Areal, diachronic, and sociolinguistic typology
Lecture 2

Francesca Di Garbo

francesca@ling.su.se
Overview of today’s lecture

- Areal typology
  - My dissertation on grammatical gender in Africa (Di Garbo 2014)
Overview of today’s lecture

- Areal typology
  - My dissertation on grammatical gender in Africa (Di Garbo 2014)
- Diachronic typology and socio-linguistic typology
  - The evolution of gender agreement systems and language contact (Di Garbo & Miestamo under revision; Di Garbo under review)
  - Work in progress on Bantu gender systems (with Annemarie Verkerk)
Areal typology
Areal typology

- The study of “the areal distribution of typologically relevant features of languages” (Dahl 2001: 1956).
The world’s linguistic macro-areas (Dryer 1989, 1992)

- Maximally distinct linguistic areas, roughly corresponding to the size of continents:
  - Africa
  - Australia
  - Eurasia
  - North America
  - Papunesia
  - South America
- Macro-areas as a basis for geographically balanced language sampling or as an object of study in their own right.
The world’s linguistic macro-areas (Dryer 1989, 1992)

- Maximally distinct linguistic areas, roughly corresponding to the size of continents:
  - Africa
  - Australia
  - Eurasia
  - North America
  - Papunesia
  - South America
- Macro-areas as a basis for geographically balanced language sampling or as an object of study in their own right.
  - Continent-wide typologies (Haspelmath 2012)
My dissertation (Di Garbo 2014)
My dissertation

Gender and its interaction with number and evaluative morphology
An areal and intergenealogical typological survey of Africa
Francesca Di Garbo

Areal, diachronic, and sociolinguistic typology
Phenomena: grammatical gender

- A system of grammatical marking (on predicates, modifiers, pronouns) indicating the assignment of a noun to a given class.
Phenomena: grammatical gender

- A system of grammatical marking (on predicates, modifiers, pronouns) indicating the assignment of a noun to a given class.

(1) *En* nouns in Swedish (*utrum genus*)

Den lycklig-a flicka-n
DEF.U happy-DEF.U girl-DEF.U

“the happy girl”

(2) *Ett* nouns in Swedish (*neutrum genus*)

Det lycklig-t barn-et
DEF.N happy-DEF.N child-DEF.N

“the happy child”
Phenomena: nominal number

(3) Singular number in Swedish
En trevlig kväll
INDEF.SG nice evening
“a nice evening”

(4) Plural number in Swedish
Flera trevlig-a kväll-ar
Many nice-PL evening-PL
“many nice evenings”
Phenomena: evaluative morphology

How we say that things are *smaller* or *bigger* than their standard size.

(5) Italian
   a. casa
      ‘house’
   b. cas-etta
      house-SMALL
      ‘small house’

(6) Italian
   a. naso
      ‘nose’
   b. nas-one
      nose-BIG
      ‘big nose’
Phenomena: evaluative morphology

How we say that things are *smaller* or *bigger* than their standard size.

(5) Italian

<table>
<thead>
<tr>
<th></th>
<th>(5) Italian</th>
<th>(6) Italian</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>casa</td>
<td>a.</td>
</tr>
<tr>
<td></td>
<td>‘house’</td>
<td>naso</td>
</tr>
<tr>
<td>b.</td>
<td>cas-etta</td>
<td>b.</td>
</tr>
<tr>
<td></td>
<td>house-SMALL</td>
<td>nas-one</td>
</tr>
<tr>
<td></td>
<td>‘small house’</td>
<td>nose-BIG</td>
</tr>
</tbody>
</table>

**DIMINUTIVE**  **AUGMENTATIVE**
Focus of the dissertation

Interactions between grammatical gender distinctions, nominal number, and evaluative morphology, with grammatical gender being the focus of comparison.

How do these interactions affect the complexity of gender systems?

Domains of interaction: morphosyntax of gender, gender assignment rules

Morphosyntax of gender

- do gender and number share the same morphological encodings?
- is the number of gender distinctions the same in the singular and in the plural?
- are there dedicated diminutive and augmentative genders?

