Universal and Existential Quantification in Chadic and Beyond

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1. Introduction

- Plan for this talk:

  Discussion of two semantic phenomena of potential interest to a general Africanist audience:

  i. coding and interpretation of universal quantification
  ii. coding and interpretation of indefiniteness / existential quantification

  in a number of West African languages
1. Introduction

- **Structure of the talk:**

  §2: Semantic Background on Quantification

  §3: ∀-Quantification in Hausa and Wolof and cross-linguistic implications

  §4: Indefinites & ∃-Quantification in Hausa, Akan, Wolof and cross-linguistic implications

  §5: Conclusion
2. Quantification - Background

• Quantification in Predicate Logic:

One universal and one existential quantifier: \( \forall, \exists \)

Both quantifiers are unrestricted and operate over (open) propositions:

\[(1) \quad a. \ \forall x \ [\text{linguist'}(x) \rightarrow \text{happy'}(x)] \approx \text{All the linguists are happy/ Every linguist is happy.} \]

\[b. \ \exists x \ [\text{linguist'}(x) \land \text{happy'}(x)] \approx \text{A / some / (at least) one linguist is happy.} \]
2. Quantification - Background

- Quantification in Predicate Logic: Problems

i. **Compositionality** - Meaning assignment only at sentential level \(\Rightarrow\) no local interpretation for quantificational NPs: *every linguist, some linguist* etc.

ii. **Expressiveness** - No meaning assignment to proportional quantificational NPs: *most linguists*

iii. **Lack of Restrictiveness**: No possibility to restrict the domain of quantification to a contextually given subset
2. Quantification - Background

• Quantification in Natural Language: GQ-Theory

Quantificational NPs in natural language denote Generalized Quantifiers (GQs) [Montague 1973, Barwise & Cooper 1981]

⇒ Quantifiers like *some* and *every* denote (second order) relations between sets.

(2)  a. \([\text{[every]}] = \lambda P. \lambda Q. P \subseteq Q\)

b. \([\text{[some]}] = \lambda P. \lambda Q. P \cap Q \neq \emptyset\)
2. Quantification - Background

• Quantification in Natural Language: GQ-Theory

(3)

\[
S \rightarrow \text{DP} \rightarrow \text{NP (P)} \rightarrow \text{VP (Q)}
\]

\[
\text{D} \quad \text{every} \quad \text{NP (P)} \quad \text{linguist} \quad \text{VP (Q)} \quad \text{is happy}
\]

\[= \text{true iff the set of linguists}_\text{NP} \text{ is a subset of the set of happy individuals}_\text{VP}\]
2. Quantification - Background

• Quantification in Natural Language: GQ-Advantages

i. Compositionality – Local meaning assignment to quantificational NPs possible ✓

ii. Expressiveness - Meaning assignment to proportional quantificational NPs possible ✓

iii. Restrictiveness: Contextual restriction of NP-set possible ✓
2. Quantification - Background

- Quantification in Natural Language

  **BUT:** Not clear how to capture the different distribution and interpretation of *all* and *every/each* [e.g. Vendler 1967, Gil 1995, Matthewson 2013]

(4)  
  a. All the sugar/students is/are gone. \([N_{PL}, N_{MASS}]\)
  b. *Every sugar/students is/are gone. \([N_{SG}]\)

(5)  
  all the students vs *every/each the student

(6)  
  a. All the students gathered in the yard. \((\text{COLL}\checkmark)\)
  b. *Each/every student gathered in the yard. \((\text{\*COLL})\)
2. Quantification - Background

• Quantification in Natural Language: Flexibility

In response to observed variability in the syntactic & semantic behavior of universal quantifiers within and across languages, Matthewson (2001, 2013) postulates flexibility in the coding of quantificational meanings:

Two types of adnominal quantifiers:

NP-selecting: \([Q \text{ NP}] \implies \text{each, every}\)

DP-selecting: \([Q \text{ DP}] \implies \text{all}\)
2. Quantification - Background

• Quantification in Natural Language: Flexibility

In response to observed variability in the syntactic & semantic behavior of universal quantifiers within and across languages, Matthewson (2001, 2013) postulates flexibility in the coding of quantificational meanings:

(7) a. \[ \text{QP<et,t>} \]
    \[ \text{Q} \ 	ext{NP<et>} \]
    \[ \text{every student} \]

b. \[ \text{QP<et,t>} \]
    \[ \text{Q} \ 	ext{DP<e>} \]
    \[ \text{all the students <et>} \]
2. Quantification - Background

- Quantification in Natural Language: Flexibility

In response to observed variability in the syntactic & semantic behavior of universal quantifiers within and across languages, Matthewson (2001, 2013) postulates flexibility in the coding of quantificational meanings:

\[(8) \quad \text{a. } [[\text{every}_{NP}]] = \lambda P<et>.\lambda Q<et>. \forall x [x \in P \rightarrow Q(x)]
\]

\[(8) \quad \text{b. } [[\text{all}_{DP}]] = \lambda y<e>.\lambda Q<et>. \forall x [x \leq y \rightarrow Q(x)]
\]
2. Quantification - Background

• Flexible Q-meanings: Predictions

i. No collective interpretations for $Q_{NP}$  
because elements of singular NP-sets are atomic!

ii. Flexible interpretation (DIST and/or COLL) for $Q_{DP}$  
because subpart-relation $\leq$ holds for atomic 
individuals and collections alike ($x=y$ possible)

iii. Further lexical specifications possible with $Q_{DP}$:  
subparts can be further specified, e.g. as [+/- atomic]
2. Quantification - Background

• Flexible Q-meanings: Predictions

i. No collective interpretations for $Q_{NP}$ because elements of singular NP-sets are atomic!

ii. Flexible interpretation (DIST and/or COLL) for $Q_{DP}$ ✓

   e.g. English *all*

iii. Further lexical specifications possible with $Q_{DP}$:

   ✓

   distributive $Q_{DP}$s in St’át’imcets [Matthewson 1999]

   $\geq 2 \ \forall$-quantifiers in a language: Kwaio (5-6), Basque (4), Cuzco Quechua (4), Malagasy (8) [Keenan 2008]
3. $\forall$-Quantification in Hausa and Wolof

- $\forall$-Quantification in African Languages:

  This section looks at the structure and interpretation of universal quantification in two major African languages:

  i. Hausa (Chadic, Afro-Asiatic) [Zimmermann 2008, 2009, 2013]

  ii. Wolof (Atlantic, Niger-Congo) [Tamba et al. 2012]

