Reduplication and negative polarity in Gã

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We present new data from Gã (Kwa, Niger-Congo: Ghana), which show that negative polarity items corresponding to *any*-NPs are formed by the reduplication of indefinite DPs. We focus on delineating the proper licensing conditions for reduplicated polarity items and show that these are strict, superstrong negative polarity items (NPIs) (in the sense of Zwarts 1998), requiring clausemate negation. Furthermore, we explore some of the interesting properties of the phenomenon such as the availability of subject NPIs, the ban on plural NPIs as well as the behaviour of such NPIs in NEG-raising contexts.

In Gã, singular indefinite DPs (1) may be reduplicated, but this is only possible in the presence of negation (2), though negation by itself, is permitted in the context of a non-reduplicated indefinite DP (1-b). It therefore seems that (some) NPIs in Gã take the form of reduplicated indefinites (see Cable 2009 for a similar phenomenon in Dholuo).

(1) a. Kwei na **wolo ko**.
      K.   see house INDEF
      'Kwei saw an book.'

    b. Kwei é-ná-áá   **wolo ko**.
      K.   SBJ-see-NEG house INDEF
      'Kwei did not see a (particular) book.'

(2) Kwei é-ná-*(áá) **wolo ko** **wolo ko**.
    K.   SBJ-see-NEG book INDEF book INDEF
    'Kwei did not see any book.'

One question is now what the conditions are that license these NPIs. Typically, weak NPIs such as *any* are licensed in so-called 'downward entailing' (DE) environments and polar questions (Ladusaw 1979). However, DE environments such as the antecedent of a conditional (3) as well as polar questions (3) do not license reduplicated NPIs.

(3) Kɛji o-na **wolo ko** (***wolo ko**) lɛ...
    if   2SG-see book INDEF book INDEF CD
    'If you see a/(#any) book ...'

(4) Ani o-na **wolo ko** (***wolo ko**) yɛ jɛmɛ?
    Q 2SG-see book INDEF book INDEF at there
    'Did you see a/(#any) book there?'

Thus, it seems that reduplicated indefinites are superstrong NPIs in the sense that they are only licensed in antimorphic environments (see e.g. van der Wouden 1997, Zwarts 1998), i.e. by clausal negation. Furthermore, these appear to behave like strict NPIs since they require clausemate negation in order to be licensed. For example, negation in the matrix clause does not license reduplicated indefinites in an embedded (5) or a relative clause (6).

(5) Kwei é-kɛ́-ɛ́ɛ́ [CP ákɛ **wolo ko** (***wolo ko**) ká jɛmɛ]
    K. SBJ-say-NEG COMP book INDEF book INDEF lie there
    'Kwei didn't say that there is any book lying there.'

(6) Kwei é-ná-áá [DP papá lɛ́ [CP ní káne **wolo ko** (***wolo ko**) lɛ́]]
    K. SBJ-see-NEG man DEF REL read book INDEF book INDEF CD
    'Kwei didn't see the man who read any book.'

Interestingly, if we take a predicate such as 'imagine', which are known to permit NEG-raising (Horn 1975, 1978, Collins & Postal 2014), we see that reduplicated indefinites are possible in an

embedded clause with matrix negation (7). This predicate restriction suggests that Gã has a process of NEG-raising, which will be explored in more detail

(7) Dede súsú-úú [CP áké Kwei na **wolo ko** **wolo ko**]
 D. imagine-NEG COMP K. see book INDEF book INDEF
 'Dede didn't imagine that Kwei saw any book.'

In addition, we discuss other aspects of negative polarity in Gã: for example, Gã is somewhat rare typologically, in allowing for subject NPIs (8). Furthermore, licensing of multiple reduplicated indefinites is also possible (9).

(8) **Nuu-ko** **nuu-ko** bá-áa.
 man-INDEF man.INDEF come-NEG
 'No man came.'

(9) **Mɔ-ko** **mɔ-ko** e-ná-áá **nɔ́-kó** **nɔ́-ko**.
 person-INDEF person-INDEF SUBJ-see-NEG thing-INDEF thing-INDEF
 'Nobody saw anything.'

   Furthermore, there are a number of interesting restrictions on reduplication that require additional discussion. For example, reduplication of plural indefinites is not possible (10).

(10) Kwei é-ná-áá **woji ko-mɛi** (*woji ko-mɛi).
 K. SBJ-see-NEG book.PL INDEF-PL book.PL INDEF-PL
 'Kwei didn't see any books.'

In (10), the plural indefinite retains its reading as a free choice item (FCI) and can additionally take wide scope only in its unreduplicated form. At present, it is unclear why plurality blocks reduplication. This will ultimately depend partly on whether NPI licensing is viewed as syntactic, e.g. via binding/Agree (e.g. Progovac 1994), or semantic (e.g. Giannakidou 1998). There also seem to be some restrictions on the size of the reduplicatable indefinite DPs. For example, in addition to the determiner, it is possible to have an adjective in the reduplicated DP (11). However, DPs with more than one adjective seem to resist reduplication (12).

(11) Kwei é-ná-áá **wolo hee ko** **wolo hee ko**.
 K. SBJ-see-NEG book new INDEF book new INDEF
 'Kwei did not see any new book.'

(12) Kwei é-ná-áá **wolo hee díŋ ko** (*wolo hee díŋ ko).
 K. SBJ-see-NEG book new black INDEF book new black INDEF
 'Kwei did not see any/particular new black book.'

In (12), while it is not possible to reduplicate the indefinite DP with more than one adjectival modifier, the unreduplicated DP can have an NPI reading (but only in the context of negation). Thus, it seems that there are phonological 'size restrictions' imposed on reduplicated material, however these do not appear affect the availability of its use as a polarity item.
   In sum, reduplicated NPIs in Gã pose an interesting theoretical challenge since there seems to be an interaction between phonology and semantics which – at face value – seems incompatible with frameworks adopting the 'Y-model' of grammar. Furthermore, not only reduplicated NPIs but also other NPIs seem to exhibit the same licensing requirements, that is, Gã appears to only have superstrong NPIs. As such, the data discussed also make an important contribution to the study of the typology of NPIs (Collins & Postal 2015).