

Quantification and freedom of choice in Nata *

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Abstract: This paper focuses on Nata (Eastern Bantu, Tanzania) *wowoosé* and claims that it induces a maximal widening of the domain it refers to, regardless of the polarity of the sentence it appears in. Following Kadmon and Landman (1993), Kratzer and Shimoyama (2002) and Chierchia (2006, 2013), I propose that the use of *wowoosé* is licensed in contexts where the inclusion of all alternatives, including the borderline cases that prevent that addressee from making a false exhaustivity inference.

Keywords: free choice item, Bantu, domain widening, negative polarity

1 Introduction

In examples such as (1) and (2), the speaker conveys that any of the choices that the addressee makes will be valid:¹

- (1) Pick any book.
- (2) Ghégha-a o-mu-térebhi **wo-u-osé**.
take-FV PPF-C3-ladle RED-C3-ose
'Pick any ladle.'

This freedom of choice is conveyed by *any* in the English example. Cross-linguistically, Free Choice Items (FCIs) share this meaning, and a rather limited distribution. This paper will propose that the Nata (Eastern Bantu E45, Tanzania) form *wowoosé*², exemplified in (2) is a FCI, by comparing its distribution to other FCIs like English *any* and Spanish *cualquier*. *Wowoosé* acts as a domain widener (Kadmon and Landman 1993) even in negative contexts where many other FCIs are not attested (e.g., Spanish *cualquier*, Catalan *qualsivol*).

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¹Glossing: APPL: applicative; C#: noun class; COMP: complementizer; COP: copula; DEM.PROX: demonstrative proximal; FV: final vowel; IPFV: imperfective; HAB: habitual; LOC: locative; NEG: negation; PASS: passive; PL: plural; PPF: pre-prefix; PFV: perfective; POSS: possessive; PST: past; RED: reduplication; SM: subject marker; SG: singular

All examples follow the Nata orthographic convention: *bh* stands for the bilabial fricative /β/; *gh* stands for the velar fricative /ɣ/; *e* stands for the open vowel /ɛ/; *o* stands for the open vowel /ɔ/

²Since this item agrees with the noun it appears with, the form changes; in this paper I will refer to it as *wowoosé* for ease of reading.

2 The Form

Nata has the following nominal morphology:

- (3) a. Pre-Prefix –Noun Class Prefix –Noun Root
 b. o-mu-kári
 PPF-C1-woman

The pre-prefix, or augment, is a vowel that appears immediately before the noun class prefix. There are 21 noun class markers, most of which are pairs of singular (odd numbers) and plural (even numbers). The noun class prefix typically has the form CV. Syntactically, nouns can be followed by demonstratives (4), possessives (5), adjectives (6) and quantifiers such as *-osé* (7), which have to agree with the noun they appear with. This is done via nominal concord: the noun class prefix that forms part of the noun (*bhi-* in (4)) also appears in possessives, demonstratives, adjectives and quantifiers:

- (4) e-bhi-tòkéké bhí-no
 PPF-C8-banana C8-DEM.PROX.
 ‘These bananas’
- (5) e-ghi-tòkéké ki-ané
 PPF-C7-banana C7-POSS.1SG
 ‘My banana’
- (6) e-ghi-tòkéké ghe-kóro
 PPF-C7-banana C7-big
 ‘A/The big banana’
- (7) e-bhi-tòkéké bhi-osé
 PPF-C8-banana C8-ose
 ‘All bananas’

The quantifier *-osé* has an interesting behaviour, part of which is the focus of this paper. Depending on the number of the noun it agrees with, it can be translated either as ‘every N’ or ‘all N’, and when the first syllable is reduplicated, there is a free choice reading. This paradigm is summarized in Table 1:

Table 1: Nata paradigm of the quantifier *-osé*

	SINGULAR	PLURAL
UNIVERSAL	e-ghí-tabho ki-osé PPF-C7-book C7-ose ‘every book’	e-bhí-tabho bhi-osé PPF-C8-book C8-ose ‘all books’
FREE CHOICE	e-ghí-tabho kjo-ki-osé PPF-C7-book RED-C7-ose ‘any book’	e-bhí-tabho bhjo-bhi-osé PPF-C8-book RED-C8-ose ‘any books’

This paper will focus on the free choice reading. The form that will be discussed has three main components: the quantifier *-osé*, noun class agreement and reduplication.³ The process is shown in examples (8) through (10). Example (8) shows again the quantifier and its concordial N-class prefix, which is broken down into two syllables in (9): the vowel in the agreement prefix *ki-* becomes a glide, and the CV syllable structure is maintained by syllabifying the first vowel of the quantifier with the prefix. The first syllable is then copied, as in (9). The resulting FC item is exemplified in (10):

(8) e-ghí-tabho ki-osé
 PPF-C7-book C7-ose
 ‘every book’

(9) a. kjo.se
 b. kjo.kjo.se

(10) e-ghí-tabho **kjo-ki-osé**
 PPF-C7-book RED-C7-ose
 ‘any book’

This means that the form of the FCI depends on the noun it agrees with. In the appendix there are further examples of the FCI agreeing with different noun classes.