  ⇒ African languages are under-represented in the survey of Matthewson (2013): only 4 out of 37

  Igbo (Igboid), Koromfe (Gur), Fongbe (Kwa), Xhosa (Bantu)
3. ∀-Quantification in Hausa and Wolof

• ∀-Quantification in Hausa and Wolof: Findings

The findings on ∀-quantification in Hausa and Wolof support the flexible approach in Matthewson (2013):

⇒ Hausa has two different ∀-quantifiers: a Q_{DP} and a Q_{NP} with characteristic semantic and syntactic properties

⇒ In Wolof, a single ∀-quantifier (epp) behaves as as Q_{DP} or Q_{NP}, depending on the overall NP/DP-syntax!
3. $\forall$-Quantification in Hausa and Wolof

- $\forall$-Quantification in Hausa: [Jaggar 2001, Zimmermann 2008]

Hausa has two Q-elements with universal force:

\[ duk(\dot{a}) \text{ vs } koo+wh \]

(9) \[ duk(\dot{a}) \text{ Hausàwaa, } \forall \text{ Hausa}_\text{PL} \]
\[ \forall \text{ food} \]
\[ \text{‘all Hausa people’ } \text{‘all the food’} \]

(10) \[ koo-wàcè \text{ mootàa, } \text{DISJ-wh}_\text{F} \text{ car} \]
\[ \text{koo-wànè } \text{daalìbii } \text{DISJ-wh}_\text{M} \text{ student} \]
3. ∀-Quantification in Hausa and Wolof

• ∀-Quantification in Hausa:

Hausa has two Q-elements with universal force:

\[ duk(à) \text{ vs } koo+wh \]

\[ \Rightarrow duk(à) \text{ shows the typical properties of } Q_{DP} \]

\[ \Rightarrow koo+wh \text{ shows the typical properties of } Q_{NP} \]
3. ∀-Quantification in Hausa and Wolof

• ∀-Quantification in Hausa: $Q_{DP} \text{duk(à)}$ vs $koo+wh$

_Syntactic differences I:_

 duk(à) shows no agreement and can precede or follow the nominal constituent

(11) duk faasinjoojî-n vs faasinjoojî-n dukà
    ∀ passengers-DEF passengers-DEF all
    ‘all the passengers’ [Newman 2000: 388]
3. \( \forall \)-Quantification in Hausa and Wolof

- \( \forall \)-Quantification in Hausa: \( Q_{DP} \) \( duk(à) \) vs \( koo+wh \)

**Syntactic differences I:**

- \( koo+wh \) shows agreement, cf. (10), and precedes the nominal constituent.

(12) * daalibii  koowànè
doalibii  DISJ-wh\(_M\)

student  DISJ-wh\(_M\)
3. ∀-Quantification in Hausa and Wolof

• ∀-Quantification in Hausa: $Q_{DP} \, duk(à) \text{ vs } koo+wh$

*Syntactic differences II:*

$duk(à)$ combines with (definite) mass nouns and PL
definites (13), but not with bare SG count nouns (14).

(13) duk(à) Hàusàwaa, duk bàbinci, duk daalibâ-n
  \forall Hausa people, \forall food \forall students-DEF
  ‘all Hausa people’ ‘all the food’ ‘all the students’

(14)*duk daalibii
  \forall student
3. $\forall$-Quantification in Hausa and Wolof

$\forall$-Quantification in Hausa: $Q_{\text{DP}} \ duk(\à) \ vs \ koo+\text{wh}$

Syntactic differences II:

$koo+\text{wh}$ combines with bare SG count nouns (15), but not with definite nouns or mass nouns (16)

(15) koowàcè mootàa
    DISJ-wh.F car
    ‘every car’

(16)*koowàcè mootà-ʁ, #koowàcè shìnkaafaa
    DISJ-wh.F car-DEF DISJ-wh.F rice
3. \( \forall \)-Quantification in Hausa and Wolof

- \( \forall \)-Quantification in Hausa: \( Q_{\text{DP}} \) \( duk(\dot{a}) \) vs \( koo+wh \)

**Syntactic differences: Summary**

\[ \Rightarrow duk(\dot{a}) \text{ combines with DPs or generically interpreted mass nouns and plural nouns (≈DP): } Q_{\text{DP}} \]

\[ \Rightarrow koo+wh \text{ shows DET-properties (agreement, fixed position) and combines with SG count NPs (set-denoting): } Q_{\text{NP}} \]
3. ∀-Quantification in Hausa and Wolof

• ∀-Quantification in Hausa: $Q_{DP}$ $duk(à)$ vs $koo+wh$

*Semantic differences I: COLL vs DIST*

$duk(à)$ allows for collective (17) and distributive (18) interpretation [Jaggar 2001]: $Q_{DP}$

(17) duk däràlibâ-àn sun tààaru à gàba-àn makařantaa
∀ students-DEF 3pl.PFV gather at front-LINK school
‘All the students gathered in front of the school.’

(18) duk däràlibâ-àn sun yi muñnàa kwarai
∀ students-DEF 3pl.PFV do gladness extremely
‘All the students were very happy.’
3. ∀-Quantification in Hausa and Wolof

• ∀-Quantification in Hausa: $Q_{DP}$ *duk(à)* vs *koo+wh*

*Semantic differences I: COLL vs DIST*

*koo+wh* only allows for distributive interpretation

[Jaggar 2001]: $Q_{NP}$

(19)* koo-wànè dàalibii yaa tàaru à gàba-n makařantaa
DISJ-wh.M student 3sg.PFV gather at front-LINK school
‘Each student gathered in front of the school.’

