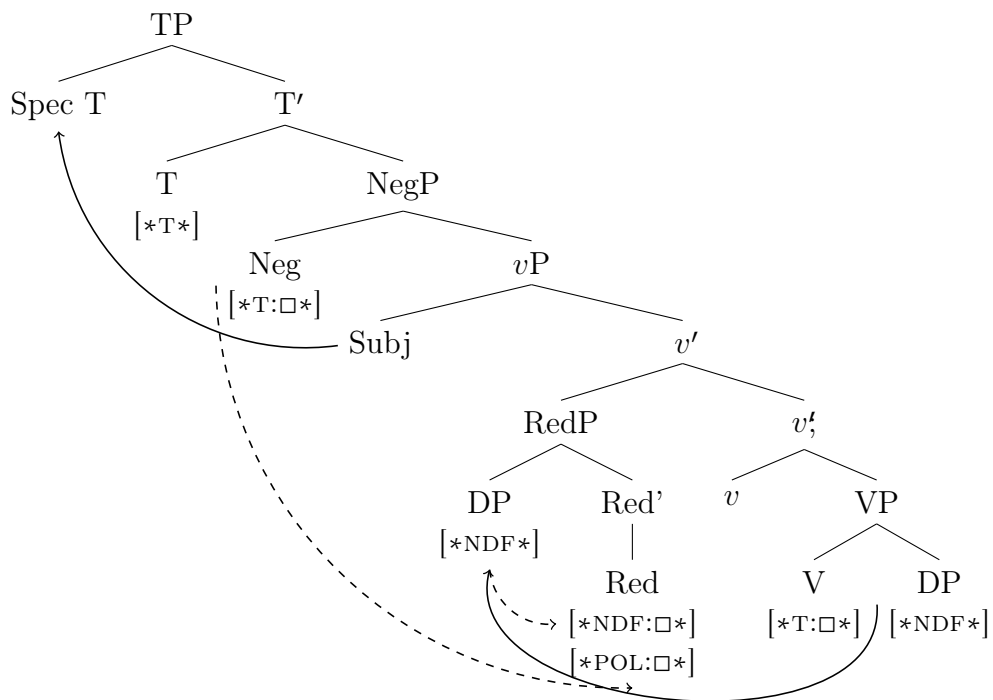
☞ Straightforward

☞ Derives the correct surface patterns (i.e. SVO) for both object and subject (reduplicated) NPIs.

4 An alternative approach

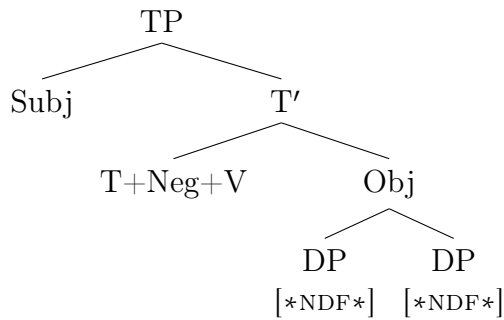
- Here is a possibly "more interesting" approach.
- Here the crucial assumption is that Red is not part of the nominal domain.
- Red(P) is base-merged at a spec of *v*.
- Note its features percolate to the mother node i.e. RedP.
- The feature on RedP attracts the indefinite DP inside VP to spec RedP.
- Thus timing of operations is crucial; sending spellout domain of *v*P to PF interface delays until RedP is merged.

(24) *Re-Deriving object* :



- [T+[Neg+[*v*+[V]]]] are pronounced as a unit. Their lower copies remain unpronounced.
- DP[*NDF:NEG*] is pronounced at both Spec *v* and at where it is originally merged.
- Thus the "reduplication" is an instance of pronouncing two adjacent copies of the same syntactic object (25).

(25) *Re-Deriving object NPIs- spellout:*



4.1 The plausibility...

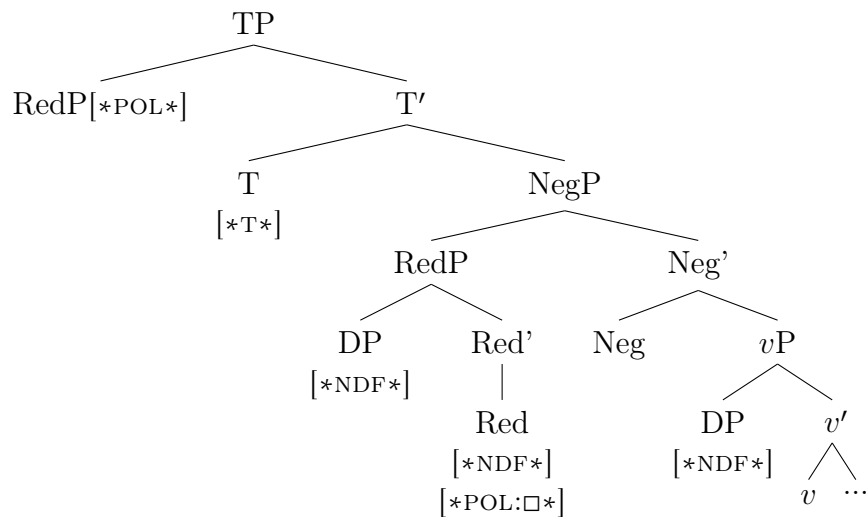
- Interestingly, the PF realization of the moved DP is independently motivated in Gã.
- In most Kwa languages (and indeed Ga), predicate fronting results in pronunciation of both lower and higher copies. (see also e.g. Hein (2015), for Akan, Aboh & Dyakonova (2009) for Gungbe). Consider the Gã case in (26).

(26) **Tsé** ni Kwei <tsé> gbéké lé.
 call FOC K call child DEF
 ‘Kwei CALLED the child (as opposed to say: Kwei beat the child) .’

- (25) may be plausible given the fact that there is no independent evidence in the language to test intervention of an adjunct e.g. (27), in the instance of object indefinite DPs.

(27) a. **Nyɛ** ni Kwei tsé gbéké lé.
 yesterday FOC K call child DEF
 ‘Kwei call the child yesterday (as opposed to say: Kwei beat the child today)
 .’
 b. Kwei tsé gbéké lé **nyɛ**
 K call child DEF yesterday
 ‘Kwei called the child yesterday.
 c. *Kwei **nyɛ** tsé gbéké lé
 K yesterday call child DEF

- But extending the same analysis to object NPIs with this reduplication pattern (28) may be problematic due to:
- When RedP is base-merged at spec NegP for the subject NPIs, the main challenge is how
 - i. to move the two indefinite DPs (at spec *v*P and spec NegP) as a unit, to spec TP.
 - ii. to get the right surface word order given that in that instance, T will intervene between the landing site and the base positions of the DPs.

(28) *Re-Deriving subject NPIs:*

5 Summary/Conclusion

- Gã exhibits an interesting pattern of what appears to be a mundane (morphological) reduplication.
- At a first glance, it seems quite obvious that this is a PF phenomenon. But a closer look at it suggests that there are various possible ways of modeling this purely in the syntax.

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