3 Distribution

In this section I describe the distribution of *wowoosé*, using as a springboard the distribution of FCIs discussed in the literature for two items: English *any* and Spanish *cualquier*.

3.1 FCIs in other languages

Any was the focus of attention of both NPI and FCI work for many years, though it was its negative polarity use that was the main point of discussion. Because of the (controversial) ambiguity of English *any* between its NPI and FCI uses, recent FCI literature has turned to items that function only as FCIs, such as Italian *qualunque* (Aloni 2007; Chierchia 2006), or Spanish *cualquier* (Menéndez-Benito 2010).

3.1.1 English *any*

The literature discusses two different types of *any*, which appear in different environments:

1. Polarity sensitive *any* (PS *any* henceforth), which is only licensed in the scope of a downward entailing operator (Carlson 1980; Ladusaw 1979; Lasnik 1972; Linebarger 1987):

³Reduplication has been studied in the Bantu literature in the verbal domain to express quantification over events (Zerbian and Krifka 2008).

- (11) a. I don't have any potatoes.
 b. *I have any potatoes.
2. Free choice *any* (FC *any* henceforth) appears in imperatives (12a), in possibility sentences (12b), as well as in habitual or generic statements (12c): and it is ruled out in necessity statements (12d) and episodic sentences (12e), though the addition of a relative clause makes the use of *any* grammatical, as shown in (12f). This phenomenon was first observed by (LeGrand 1975) and is called SUBTRIGGERING (examples from Aloni (2007); Dayal (2004); Kadmon and Landman (1993); Menéndez-Benito (2010)):
- (12) a. To continue push any key!
 b. You can take any card from this deck.
 c. Any owl hunts mice.
 d. *John must take any of the cards from this deck.
 e. *John took any of the cards from this deck.
 f. John talked to any student who came up to him.

3.1.2 Spanish *cualquier*

Like FC *any*, *cualquier* appears with imperative forms (13), and possibility sentences (15) and in generic statements (14), but not in necessity statements (16):

- (13) Coge cualquier carta.
 take.IMP FCI card
 'Pick any card.'
- (14) Cualquiera búho caza ratones.
 FCI owl hunts mice
 'Any owl hunts mice.'
- (15) Puedes escoger cualquier cuadro.
 can.2SG choose FCI painting
 'You can choose any painting.'
- (16) *Debes escoger cualquier cuadro.
 must.2SG choose FCI painting
 *'You must choose any painting.'

Spanish *cualquier* is also ruled out in episodic sentences:

- (17) *María escogió cualquier cuadro.
 María chose FCI painting
 *‘María chose any painting.’

Also in Spanish subtriggering is possible, but it forces the use of the subjunctive in the relative clause. The relationship between irrealis, subtriggering and FCIs has been discussed by Giannakidou (2001), but shall not be dealt with in this paper. The following example illustrates subtriggering in Spanish:

- (18) María escogió cualquier cuadro que estuviera bien de precio.
 María chose FCI painting COMP be.SUBJ good of price
 ‘María chose any painting that had a good price.’

Although it is sometimes claimed that *cualquier*, unlike English *any*, cannot appear with negation, it is indeed possible to find examples. In this case, the reading is anti-indiscriminate (Horn 2000, 2005), also called anti-depreciative (Haspelmath 1997), and can be translated as ‘not just any’:

- (19) María no robó cualquier cuadro ...robó el Guernica!
 María NEG stole FCI painting ...stole the Gernika
 ‘María did not steal just any painting ... she stole the Gernika!’

Cualquier has been discussed in the literature as a universal FCI (Dayal 2004; Menéndez-Benito 2010) and as a ‘pure FCI’ (Chierchia 2006), together with Italian *qualunque* and *qualunque*, Catalan *qualsevol*, neither of which can be used as NPIs. Although there is also variation in the distribution of these ‘pure’ FCIs, their resistance to appear under negation is a challenge for analyses that try to unify NPI and FCI uses of items such as *any* – discussed in Section 4 – since they cannot be used as NPIs.⁴

3.1.3 Nata *wowoosé*

The following Table 2 summarizes the differences in distribution observed for *any* and *cualquier*, and gives a preview of the distribution of *wowoosé*:

Table 2: The distribution of FCIs in English (*any*), Spanish (*cualquier*) and Nata (*wowoosé*). The Nata column is split in two: the FCI preceded by an augmented (1) or unaugmented noun (2).