(20) koo-wànè mûtûmì yaa sayar dà gida-n-sàì / *sùì*
DISJ-wh.M man 3sg.PFV sell house-of-his them
‘Every man sold his house.’
3. ∀-Quantification in Hausa and Wolof

• ∀-Quantification in Hausa: $Q_{DP} \ duk(\dot{a})$ vs $koo+wh$

*Semantic differences I: COLL vs DIST*

This difference falls out on Matthewson’s analysis:

i. because of $x \leq y$, $Q_{DP} \ duk(\dot{a})$ can quantify either over atomic subparts of DP-denotation, or over the DP-denotation as a whole ($x = y$): DIST or COLL

ii. $Q_{NP} \ koo+wh$ only has access to atomic elements of a set: only DIST
3. $\forall$-Quantification in Hausa and Wolof

- $\forall$-Quantification in Hausa: $Q_{dp}$ $duk(à)$ vs $koo+wh$

*Semantic differences II: NEG*

Different interpretation of $duk(à)$ and $koo+wh$ under negation [Jaggar 2001: 377, Zimmermann 2008: 459]:

i. $NEG > duk(à) \Rightarrow not\ all \quad (21a)$

ii. $NEG > koo+wh \Rightarrow not\ any = every\ not \quad (21b)$
3. $\forall$-Quantification in Hausa and Wolof

$\forall$-Quantification in Hausa: $Q_{dp}$ $duk(\dot{a})$ vs $koo+wh$

Semantic differences II: NEG

(21) a. $bâ-n$ karàn tà $duk$ liitàttàafâ-n $ba$
    NEG-1sg read $\forall$ books-DEF NEG
    ‘I didn’t read all the books.’ [Jaggar 2001: 377]

    b. $bâ-n$ ga $koo-waa$ $ba$
    NEG-1sg see DISJ-wh NEG
    ‘I didn’t see anyone.’ [Zimmermann 2008: 450]
3. \( \forall \)-Quantification in Hausa and Wolof

- \( \forall \)-Quantification in Hausa: \( Q_{DP} \) duk(à) vs koo+wh

The difference in interpretation of duk(à) and koo+wh under negation does not fall out on Matthewson’s analysis: both nominal expressions are of semantic type <et,t> \( \Rightarrow \) non-referring expressions

\( \Rightarrow \)The difference would fall out on Brisson’s (1998) analysis, which treats all-DPs as referring expressions (<e>):

(21a) \( \approx \) ‘I didn’t read the books in their entirety.’
3. $\forall$-Quantification in Hausa and Wolof

• $\forall$-Quantification in Wolof: $CL\cdot epp$

Unlike Hausa, Wolof has only one lexical universal quantifier ($CL\cdot epp$) [Tamba et al. 2012]

$\Rightarrow$This $\forall$-quantifier exhibits $Q_{NP}$ or $Q_{DP}$-behaviour depending on its syntactic context!
[see Gil 1995 for similar observations on Hebrew]
3. \( \forall \)-Quantification in Hausa and Wolof

- \( \forall \)-Quantification in Wolof: \( CL\text{-epp} \)

(22) a. \( xale \) (%y-i) \( y\text{-epp} \)
    \( \text{child} \) \( CL\text{-PL-DEF.PROX} \) \( CL\text{-PL-}\forall \)
    ‘all the children’

    \( NP > epp, CL\text{-PL-epp, epp}\text{+DEF} \)

b. \( b\text{-epp} \) \( xale \) (*b-i)
    \( CL\text{-}\forall \) \( \text{child} \) \( CL\text{-DEF.PROX} \)
    ‘every child’

    \( epp > NP, CL\text{-SG-epp, *epp}\text{+DEF} \)
3. \( \forall \)-Quantification in Hausa and Wolof

- \( \forall \)-Quantification in Wolof: \textit{CL-epp}

Other differences I: [\(+/-\) mass]
Preposed \textit{epp} cannot combine with mass nouns (= every)

(23) *\textit{B-epp} ceeb tuuru-na
\textit{CL-\( \forall \)} rice spill-FIN
intended: ‘All the rice spilled.’
3. $\forall$-Quantification in Hausa and Wolof

- $\forall$-Quantification in Wolof: *CL-epp*

\textit{Other differences I: [+/− mass]}

Postposed *epp* quantifies over mass Ns + CL.SG+DEF (= \textit{all}). Impossible with count N+CL.SG+DEF

(24) a. ceeb b-i y-ëpp
rice CL.SG-DEF.PROX CL.PL-$\forall$

‘all the rice’

b. *xaj b-i y-ëpp
dog CL.SG-DEF.PROX CL.PL-$\forall$
3. $\forall$-Quantification in Hausa and Wolof

- $\forall$-Quantification in Wolof: $\text{CL-epp}$

Additional observations I:
without CL.SG-DEF marking, (24a) expresses $\forall$-quantification over a plurality of portions/kinds (=22a).

(24) c. ceerb y- ëpp
    rice    CL.PL-$\forall$
    ‘all the rices’
3. \( \forall \)-Quantification in Hausa and Wolof

• \( \forall \)-Quantification in Wolof: \( CL-epp \)

*Additional observations II:*
without CL.SG+DEF marking, postposed CL.SG-\( epp \) functions as a modifier on SG count nouns (cf. 24b)

(25) Jàng-na-a tée\( r \)é b-épp
read-FIN-1SG book CL-\( \forall \)
‘I read the whole book’
3. $\forall$-Quantification in Hausa and Wolof

- $\forall$-Quantification in Wolof: CL-epp

Consequences for NP-semantics:

i. y not a PL-marker, but a LATT(ice)-marker (mass, PL) [Link 1982] (22a, 24a, 24c).

ii. CL+DEF marking $b$-$i$ in (24a) has semantic import:

iii. $\forall$-quantification over parts of atomic entities possible with postposed $b$-epp (25): all the apple
3. $\forall$-Quantification in Hausa and Wolof

- $\forall$-Quantification in Wolof: $CL$-$epp$

*Semantic differences: COLL vs DIST*

Preposed $epp$ does not allow for collective interpretations ($= Q_{NP}: every, koo+wh$), whereas postposed $y$-$epp$ does ($= Q_{DP}: all the, duk(à)$).
3. $\forall$-Quantification in Hausa and Wolof

- $\forall$-Quantification in Wolof: *CL-epp*

*Semantic differences: COLL vs DIST*

(26) a. Xale y–ëpp daje-na-ńu  
    child CL-$\forall$ gather-FIN-3PL  
    ‘All the children gathered.’

b. *B-epp xale daje-na  
    CL-$\forall$ child gather-FIN
3. $\forall$-Quantification in Hausa and Wolof

- $\forall$-Quantification in Wolof: Data Summary

Unlike Hausa, Wolof has only one lexical universal quantifier: $CL\text{-epp}$

This $\forall$-quantifier exhibits $Q_{\text{NP}}$ or $Q_{\text{DP}}$-behavior in its combinatorial possibilities and interpretation, depending on its syntactic context!