Assignment rules

- Is gender assignment rigid or flexible/manipulable?
- Are the meanings expressed through flexible gender assignment relevant for number marking and evaluative morphology?
Focus of the dissertation

- Interactions between grammatical gender distinctions, nominal number, and evaluative morphology, with grammatical gender being the focus of comparison.
Focus of the dissertation

- Interactions between grammatical gender distinctions, nominal number, and evaluative morphology, with grammatical gender being the focus of comparison.
- How do these interactions affect the complexity of gender systems?
Focus of the dissertation

- Interactions between grammatical gender distinctions, nominal number, and evaluative morphology, with grammatical gender being the focus of comparison.
- How do these interactions affect the complexity of gender systems?
- Domains of interaction: morphosyntax of gender, gender assignment rules
Focus of the dissertation

- Interactions between grammatical gender distinctions, nominal number, and evaluative morphology, with grammatical gender being the focus of comparison.
- How do these interactions affect the complexity of gender systems?
- Domains of interaction: morphosyntax of gender, gender assignment rules

Morphosyntax of gender
Focus of the dissertation

- Interactions between grammatical gender distinctions, nominal number, and evaluative morphology, with grammatical gender being the focus of comparison.
- How do these interactions affect the complexity of gender systems?
- Domains of interaction: morphosyntax of gender, gender assignment rules

Morphosyntax of gender

- do gender and number share the same morphological encodings?
Focus of the dissertation

- Interactions between grammatical gender distinctions, nominal number, and evaluative morphology, with grammatical gender being the focus of comparison.
- How do these interactions affect the complexity of gender systems?
- Domains of interaction: morphosyntax of gender, gender assignment rules

Morphosyntax of gender

- do gender and number share the same morphological encodings? is the number of gender distinctions the same in the singular and in the plural?
Focus of the dissertation

- Interactions between grammatical gender distinctions, nominal number, and evaluative morphology, with grammatical gender being the focus of comparison.
- How do these interactions affect the complexity of gender systems?
- Domains of interaction: morphosyntax of gender, gender assignment rules

Morphosyntax of gender

- do gender and number share the same morphological encodings? is the number of gender distinctions the same in the singular and in the plural?
- are there dedicated diminutive and augmentative genders?
Focus of the dissertation

- Interactions between grammatical gender distinctions, nominal number, and evaluative morphology, with grammatical gender being the focus of comparison.
- How do these interactions affect the complexity of gender systems?
- Domains of interaction: morphosyntax of gender, gender assignment rules

Morphosyntax of gender

- do gender and number share the same morphological encodings? is the number of gender distinctions the same in the singular and in the plural?
- are there dedicated diminutive and augmentative genders?

Assignment rules
Focus of the dissertation

- Interactions between grammatical gender distinctions, nominal number, and evaluative morphology, with grammatical gender being the focus of comparison.
- How do these interactions affect the complexity of gender systems?
- Domains of interaction: morphosyntax of gender, gender assignment rules

Morphosyntax of gender

- do gender and number share the same morphological encodings? is the number of gender distinctions the same in the singular and in the plural?
- are there dedicated diminutive and augmentative genders?

Assignment rules

- Is gender assignment rigid or flexible/manipulable?
Focus of the dissertation

- Interactions between grammatical gender distinctions, nominal number, and evaluative morphology, with grammatical gender being the focus of comparison.
- How do these interactions affect the complexity of gender systems?
- Domains of interaction: morphosyntax of gender, gender assignment rules

Morphosyntax of gender

- do gender and number share the same morphological encodings? is the number of gender distinctions the same in the singular and in the plural?
- are there dedicated diminutive and augmentative genders?

Assignment rules

- Is gender assignment rigid or flexible/manipulable?
- Are the meanings expressed through flexible gender assignment relevant for number marking and evaluative morphology?
Africa as the area of investigation

Africa is one of the world's macroareas where grammatical gender is most common (Corbett 1991; Nichols 1992).