CONTEXT	ENGLISH <i>any</i>	SPANISH <i>cualquier</i>	NATA (1) PPF-C#-N <i>wowoosé</i>	NATA (2) ∅-C#-N <i>wowoosé</i>
Imperative	✓	✓	✓	✗
Habitual	✓	✓	✓	✗
Possibility	✓	✓	✓	✗
Negative episodic	✓	✗	✗	✓
Necessity	✗	✗	✗	✗
Affirmative episodic	✗	✗	✗	✗

⁴Although it may be argued that negative concord blocks the NPI use, this explanation would not account for German *irgendein*, since it does not appear under negation but German has no negative concord. I thank Hotze Rullmann for this point.

The proposed FC item in Nata appears in imperatives:

- (20) Ghégh-a e-ghí-tabho **kjo-ki-osé**.
 take-FV PPF-C7-book RED-C7-ose
 ‘Pick any book.’

The behaviour of *wowoosé* with modals patterns with the distribution already observed for other FC items such as *cualquier* in Spanish (Menéndez-Benito 2010): it is ruled out in necessity statements (21) and allowed with possibility modals (22):

- (21) *Wasato n-a-ko-éend-er-u a-sóm-e e-ghí-tabho **kjo-ki-osé**.
 Wasato COMP-SM1-IPFV-want-APPL-PASS SM1-read-FV PPF-C7-book RED-C7-ose
 *‘Wasato must read any book’
 JG: Would be nice without *kyokyosé*
- (22) N-o-gho-tór-a ku-ghégh-a e-ghí-tabho **kjo-ki-osé**.
 COMP-2sgSM-IPFV-be.able-FV C15-pick-FV PPF-C7-book RED-C7-ose
 ‘You can take any book’

As Kadmon and Landman (1993) observe for English *any*, the Nata FC item can appear in the same environment as a generic indefinite. Both (23) and (24) are generic statements bearing the habitual aspectual marker, which has been argued to be the overt realization of the generic operator GEN in Nata (Gambarage 2012) and similarly in Shona, another Bantu language (Déchaine and Tremblay 2011):⁵

- (23) E-ke-bhúse n-ki-háa-ri e-bhi-tòoké.
 PPF-C7-baboon COMP-SM7-HAB-eat PPF-C8-banana
 ‘A baboon eats bananas’
- (24) E-ke-bhúse **kjo-ki-osé** n-ki-háa-ri e-bhi-tòoké.
 PPF-C7-baboon RED-C7-ose COMP-SM7-HAB-eat PPF-C8-banana
 ‘Any baboon eats bananas’

Example (25) shows one of the effects most extensively discussed in Kadmon and Landman (1993): the use of *wowoosé* marks that the set of individuals that needs to be taken into account is larger than what the addressee thinks. In the example, A wants to make clear that the set of baboons that eat bananas include individuals that B is trying to exclude, in this case, a type of baboon:

- (25) A: E-bhe-bhúse m-bhi-háa-ri e-bhi-tòoké.
 PPF-C8-baboon COMP-SM8-HAB-eat PPF-C8-banana
 ‘Baboon eats bananas’
- B: Maaré ta-ni e-bhe-bhúse ibjeeró.
 but NEG-COP PPF-C8-baboon white
 ‘But not white-faced baboons’

⁵It should be noted that Nata does not overtly distinguish between definite and indefinite nouns.

A: A-a, e-ke-bhúse **kjo-ki-osé** n-ki-háa-ri e-bhi-ṭoóké.
 no PPF-C7-baboon RED-C7-ose COMP-SM7-HAB-eat PPF-C8-banana
 ‘No, any baboon eats bananas’

As expected, the proposed FC item is ruled out in affirmative episodic sentences:

(26) *N-a-a-sòm-íre e-ghí-tabho **kjo-ki-osé**.
 COMP-SM1-PST-read-PFV PPF-C7-book RED-C7-ose
 *‘I have read any book’

Subtrigging is also possible in Nata; that is, it is correct to use the FC item in an episodic sentence if it is followed by a relative clause:

(27) Masáto a-ka-chúuki e-ghí-tabho **kjo-ki-osé** kí-no a-a-sòm-íre.
 Masato SM1-PST-burn PPF-C7-book RED-C7-ose C7-DEM.PROX. SM1-PST-read-PFV
 ‘Masato burned any book he read’

Unlike Spanish *cualquier*, but like English *any*, *wowoosé* can appear in negative contexts, in which case the noun it appears with is unaugmented, that is, it does not bear the pre-prefix:

(28) Bha-ta-ni-ho bha-aná **bho-bha-osé** mo-kibhára.
 SM2-NEG-COP-LOC C2-child RED-C2-ose C18-park
 ‘There aren’t any children in the park’

In the example above, the use of the FCI is determined by the context: only when a bigger group of children is being referred to can it be licensed. The effect of the presence or absence of the FCI in negative environments is explained with the following examples:

(29) *A parent wants a babysitter to take care of his child, but she has no time.*
 Ne-te-ku-ghégh-a mu-aná.
 1sgSM-NEG-IPFV-take-FV C1-child
 ‘I won’t take the child’

(30) *There are many parents asking the babysitter to take care of their children, but she has no time. One of them hands her his child.*
 Ne-te-ku-ghégh-a mu-aná **wo-u-osé**.
 1sgSM-NEG-IPFV-take-FV C1-child RED-C1-ose
 ‘I won’t take any child’

Crucially, the context in which the FCI does not appear (29) involves a closed and specific set of alternatives, whereas in (30), where *wowoosé* is used, the domain seems to be larger.

4 Analyses of FCIs in the literature

The quantificational force of FCIs and their relationship with NPIs has been under discussion in the literature, and many analyses have been proposed to explain these phenomena. The distribution of *wowoosé* in Section 3.1.3 shows that this item can, in fact, appear in negative contexts. Other items in other languages show a similar pattern – English *any*, Hindi *ek bhii* (Lahiri 1998) – which has promoted analyses that give a unified account of the free choice and the negative polarity use of these items. I propose therefore that a unifying analysis is the best option for Nata *wowoosé*. First, I will give a review of what has led authors to propose a unified account for PS and FC *any*.

4.1 From universal to existential

There is a long-standing debate about whether the two uses of *any* show that there are two items – NP *any* and FC *any* – or if a unified analysis can account for the different uses. In older accounts of English *any*, it was claimed that it was a wide scope universal quantifier (Eisner 1994; Lasnik 1972; LeGrand 1975; Quine 1960; Reichenbach 1947). That is: both PS *any* and FC *any* have universal force.⁶

However, as Ladusaw (1979) and Carlson (1980) noted, *any* also behaves like an existential quantifier under negation. Among other diagnostics, Carlson observes that PS *any* cannot be modified by *nearly* or *almost* (31), whereas FC *any* can (32):

- (31) a. *John doubts that almost anyone is in that room there.
b. *Has nearly anyone been here before?
- (32) a. Nearly anyone can fix a leaky faucet.
b. John will eat almost anything.

This leads Carlson to propose that at least PS *any* is existential. However, he does not firmly claim that there are two distinct *anys* in English, and proposes that if an analysis should unify both, then it should be as an existential quantifier.

This is exactly what Kadmon and Landman (1993) (K&L henceforth) propose: to unify PS and FC *any* in one existential analysis. Their main claim is that *any NP* is a Heimian indefinite that takes its quantificational force from another operator, with the added meaning of inducing a maximal WIDENING of the domain it refers to:

- (33) WIDENING: In an NP of the form *any CN*, *any* widens the interpretation of the common noun phrase (CN) along a contextual dimension. (Kadmon and Landman 1993:362)

One of their main observations is that FC *any* is licensed in generic statements, where a generic indefinite would appear, as in (34) – both express generalizations and are ‘law-like’, but (34b) signals a reduced tolerance for exceptions:

⁶More recent accounts claim that only FC *any* is inherently universal (Dayal 1998, 2004; Menéndez-Benito 2010). The reader is referred to these authors.

- (34) a. An owl hunts mice.
 b. Any owl hunts mice.

Importantly, *any* is only licensed when the widening it induces strengthens the statement, that is “only if the statement on the wide interpretation [entails] the statement on the narrow interpretation” (Kadmon and Landman 1993:370). This explains the grammaticality of *any* in downward entailing environments, such as negation (35):

- (35) a. I don’t have any potatoes.
 b. $\neg \exists x [\text{Potato}(x) \ \& \ \text{I have}(x)]$
 c. Wide: I don’t have potatoes, cooking or other.
 \Rightarrow Narrow: I don’t have cooking potatoes. (Kadmon and Landman 1993:371)

Since negation is a downward entailing operator, it allows inferences from the maximal set of potatoes to any of its subsets (e.g. cooking, rotten, decorative). In other words, the wide domain of (35) entails the narrow domain, that is, the statement is stronger, and hence *any* is licensed. This does not happen in positive contexts where there is no DE operator.