$\Rightarrow$ How to account for the two $Q$-instantiations on a Matthewson-style analysis?
3. \( \forall \)-Quantification in Hausa and Wolof

• \( \forall \)-Quantification in Wolof: Uniform analysis of \( CL\)-\textit{epp}

A uniform analysis is possible on the assumption that \( CL\)-\textit{epp} is lexically underspecified for the set_of/part_of-relation relating the individuals quantified over with the quantificational domain as a whole:

\( \Rightarrow \text{epp expresses } \forall \)-quantification over constituents of a larger whole (sets, pluralities/masses/atomic individual):

\[
\begin{align*}
(27) \quad [[CL\text{-}epp]] &= \lambda P_{<et>} \lambda Q_{<et>} \forall x [x R_{\text{CONST}} P \rightarrow Q(x)]; \\
&\text{with } x R_{\text{CONST}} P: \text{`x is a constitutive component of } P' \\
\end{align*}
\]
3. ∀-Quantification in Hausa and Wolof

• ∀-Quantification in Wolof: Uniform analysis of *CL-epp*

(28) a. QP<et,t>  
   Q  
   b-epp  
   *y-epp  
   NP<et>  

b. QP<et,t>  
   DP<e>  
   Q  
   y-epp  
   NP  
   CL-DEF  
   (b-epp)  
   y-i (plural)  
   b-i (mass)
3. ∀-Quantification in Hausa and Wolof

- ∀-Quantification in Wolof: Uniform analysis of \textit{CL-epp}

⇒ Differences in distribution, combinatory possibilities and semantic interpretation follow from CL-marking [+/- lattice: \(y\)- vs \(b\)-] and the different status of the nominal complement [NP vs DP].

\textbf{Q:} Do the \(Q_{\text{NP}}\) and \(Q_{\text{DP}}\)-instantiations of \textit{epp} show different semantic behavior under sentential negation, as observed for Hausa? ⇒ future research!
3. ∀-Quantification in Hausa and Wolof

• ∀-Quantification: Cross-linguistic implications

i. There is variation in the status of lexical adnominal ∀-quantifiers as $Q_{NP}$ and $Q_{DP}$ not only between languages [Matthewson 2013], but also within individual languages (English, Hausa) ⇒ no parameter-setting!

ii. Wolof has only one lexical ∀-quantifier, showing $Q_{NP}$- or $Q_{DP}$-behavior depending on syntactic context; (= kol in Hebrew, Gil 1995)

Q: Which factors decide on the realization of ∀ as $Q_{NP}$, or $Q_{DP}$, or both in a given language?
3. ∀-Quantification in Hausa and Wolof

• ∀-Quantification: Methodological Guidelines

i. Mere translation and corpus findings insufficient for establishing semantic nature of ∀-quantifiers as Q\textsubscript{NP}/Q\textsubscript{DP}

ii. Minimal check-list for Semantic Field Research:
   - NP or DP-complement?
   - Combination with mass, count\textsubscript{PL}, count\textsubscript{SG} nouns?
   - COLL and/or DIST-interpretations possible?
   - Scope behavior under negation?
3. ∀-Quantification in Hausa and Wolof

• ∀-Quantification in under-researched languages

Ngamo (West Chadic; Mira Grubic, p.c.): $\forall_{NP}$ vs $\forall_{DP}$

(Ng1) kultama=s siya ke $\forall_{NP}$: NP-wh-ADD
    eggplant=link.f which.f also
    ‘every eggplant’

(Ng2) Biya shap(=su)
    people all(=of.them)
    ‘all the people’
3. $\forall$-Quantification in Hausa and Wolof

- $\forall$-Quantification in under-researched languages

$\forall_{NPs}$ with wh+DISJ marker also observed in:

- Margi (Central Chadic, Hoffmann 1963),
- Mupun (Central Chadic, Frajzyngier 1993),
- Hdi (Central Chadic, Frajzyngier 2002),
- Gùrùntùm (West Chadic, Haruna 2003),
- Nigerian Fulani (Jungraithmayr & Abu-Manga 1989)
4. Indefinites in Hausa, Akan, Wolof

- Indefiniteness in African Languages:

  This section looks at the structure and interpretation of **indefinites** in three major African languages:

i. Hausa (Chadic, Afro-Asiatic) [Zimmermann 2008, 2013]

ii. Akan (Kwa, Niger-Congo) [Amfo 2009]

iii. Wolof (Atlantic, Niger-Congo) [Tamba et al. 2012]
4. Indefinites in Hausa, Akan and Wolof

• Indefiniteness: Semantic Background

Indefinite NPs introduce new individuals into the discourse [Heim 1982, Kamp & Reyle 1993]:

i. They are associated with $\exists$-quantificational force.

ii. They are non-referential $\neq$ definites, proper names

(29) a. A student entered the room. He was smiling.
   b. The student entered the room. He was smiling.
4. Indefinites in Hausa, Akan and Wolof

• Indefiniteness: Semantic Background

Indefinites are standardly analyzed as generalized quantifiers [Montague 1973, Barwise & Cooper 1981, Heim & Kratzer 1998]

(30) a. \([\text{[a/some]}] = \lambda\mathbf{P}.\lambda\mathbf{Q}. \mathbf{P} \cap \mathbf{Q} \neq \emptyset\)  \(= 2b\)

OR

b. \([\text{[a/some]}] = \lambda\mathbf{f}.\lambda\mathbf{g}. \exists \mathbf{x} [\mathbf{f}(\mathbf{x}) \land \mathbf{g}(\mathbf{x})]\)
4. Indefinites in Hausa, Akan and Wolof

• Indefiniteness: Semantic Background

BUT: Indefinites differ from other (∀-) GQs in scope taking behavior: Indefinites take exceptional wide scope out of syntactic islands [Fodor & Sag 1982, Reinhart 1997]

(31) **Someone** will be offended

    [if we don't invite *most* philosophers]

i. ‘A certain person will be offended if we don’t invite most philosophers.’ ∃ > MOST

ii. ‘For most philosophers, there will be a (different) person that will be offended if we don't invite her.’ *MOST > ∃
4. Indefinites in Hausa, Akan and Wolof

• Indefiniteness: Semantic Background

BUT: Indefinites differ from other (∀-) GQs in scope taking behavior: Indefinites take exceptional wide scope out of syntactic islands [Fodor & Sag 1982, Reinhart 1997]

(32) **Most** guests will be offended

   [if we don’t invite some philosopher]

i. ‘Most guests will be offended if we don't invite a (different) philosopher’

ii. ‘There is a/some philosopher such that most guests will be offended if we don’t invite her’ \( \exists > \text{MOST} \checkmark \) (= specific)
4. Indefinites in Hausa, Akan and Wolof