It is important to note that K&L analyze generic statements as DE environments: *any* appears in the restrictor of a universal quantifier – namely GEN – which is a DE environment:

- (36) a. Any owl hunts mice.
 b. Wide: any owl (sick or healthy) hunts mice.
 \Rightarrow Narrow: any healthy owl hunts mice. (Kadmon and Landman 1993:371)

One of the main weaknesses of K&L’s analysis is its treatment of the role of stress, which they claim is not important for their analysis of *any* and is only used to reinforce widening. In fact, Krifka (1995) claims that *only* stressed *any* induces widening.

4.2 Chierchia

Chierchia (2006, 2013) proposes one of the latest unifying accounts for NPIs and FCIs, focusing primarily on English *any* and Italian *qualunque*. He draws on previous analyses and uses the following key ingredients:

1. **Domain widening** (Kadmon and Landman 1993)
 Inspired by K&L, Chierchia defends the idea that the common characteristic between NPIs and FCIs is that they both induce domain widening: larger domains are referred to when items like *any* and *qualunque* are used. This common element explains the strong link that exists between these two items.
2. **The anti-exhaustivity inference of FCIs** (Kratzer and Shimoyama 2002)
 Whereas Kadmon and Landman only talk about strengthening, Kratzer and Shimoyama add avoiding a false claim and avoiding a false exhaustivity inference (illustrated by (37)) as components of the meaning of FCIs. By widening the domain, FCIs avoid that the hearer makes such an inference and discards a viable alternative:

- (37) Two books are under discussion. An algebra book and a biology book.
I say to you: *You can borrow the algebra book.*

EXHAUSTIVITY INFERENCE: You cannot borrow the biology book.

3. **Even-implicature of NPIs** (Hoeksema and Rullmann 2001; Krifka 1995; Lahiri 1998; Lee and Horn 1994)

Chierchia draws on the analyses that claim that NPIs are associated with an *even* implicature, such as Krifka (1995); Lahiri (1998), as illustrated by (38):

- (38) Mary doesn't have any bananas = Mary doesn't have even a single banana.

Hence, the fact that both NPIs and FCIs induce a maximal widening of the domain is what explains the similarities between them; they differ in what kind of implicature they are associated with, either an anti-exhaustivity if it is an FCI or an even-like implicature if it is an NPI.

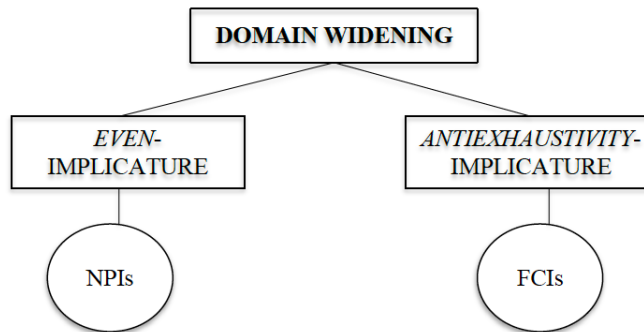


Figure 1: Chierchia (2006, 2013) classification of NPIs and FCIs.

Chierchia's analysis works as follows: when we talk, we select the domains of discourse that we want to refer to. FCIs allow the speaker to refer to the largest domain possible. In addition, a sentence is considered against a set of alternatives. Now, these alternative domains do not have to have the same size: this is the core difference between NPIs and FCIs, since different domain sizes are linked with different implicatures in Chierchia's analysis. Compare the sizes of the alternative domains in Figure 2:

$D = \{ a, b, c \}$	widest domain		$D = \{ a, b, c \}$	
$D1 = \{ a, b \}$		$D1 = \{ a, b \}$	$D2 = \{ b, c \}$	$D3 = \{ a, c \}$
$D2 = \{ b, c \}$		$D4 = \{ a \}$	$D5 = \{ b \}$	$D6 = \{ c \}$
$D3 = \{ a, c \}$				

Figure 2: Different alternative domain sizes for NPIs (left) and FCIs (right) (Chierchia 2006)

Whereas NPIs have large alternative domain sizes, FCIs have unequal alternative sizes, some of them as small as they can get. This difference in alternatives explains why FCIs are associated with

anti-exhaustivity: since all possible sets of different sizes are considered, if the maximal domain is chosen as a referent the speaker has to understand that there is no marginal set that can be left out of consideration.

5 Analysis of *wowoosé*

In this section I will present an analysis for *wowoosé*. I claim that like other FCIs, *wowoosé* induces maximal widening of the set of alternatives. This widening avoids that the speaker makes a false exhaustivity inference. The role of polarity is therefore separated from *wowoosé*.

5.1 *Wowoosé* and domain widening

There is a leitmotiv in the Nata data shown in Section 3.1.3, and that is an apparent widening of the domain referred to when *wowoosé* appears: Speaker A wants to make the domain as wide as possible to avoid the exclusion of any possible option by Speaker B:

- (39) A. E-bhe-bhúse m-bhi-háa-ri e-bhi-tòóké.
 PPF-C8-baboon COMP-SM8-HAB-eat PPFC8-banana
 ‘Baboons eat bananas’
- B. Maaré ta-ni e-bhi-tòóké e-bhi-bhór-u.
 but NEG-COP PPF-C8-banana PPF-C8-ripe-PASS
 ‘But not rotten bananas’
- A. Aa e-bhe-bhúse m-bhi-háa-ri e-bhi-tòóké **bhjo-bhi-osé**.
 no PPF-C8-baboon COMP-SM8-HAB-eat PPF-C8-banana RED-C8-ose
 ‘No, baboons eat ANY banana’

In (39), B makes the inference that only relevant or salient alternatives are considered, but A uses *wowoosé* to enlarge the domain and accept as possibility even marginal alternatives –in this case, rotten bananas. In K&L’s notation:

- (40) a. wide: baboons eat any bananas (green, ripe, rotten, imaginary...)
 b. ⇒narrow: baboons eat ripe bananas

The domain selected is also the widest in the case of *wowoosé* in negative environments:

- (41) Ne-te-ku-ghégh-a mu-aná.
 1sgSM-NEG-IPFV-pick-FV C1-child
 ‘I won’t take a child’
- (42) Ne-te-ku-ghégh-a mu-aná **wo-u-osé**.
 1sgSM-NEG-IPFV-pick-FV C1-child RED-C1-ose
 ‘I won’t take ANY child’

The comments of the speaker highlight this: (48) is uttered to avoid any further discussion of the topic. The set of alternatives is widened to include even marginal options.

If we translate this into a table, as in Table 3, it seems clear that *wowoosé* appears whenever there is domain widening, regardless of polarity. This is not surprising, since FCIs, by definition, induce a maximal widening of the domain:

Table 3: This table shows that: (a) *wowoosé* is a domain widener, as other FCIs, and (b) although it appears under negation, this context requires other changes in the whole NP structure.

	Domain Widening
Free Choice	English: ANY CN
	Spanish: cualquier CN
	Nata: PPF –NOUN CLASS –NROOT <i>wowoosé</i>
Negation	Nata: NOUN CLASS –NROOT <i>wowoosé</i>
	English: ANY CN
	Spanish: *

However, *wowoosé* is different to previously studied FCIs in two ways: if we compare it to FCIs that do not behave like NPIs, as Spanish *cualquier*, it differs in the fact that it can indeed appear in negative contexts. This would bring it closer to an *any*-type of FCI. However, Table 3 shows another difference: although *wowoosé* can appear under negation, it is not the case that the same NP (that is, the tripartite nominal structure discussed at the beginning of Section 2 followed by *wowoosé*) can appear in both contexts. The augment, or pre-prefix (PPF), does not appear in negative sentences, whereas it does in affirmative sentence. I conclude therefore that *wowoosé* is a *domain widener* regardless of the polarity of the sentence, and that it is another factor – namely the absence of the augment in the noun – that makes the whole NP behave like an NPI. The following section will deal with this problem.

5.2 *Wowoosé* and negation

One of the most interesting pieces of data is the relationship between *wowoosé* and negation, illustrated with example (43). FCIs that have been named “pure” (Chierchia 2006) – such as Catalan *qualsivol*, Italian *qualunque*, and Spanish *cualquier* – do not appear in negative contexts.⁷ However, *wowoosé* can appear following a negated verb. In this case, the noun it accompanies is unaugmented, like (43) shows:

- (43) A: Ni-té-ni na=bhi-tòoké.
 1sgSM-NEG-COP with=C8-banana
 ‘I don’t have bananas’
- B: (*B was in A’s house the day before and saw some very ripe bananas*)
 You had bananas yesterday!