• Indefiniteness: Semantic Background

In addition, indefinites allow for intermediate (wide) scope readings [Reinhart 1997]

(33) [Most linguists have looked at [every analysis [that solves some problem]]]

= For most linguists z, there is a problem x, such that z looked at each analysis solving x.
4. Indefinites in Hausa, Akan and Wolof

• The problem of indefinites:

Indefinite expressions appear to be sometimes referential (<e>, on specific/wide scope -interpretation), sometimes non-referential (<et,t>),

but even on their referential use they are still indefinite in not giving away the identity of their referent!
4. Indefinites in Hausa, Akan and Wolof

• The problem of indefinites: Solution I

In response to the double nature of English and German indefinites, Reinhart (1997) and Kratzer (1998) propose lexical ambiguity accounts:

Two interpretations for indefinites:
(i.) a $Q_{NP}$-$\exists$-interpretation (see above)
(ii.) an interpretation as $\text{CHOICE FUNCTION}$ variable $f_{CH}$
4. Indefinites in Hausa, Akan and Wolof

• The problem of indefinites: Solution I

A function $f$ is a **choice function** ($f_{CH}$) if it applies to any non-empty set and yields a member of that set [Reinhart 1997: 372]

\[
[[f_{CH}]] = \lambda P_{<et>}. x_{<e>}, \text{ such that } x \in P
\]

\[\implies \text{output of } f_{CH} \text{ of type } <e> = \text{referential}\]
\[\implies \text{output of } f_{CH} \text{ underdetermined (any element of } P \text{ will do)} = \text{indefinite}\]
4. Indefinites in Hausa, Akan and Wolof

• The problem of indefinites: Solution I

(35) a. \( \exists -Q_{NP} \) \( NP<et> \)
    \( QP<et,t> \)

b. \( f_{CH}<et,e> \) \( NP<et> \)
    \( DP<e> \)

⇒ Choice function variable existentially bound at sentential level (Reinhart 1997) or contextually bound at matrix level (Kratzer 1998), thus giving rise to exceptional wide scope phenomena.
4. Indefinites in Hausa, Akan and Wolof

• The problem of indefinites: Solution I

(32) Most guests will be offended
   [if we don’t invite some philosopher]

i. ∃f [most guests will be offended
       if we don’t invite f([[philosopher]])]

ii. [most guests will be offended
      if we don’t invite g(f₁)([[philosopher]])]
4. Indefinites in Hausa, Akan and Wolof

- The problem of indefinites: Solution II

In response to empirical problems with the $\exists$-bound choice function approach of Reinhart (1997), and with conceptual problems of the context-bound choice function approach of Kratzer (1998) [see Chierchia 2001, Schwarz 2001], ...

Schwarzschild (2002) proposes a more conservative analysis of indefinites as unambiguously denoting $\exists$-Q\textsubscript{NP}s
4. Indefinites in Hausa, Akan and Wolof

• The problem of indefinites: Solution II

The difference in interpretation (apparent narrow vs (exceptional) wide scope) follows from a difference in the size of the Q-restricting NP-set:

In the extreme case, the NP-restriction is contextually delimited to denote a singleton set containing only one element \( \Rightarrow \) exceptional wide scope \( \approx \) scope neutralization
4. Indefinites in Hausa, Akan and Wolof

• The problem of indefinites: Solution II

(36) a. Everyone at the party voted to watch a movie that Phil liked. [Schwarzschild 2002: 294]

b. [[movie that Phil liked]] =

{ x : x is a movie that Phil liked and x was proposed as a candidate movie for the vote on what to watch by the guests}

⇒ Shift of semantic burden to implicit contextual restriction, which is required with Qs anyway!
4. Indefinites in Hausa, Akan and Wolof

• The problem of indefinites: Solution II

Apart from the reliance on contextual factors (hard to control for), the singleton set analysis of indefinites is not entirely unproblematic either. [Heim 2011]
4. Indefinites in Hausa, Akan and Wolof

- The problem of indefinites: Cross-linguistic perspective

What can Non-European languages with $\geq 1$ indefinite form tell us about the proper analysis of indefinites?

$\Rightarrow$ Evidence in favor of choice functions?

$\Rightarrow$ Evidence in favor of $Q_{NPs}$ (with singleton restrictor)?
4. Indefinites in Hausa, Akan and Wolof

• Indefinites in Hausa: Realization and Interpretation

Hausa has two kinds of indefinite expressions, which differ in semantic interpretation (scope), morphosyntax, and discourse-semantic behavior (anaphoric potential). [Jaggar 1988, Zimmermann 2008]

- **bare NPs** vs **wani/wata/wasu NPs**

<table>
<thead>
<tr>
<th>bare NPs</th>
<th>vs</th>
<th>wani/wata/wasu NPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>mûtûm</td>
<td>arrison mûtûm</td>
<td>‘(a) man’</td>
</tr>
<tr>
<td>mace</td>
<td>arrison mûtûm</td>
<td>‘woman’</td>
</tr>
<tr>
<td>mutàanee</td>
<td>arrison mûtûm</td>
<td>‘people’</td>
</tr>
</tbody>
</table>
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Hausa: Realization and Interpretation**

  ⇒ The existence of two structurally different classes of indefinite expressions is not an uncommon feature of (West) African languages; see below
4. Indefinites in Hausa, Akan and Wolof

• Indefinites in Hausa: Scope

The two indefinite forms differ in scopal behavior:

- bare NPs always take narrow scope

- *wani*-NPs can take narrow or wide scope relative to other operators (NEG), including exceptional wide scope and intermediate scope.
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Hausa:** NEG > INDEF - wide scope context
  
  [Matthewson 2011]

(37) CONTEXT: Audu bought a lot of fish, but ...

  a. #Audu ba-i sayi kifi ba #bare NP
     
     Audu neg-3sg.m buy fish neg

  i. # ‘Audu didn’t buy any fish.’
     