⁷I am abstracting away from the indiscriminate reading, also called not-just-any reading.

A: Ni-té-ni na=bhi-tòóké **bhjo-bhi-osé.**
 1sgSM-NEG-COP with=C8-banana RED-C8-ose
 ‘I don’t have any bananas’

In this example, we see again the widening of the domain: the wide interpretation (“I don’t have any bananas, neither ripe nor rotten nor in perfect state”) entails the narrow interpretation “I don’t have any ripe bananas”. As we saw throughout the paper, the widening happens also in other downward entailing contexts: in this example, the only difference is the absence of the augment in the noun.⁸

It has been proposed for other Bantu languages that unaugmented nouns behave like NPIs (Progovac 1993). As was briefly mentioned in Section 2, Nata, as other Bantu languages, has a tri-partite nominal structure composed of a noun root, a noun class prefix, and a noun class pre-prefix, or augment. Unaugmented nouns are therefore those nouns that lack the pre-prefix. Their distribution has been, and currently is, at the center of much debate (see Gambarage 2012 for an overview of the different contexts in which unaugmented nouns appear in Nata and the problems that previous analyses in Bantu literature pose).

One of the analyses that propose that unaugmented nouns behave like NPIs is Progovac (1993). She claims this based on her work on Kinande (Bantu, DRC): whereas augmented forms appear freely with or without negation, unaugmented forms need to be licensed by an operator. Therefore they are only licensed in DE contexts, such as negation, interrogative sentences and modal sentences. Unfortunately, this issue is beyond the scope of this paper, but it is important to note that whenever *wowoosé* is used with negation, the noun it agrees with has to be unaugmented. Example (44) is ungrammatical for this reason, whereas (45) is grammatical because the noun is unaugmented, and (46) is grammatical because there is no negation to license the unaugmented noun:

(44) *Ne-te-ku-ghégh-a u-mu-aná **wo-u-osé.**
 1sgSM-NEG-IPFV-pick-FV PPF-C1-child RED-C1-ose
 ‘I won’t take ANY child’

(45) Ne-te-ku-ghégh-a mu-aná **wo-u-osé.**
 1sgSM-NEG-IPFV-pick-FV C1-child RED-C1-ose
 ‘I won’t take ANY child’

(46) Ne-ku-ghégh-a u-mu-aná **wo-u-osé.**
 1sgSM-IPFV-pick-FV PPF-C1-child RED-C1-ose
 ‘I will take any child’

With these data I conclude that polarity does not play a direct role in the domain widening induced by *wowoosé*, which sets it apart from FCIs like *any* and *cualquier*. Looking back at Figure 3, both *any* and *cualquier* either appear (*any*, both unstressed and stressed) or are ruled out (*cualquier*) by negation or another DE operator. In contrast, *wowoosé* moves freely across polarity differences: again, the only constant is the widening of the domain.

⁸A more thorough analysis of the relationship between *wowoosé* and DE-contexts other than negation needs to be done. For now, I have only encountered the absence of the augment in negative sentences.

5.3 *Wowoosé* and Chierchia

The proposed analysis of *wowoosé* steers away from negative polarity. Chierchia offers an explanation for English *any* in similar terms. In his own words, “pure negative polarity *any* is a fiction” (Chierchia 2006:580). He claims that *any* is closer in meaning to FCIs like Italian *qualunque*, a “pure FCI”. I claim a similar analysis for *wowoosé*, although based on the fact that *wowoosé* has no NPI part per se.

Like *any* and *cualquier*, *wowoosé* induces maximal widening of the set of alternatives and an antiexhaustiveness implicature. Antiexhaustivity is used not to rule out any possible option or alternative. This is visible in the difference between (47) and (48): whereas (47) can be used in out-of-the-blue contexts, (48) is pragmatically inappropriate unless there is a previous context (the one in (29)).

- (47) Ne-te-ku-ghégh-a mu-aná.
 1sgSM-NEG-IPFV-pick-FV C1-child
 ‘I won’t take a child’
- (48) Ne-te-ku-ghégh-a mu-aná **wo-u-osé**.
 1sgSM-NEG-IPFV-pick-FV C1-child RED-C1-ose
 ‘I won’t take any child’

The comments of the speaker highlight this: (48) is uttered to avoid any further discussion of the topic. The set of alternatives is widened to include even marginal options, and the anti exhaustiveness implicature impedes that the alternative chosen is too restricted.