     [Comment: “This is contradictory!”]

  ii. *‘There is a certain fish Audu didn’t buy.’
4. Indefinites in Hausa, Akan and Wolof

**Indefinites in Hausa:** NEG > INDEF - wide scope context

(37) CONTEXT: Audu bought a lot of fish, but ...

b. Audu **ba-i** sayi **wani kifi ba ✓** **wani-NP**
Audu neg-3sg.m buy WANI fish neg
‘Audu didn’t buy a certain fish’

[Comment: “This sentence can mean either ‘Audu didn’t buy any fish’ or ‘Audu didn’t buy a certain fish’. Here is has the second meaning, but in isolation one would think it has the first meaning.”]
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Hausa**: NEG > INDEF - narrow scope

(38) CONTEXT: Musa couldn’t find any Daura girl that he liked, so...

a. Musa *ba*-i auri *yarinya* ‘yar Daura *ba*. ✓*bare NP*
Musa neg-3sg.m marry girl daughter-of D. neg
‘Musa didn’t marry any girl from Daura.’

b. Musa *ba*-i auri *wata yarinya* ‘yar Daura *ba*. ✓*wani-NP*
Musa neg-3sg.m marry WANI girl daughter-of D. neg
‘Musa didn’t marry any girl from Daura.’
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Hausa**: Exceptional wide scope with COND

(39) CONTEXT: Many people will come to the meeting, but...

a. #Idan mutum ya zo taro-n, bare NP
   if man 3sg.m come meeting-DET
   Musa zai yi farin ciki sosai.
   Musa fut-3sg do happiness very

‘If a person comes to the meeting, Musa will be particularly happy’
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Hausa:** Exceptional wide scope with COND

(39) CONTEXT: Many people will come to the meeting, but...

b. *Idan wani mutum ya zo taro-n,*
   if *WANI man 3sg.m come meeting-det*
   Musa zai yi farin ciki sosai.
   Musa fut-3sg do happiness very

‘if SOME person comes to the meeting, Musa will be particularly happy.’
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Hausa**: Narrow scope under COND

(40) CONTEXT: Mary doesn’t know if there are any elders, but ...

a. *Idan dattijo* ya zo, Mary za ta yi farin ciki. ✓bare NP
   if elder 3sg.m come, Mary fut 3sg.f do happy
   ‘If any elder comes, Mary will be happy’

b. *Idan wani dattijo* ya zo, Mary za ta yi farin ciki.
   if WANI elder 3sg.m come, Mary fut 3sg.f do happy
   ‘If any elder comes, Mary will be happy.’ ✓wani-NP
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Hausa**: Intermediate Scope

(41) Context: I am married to Asabe and Hawwa. My mum and my sister are my only relatives. My mum only likes Asabe, and my sister only likes Hawwa.

Kowane dangina yana sô-n
every relative-1sg 3sg.m.prog like-link
wata yarinya daga cikin yara-n da na aura.
wani girl from inside girls-def rel 1sg marry
‘For every relative of mine there is a certain girl that I married such that she likes her.’ ✓wani-NP
4. Indefinites in Hausa, Akan and Wolof

• Indefinites in Hausa: Summary Scope Behavior

i. \textit{wani}-NPs show the flexible scope behavior attributed to choice functions or singleton set restrictions in the semantic literature!

Q: Is there independent evidence as to whether Hausa \textit{wani}-NPs denote choice function variables or $Q_{\text{NPs}}$?

ii. Bare NPs show the narrow scope behavior attributed to a generalized quantifier-interpretation in the literature
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Hausa: Form**

  Complex *wani*-NPs show the structural properties of universal $Q_{NP}$-quantifiers ($koo+wh$) [Zimmermann 2008]:
  
  - indefinite marker occurs in the same prenominal slot
  - indefinite marker shows gender agreement with noun

  $\text{formal properties } \Rightarrow Q_{NP}$
4. Indefinites in Hausa, Akan and Wolof

• Indefinites in Hausa:

Further evidence for singleton $Q_{NPs}$:

$wani$ can combine with overt singleton-denoting restrictors: NP+DEF

(42) $wata$ mootà-r taa b’aacì
taa car-DEF 3sg.PERF break.down

‘A specific (previously mentioned) car broke down.’

⇒ sequences of $wani/wata$-NPs translate as ‘the one..., the other...’
4. Indefinites in Hausa, Akan and Wolof

• **Indefinites in Hausa: Form**

  Bare NPs show no structural evidence of functional Q-elements:

  formal properties $\Rightarrow$ predicative interpretation: <et>
4. Indefinites in Hausa, Akan and Wolof

• Indefinites in Hausa: Discourse semantics

New discourse referents to be referred to in subsequent discourse are preferably introduced by wani-NPs

‘[...] its essence is that it conveys new information, introduces a new character into a story [...] if this new thing is felt to be sufficiently important to the story, e.g. you are going to hear more about it, then wani/wata/wad’ansu is generally put in front of it.” [Jaggar 1988: 46, quoting from Parsons, .n.d.]

⇒ *Bare NPs* do not (easily) introduce discourse referents
• Indefinites in Hausa: Discourse semantics

⇒ Obligatory narrow scope and the lack of discourse transparency displayed by bare NP-indefinites is a characteristic property of pseudo-incorporated NPs [Farkas & deSwart 2003].

_Pseudo-incorporation:_
Semantic modification of a V- or VP-denotation with an NP-meaning of type <et>
≈ Chung & Ladusaw’s (2004) RESTRICT
4. Indefinites in Hausa, Akan and Wolof

- Indefinites in Hausa: Discourse semantics

(43) **RESTRICT:** If there is a node $\alpha$ with two syntactic daughters $\beta$ of type <eet> and $\gamma$ of type <et>, then

$$[[\alpha]] = \lambda x.\lambda y. [[\beta]](x)(y) \& [[\gamma]](x) = \lambda x.\lambda y. R(y, x) \& P(x)$$

(44) **VP<et>** $\lambda x.\lambda y. \text{marry}'(y, x) \& \text{girl}'(x)$

$\text{V<eet>}$  $\text{NP<et>}$

auri       yarinya
marry       girl
4. Indefinites in Hausa, Akan and Wolof

• Indefinites in Hausa: Summary

The two indefinite forms in Hausa come with two different semantic interpretations:

i. *wani*-NPs: \([Q_{NP} [NP]]\); semantic type <et,t>
   can be restricted by singleton NP-sets: exceptional scope

ii. Bare indefinite NPs are of semantic type <et> and combine with their syntactic sisters qua RESTRICT
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Hausa: Cross-Linguistic Implications**

  Hausa: two forms
  
  1. *wani-NP*  
  2. **Q\textsubscript{NP}<et,t>**  
  3. *bare NP*  
  4. **<et>**  
  5. scope: *flexible*  
  6. *narrow*

  \[ \Rightarrow \] prima facie, the existence of two different indefinites in Hausa would appear to support lexical ambiguity analyses for indefinites in English
4. Indefinites in Hausa, Akan and Wolof

• Indefinites in Hausa: Cross-Linguistic Implications

English ambiguity analyses: two interpretations

\[ f_{CH} <e> \quad Q_{NP <et,t>} \]

scope: flexible narrow

**BUT:** Ambiguity analyses for English assume a choice-function interpretation, for which there is no evidence in Hausa. Moreover, the quantifier interpretation is used to account for obligatory narrow scope, which is expressed by non-quantificational NPs in Hausa.
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Hausa: Cross-Linguistic Implications**

  The Hausa data provide no support for choice function analyses of indefinites in English, rather suggest that:

  $$\Rightarrow$$ English indefinites headed by indefinite article *a/some* consistently denote generalized quantifiers: $Q_{NP}$

  In addition, there are bare indefinite NPs (plurals, mass nouns), which take obligatory narrow scope (Carlson 1977) and which may denote into type $<et>$

  English $\approx$ Hausa
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Akan (Kwa):** Same picture

  Akan also has two indefinite forms: a complex form headed by an indefinite determiner *bí* and bare NPs [Amfo 2009]

  - NP-*bí*: wide scope, specific readings
  - bare NP: narrow scope, unspecific
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Akan (Kwa):** Same picture

(45) a. Me re-kɔ-tɔ mpabo. [Amfo 2009: 1787,(1)]
   1sg prog-go-buy shoes
   ‘I am going to buy a pair of shoes.’

  ⇒ type-identification

b. Me re-kɔ-tɔ mpabo bi. [Amfo 2009: 1787,(2)]
   1sg prog-go-buy shoes some
   ‘I am going to buy a certain pair of shoes.’
4. Indefinites in Hausa, Akan and Wolof

• **Indefinites in Akan (Kwa):** Same picture

  Parallels Akan *bí* – Hausa *wani*:

  i. *NP bi* allows for specific interpretations (45b)

  ii. The use of NP bi ‘is quite common in introductory sentences where the speaker introduces a referent that will be mentioned recurrently in the ensuing discourse’ [Amfo 2009: 1791]

  iii. *bí* has procedural semantics of an $\exists$-quantifier [Amfo 2009: 1792]
4. Indefinites in Hausa, Akan and Wolof

- Indefinites in Akan (Kwa): Same picture

Future research: Scope behavior of \( NP-bí \):

Q: Does \( NP-bí \) also allow for narrow scope interpretations?

If so, the analysis of Hausa indefinites would directly extend to Akan (and presumably many other Kwa and Chadic languages...
4. Indefinites in Hausa, Akan and Wolof

• Indefinites in Ngamo and Bura (Chadic): Same picture

**Ngamo** (Yobe State, West Chadic):

(Ng3) Ngo sal-ko bano.  
person build-pfv house  
‘A person / Somebody built a house.’

(Ng4) Ngo=i yo'oto sal-ko bano.  
person=linker INDEF.m build-pfv house  
‘A (specific) person / Somebody built a house.’
4. Indefinites in Hausa, Akan and Wolof

• Indefinites in Ngamo and Bura (Chadic): Same picture

Bura (Central Chadic):

(Bu1) mda mwala  Bare NP
woman

(Bu2) (mda) mwala laga  NP+INDEF
woman INDEF
4. Indefinites in Hausa, Akan and Wolof

• **Indefinites in Wolof (Atlantic):** Three forms!

  Tamba et al. [2012] show that Wolof has three indefinite forms, raising the question of how these differ in semantic meaning and semantic behavior (scope)?

  i. $Q_{<et,t>}$, $NP_{<et>}$, ???

  ii. flexible, narrow, ???
4. Indefinites in Hausa, Akan and Wolof

• **Indefinites in Wolof:** Three forms!

Three indefinites in Wolof [Tamba et al. 2012]:

i. CL-enn  NP

ii. u/a-CL  NP

iii. Bare  NP
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Wolof**: Three forms!

  i. *CL-enn* NP [Tamba et al. 2012:897]:

  (46) a. **b-enn** xaj  
      CL.SG-some dog  
      ‘a/some dog’, ‘one dog’

  b. **y-enn** yaj  
      CL.PL-some dog  
      ‘some dogs’

  cf. *b-epp, y-epp* from above!
• **Indefinites in Wolof:** Three forms!

  ii. u/a-CL NP [Tamba et al. 2012:897]:

  (47) u/a-b xaj
      INDEF-CL.SG  dog
      ‘a dog’
4. Indefinites in Hausa, Akan and Wolof

• **Indefinites in Wolof**: Three forms!

iii. Bare NPs [Tamba et al. 2012:897]:

(48) Gis-na-a xaj
    see-FIN-1SG dog
    ‘I saw a dog (i.e. some dog or other)’
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Wolof:** Three forms!

(49) \[ \text{Xadi gis-na a-b/ b-enn } /\emptyset \text{ sàcc} \]
\[ \text{Xadi see-FIN NDEF-CL } \text{CL- some } \text{thief} \]
\[ \text{‘Xadi saw a thief’, ‘Xadi saw a certain thief’} \]

⇒ All three forms can give rise to specific interpretations in episodic sentences, but otherwise they differ in distribution, combinatory possibilities and semantic interpretation.
4. Indefinites in Hausa, Akan and Wolof

• **Indefinites in Wolof:** Three forms!

*Combinatorial differences:* Plural and mass NPs

Bare NPs only have singular interpretations (no CL.PL):

(50) Awa jàpp-na sàcc vs
Awa catch-FIN thief
‘Awa caught a thief.’
NOT: ‘Awa caught some thieves.’
4. Indefinites in Hausa, Akan and Wolof

• **Indefinites in Wolof**: Three forms!

*Combinatorial differences*: Plural and mass NPs

Overt INDEF-forms cannot combine with mass nouns:

\[(51)\] Jënd-na-a $\emptyset$/*a-b / *b-enn ceeb
buy-FIN-1SG NDEF-CL/CL-some rice
‘I bought rice’

$\Rightarrow$ $a/u$-CL & CL-enn related to countability, atomicity
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Wolof:** Three forms!

  *Distributional differences: subjecthood*

i. Bare NPs can function as the subject of generic sentences, whereas *a/u-CL* and *CL-enn* cannot

ii. *a/u-CL* and *CL-enn* can function as the subject of episodic sentences, whereas bare NPs cannot.