If anti-exhaustivity is linked to *wowoosé*, we would expect that it would make certain follow up questions unnecessary: if the speaker has signaled that all alternatives, even marginal ones, need to be taken into account, it would not be felicitous to ask about them. And this is exactly what happens, illustrated by the following example:

- (49) *A and B are walking around the city. A says that he wants to read something, even a geology textbook! They find a bookstore and A gets in, but B stays outside. The books are too expensive, so A comes out empty handed and says:*

Ne-tee-ghor-íre ghí-tabho **kjo-ki-osé**.
 1sgSM-NEG-buy-PFV C7-book RED-C7-ose
 ‘I didn’t buy any book’

Crucially, B cannot follow up on this remark by asking about marginal alternatives –such as the geology book that was mentioned in the context:

- (50) #No-ghor-íre e-ghí-tabho ke=jióloji?
 2sgSM-buy-PFV PPF-C7-book ke=geology
 ‘Did you buy the geology book?’

However, (50) could be felicitous as a follow up question if *kyokyoosé* was not uttered by A. This is illustrated in (51):

- (51) a. Ne-tee-ghor-íre ghí-tabho.
 1sgSM-NEG-buy-PFV C7-book
 ‘I didn’t buy any book’
- b. No-ghor-íre e-ghí-tabho ke=jióloji?
 2sgSM-buy-PFV PPF-C7-book ke=geology
 ‘Did you buy the geology book?’

In (51) there is no *wowoosé*, and so the addressee may understand that there is still the possibility of the marginal alternative – the geology book –to have been bought.

This corresponds to the difference in the size of the domain that *wowoosé* induces. If *wowoosé* was linked to large sized domains, as an NPI, the sets of alternatives would look as such:

$$\begin{aligned}
 D &= \text{📖} \text{📗} \text{✳} \\
 D_1 &= \text{📖} \text{📗} \\
 D_2 &= \text{📖} \text{✳} \\
 D_3 &= \text{📗} \text{✳}
 \end{aligned}$$

Figure 3: Alternative domains for an NPI: 📗 is a poetry book, 📖 is an algebra book, and ✳ is a geology book

However, large domains will not capture the anti exhaustivity effect produced by the use of *wowoosé*: even the smallest and most marginal alternative has to be taken into account. This is achieved if the alternatives look as in Figure4:

$$\begin{aligned}
 D &= \text{📖} \text{📗} \text{✳} \\
 D_1 &= \text{📖} \text{📗} & D_2 &= \text{📖} \text{✳} \\
 D_3 &= \text{📗} \text{✳} & D_4 &= \text{📖} \\
 D_5 &= \text{📗} & D_6 &= \text{✳}
 \end{aligned}$$

Figure 4: Alternative domains for an FCI.

The widest domain possible is chosen from a group of unequal sized alternative domains. This explains the tolerance for exceptions that K&L talk about when they discuss the pragmatic effects of *any*, and the Nata speaker comments that using *wowoosé* is like using a hammer: *all* alternatives of *all* sizes have to be taken as possible options, so there is no doubt that the widest domain has been chosen for a reason.

6 Conclusion and future research

The main conclusion is that *wowoosé* is not an FCI per se, but it is a domain widener: it allows the speaker to avoid that the addressee thinks that there is some marginal option that he or she is leaving out by inducing a maximal widening of unequal alternative domains.

One of the main criticisms that Kadmon and Landman’s approach to English *any* gave rise to was the lack of focus or stress in their account. Other analyses, including Krifka (1995) and Lahiri

(1998) do take into account these factors, and it would be an interesting next step in the research of this item.

Nata, and Bantu languages in general, cast light on the subject of quantification and freedom of choice for two main reasons: one, their morphological structure allows us to establish paradigms like the one in Table 1, where the relationship between the quantificational base, concordial agreement, and different readings seem to be transparent. If it is indeed so needs further research. Second, some of the operators that have been proposed as binders of the existential variable (such as GEN) are overt in some Bantu languages, as has been proposed for Nata habitual marker *haa* (Gambarage 2012). This apparent transparency both in the morphological structure and in the quantificational environments will surely prove helpful in future research on this topic.

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A Data

(52) Noun Class 2

bha-ta-ni-ho bha-na bho-bh-ose mo-kibhara
 SM2-NEG-COP-LOC C2-child RED-C2-ose C18-park
 ‘There aren’t any children in the park.’

(53) Noun Class 3

ghegh-a o-mu-terebhi wo-u-ose
 take-FV PPF-C3-ladle RED-C3-ose
 ‘Pick any ladle.’

(54) Noun Class 9

it-a a-m-bori yo-i-ose
 kill-FV PPF-C9-goat RED-C9-ose
 ‘Kill any goat’