⇒ Bare NPs have non-referential predicative meaning: <et>
4. Indefinites in Hausa, Akan and Wolof

• **Indefinites in Wolof:** Three forms!

  *Interpretive differences: Scope*

  *u/a-CL* and *CL-enn* differ in scopal behavior:

  i. *CL-enn* takes obligatory scope under NEG, but can scope over conditional operators

  ii. *u/a-CL* cannot take scope over conditional operators, but it can take scope over NEG

  iii. Bare NPs always take narrow scope (as expected)
4. Indefinites in Hausa, Akan and Wolof

• **Indefinites in Wolof**: Scope relative to NEG

(52) a. Awa dóór-\textit{ul} a-b xale \textit{NEG}\textgreater \exists, \exists\textgreater \textit{NEG}
awá hit-NEG NDEF-CL child
‘Awa did not hit any / a certain child’

b. Awa dóór-\textit{ul} b-enn xale \textit{NEG}\textgreater \exists
awá hit-NEG CL-some child
‘Awa did not hit a single child’

c. Awa dóór-\textit{ul} xale \textit{NEG}\textgreater \exists
awá hit-NEG child
‘Awa did not hit any child(ren)’
4. Indefinites in Hausa, Akan and Wolof

• Indefinites in Wolof: Scope relative to COND

(53) a. Su sama a-m mbokk gañ -u-ee,
   if my NDEF-CL relative hurt-REFL-PERF
   di-na-a donn-u kër
   IMPERF-FIN-1SG inherit-REFL house

‘If any relative of mine dies, I will inherit a house’

⇒ COND > ∃
4. Indefinites in Hausa, Akan and Wolof

• **Indefinites in Wolof:** Scope relative to COND

(53) b. Su sama m-enn mbokk gañ-u-ee,
if my CL-some relative hurt-REFL-PERF
di-na-a donn-u kër
IMPERF-FIN-1SG inherit-REFL house

‘If any/a certain relative of mine dies, I will inherit a house’

⇒ ∃ > COND, COND > ∃
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Wolof:** Analysis of *CL-enn* & *u/a-CL*

  While the analysis of bare NPs in Wolof as type <et> predicative expressions is straightforward and adequate,

  The different scope behavior of *CL-enn* and *u/a-CL* is puzzling: Neither of them seems to behave like a bona fide choice-function denoting or (singleton-restricted) Q: 

  \[\Rightarrow\text{either analysis predicts possible wide scope from NEG- and COND-environments with no additional restrictions!}\]
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Wolof:** Analysis of *CL-enn* & *u/a-CL*

  *Another difference:* Only *u/a-CL* licit in existentials:

  (54) a. Am-na a-y góór ci arme b-i NDEF exist-FIN NDEF-CL.PL man P army CL-DEF.PROX
  ‘There are men in the army’

  b. *Am-na y-enn / ∅ góór ci arme b-i NDEF exist-FIN CL.PL-some man P army CL-DEF.PROX
  ‘There are men in the army’
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Wolof:** Analysis of *CL-enn & u/a-CL*

In the absence of further evidence I tentatively propose the following analysis:

**CL-enn:** $Q_{NP}$, with *enn* inducing atomicity restriction on NP-meaning ($\approx a\ \text{single} = \text{Spanish } uno\ vs\ unos$, Martí 2008)

structurally parallel to $\forall$-quantifier *CL-epp*;

*with mass Ns; *in EXISTs and GENs

Assumption: $Q$ interpreted/ no singleton restriction under NEG. *Depending on focus?*
4. Indefinites in Hausa, Akan and Wolof

• **Indefinites in Wolof**: Analysis of *CL-enn & u/a-CL*

  $\Rightarrow$ Similarity to *a single*-phrases in English!

(55) If a single relative of mine dies I will inherit a fortune.

  COND $> \exists, \exists >$ COND

(56) a. I didn’t see *a single child.* only $\neg > \exists$

  b. A SINGLE child I didn’t see. $\exists > \neg$
4. Indefinites in Hausa, Akan and Wolof

- **Indefinites in Wolof**: Analysis of *CL-enn & u/a-CL*

  In the absence of further evidence I tentatively propose the following analysis:

  **u/a-CL**: $f_{CH}$, with clausal $\exists$-binding of f-variable

  *with mass Ns and GENs; $\checkmark$ in EXISTS

  **Assumption**: $\exists$-binding above or below NEG, but within the clause
4. Indefinites in Hausa, Akan and Wolof

- Indefinites in Wolof: Future Research

Closer study of *CL-enn* and *u/a-CL*

- In comparison to *a single* NPs in English
- Controlling for focus
- In environments that have shown to be problematic for choice function approaches with local $\exists$-binding

[Chierchia 2001, Schwarz 2001]
4. Indefinites in Hausa, Akan and Wolof

- Indefinites in Wolof: Summary

Wolof has three indefinite forms that differ in their semantic interpretation

... posing problems for European-based analyses, which at most assume a twofold lexical ambiguity...

... pointing to the need for more fine-grained distinctions in the formal semantic representation of indefinites in natural language (a certain, a single, ...).
4. Indefinites in Hausa, Akan and Wolof

• Indefinites: Methodological Guidelines

i. Mere translation insufficient for establish the semantic nature of indefinites as $Q_{NP}$, $f_{CH}$, or NP-predicates

ii. Minimal check-list for *Semantic Field Research*:

- Combination with mass, count$_{PL}$, count$_{SG}$ nouns?
- Occurrence in different clause types: GEN, EPIS, EXIST?
- Scope behavior relative to negation and conditionals; Exceptional (intermediate) wide scope?
- Discourse-anaphoric potential
5. Conclusion

i. Empirical description and formal semantic analysis of \( \forall \)-quantification and indefinites/ \( \exists \)-quantification in 2 \( \frac{1}{2} \) major West African languages: Hausa, Wolof, Akan

ii. Highlights cross-linguistic variation and cross-linguistic parallels in coding of quantification

iii. Has potential to shed light on the proper analysis of these quantificational concepts in European languages

iv. In some cases, points to the need for more fine-grained distinctions in the formal analysis: all – every; three indefinite forms in Wolof, ...

v. Formal semantic analysis of smaller African languages will increase understanding of quantification in general
THANK YOU!

COMMENTS, SUGGESTIONS AND POINTERS TO OTHER LANGUAGES/REFERENCES WELCOME !!!


References

References

References