About 2000 languages are estimated to be currently spoken in the African continent (Heine & Nurse 2000; Mous 2003).

I selected 100 of them.

How did I go about choosing them?
Africa as the area of investigation

- Africa is one of the world’s macroareas where grammatical gender is most common (Corbett 1991; Nichols 1992)
Africa as the area of investigation

- Africa is one of the world’s macroareas where grammatical gender is most common (Corbett 1991; Nichols 1992)
- About 2000 languages are estimated to be currently spoken in the African continent (Heine & Nurse 2000; Mous 2003).
Africa as the area of investigation

- Africa is one of the world’s macroareas where grammatical gender is most common (Corbett 1991; Nichols 1992)
- About 2000 languages are estimated to be currently spoken in the African continent (Heine & Nurse 2000; Mous 2003).
- I selected 100 of them.
Africa as the area of investigation

- Africa is one of the world’s macroareas where grammatical gender is most common (Corbett 1991; Nichols 1992)
- About 2000 languages are estimated to be currently spoken in the African continent (Heine & Nurse 2000; Mous 2003).
- I selected 100 of them. How did I go about choosing them?
Sampling procedure: in theory

- Combining comparisons within language families with comparisons across language families
Sampling procedure: in theory

- Combining comparisons within language families with comparisons across language families
- Treating presence of grammatical gender as the most important criterion for inclusion
Sampling procedure: in theory

- Combining comparisons within language families with comparisons across language families
- Treating presence of grammatical gender as the most important criterion for inclusion
- Including a small set of languages without gender as a control group.
Sampling procedure: in practice

Figure 1: African language families based on Dimmendaal (2008)
My language sample

- 84 languages with grammatical gender
- 16 languages without grammatical gender
- 10 macro-level families + 2 isolates (based on Glottolog’s classification (Nordhoff et al. 2013))
- 21 genealogical units in total (counting the individual subfamilies within each family)
Data collection and management

- **Data sources**: reference grammars, consultations of language experts and native speaker linguists
- **Data collection**: collecting comparable data from each of the sampled languages with the help of a ‘checklist’
- **Data management**: the checklist was then used as the coding sheet for the relational database that I designed in order to store the data in an organized and searchable fashion.
Outcomes

- Frequency distributions and areal spreads of identified patterns (more about these on Friday).
- A baseline for further studies on other linguistic areas (see Svärd under revision: on grammatical gender in New Guinea).
Diachronic and sociolinguistic typology
The approach exists since the early days of modern typology: Greenberg (1978)

- Observing synchronic distributions of types/structures in closely related languages.
- Inferring patterns of diachronic change from one type to the other.
- Attested types differ in terms of stability: *persistent* and *transitional* types.
The approach exists since the early days of modern typology: Greenberg (1978)

- Observing synchronic distributions of types/structures in closely related languages.
- Inferring patterns of diachronic change from one type to the other.
- Attested types differ in terms of stability: *persistent* and *transitional* types.

Sociolinguistic typology (Trudgill 2010: 300)

Sociolinguistic typology examines the possibility that different types of language or linguistic structure may be, or may tend to be, associated with different types of society or social structure.
Sociolinguistic typology examines the possibility that different types of language or linguistic structure may be, or may tend to be, associated with different types of society or social structure.

Social factors at stake:

- community size
- tightness of social networks
- degree of social stability
- degree of shared information
- degree of contact/isolation
My research in diachronic and sociolinguistic typology

The evolution of gender agreement systems and the role of language contact

Aims:
▶ To study the life-cycle of grammatical gender systems: emergence, expansion, reduction, loss.
▶ To study the sociohistorical correlates of these patterns of change.

Points of departure:
▶ Gender systems are very stable (Nichols 1992); they tend to "cluster in adjacent or nearby languages" (Nichols 2003: 300-303).
▶ Contact-induced loss and emergence of gender presuppose intensive bilingualism and heavy borrowing (Thomason 2001: 71).
My research in diachronic and sociolinguistic typology
The evolution of gender agreement systems and the role of language contact

Aims:

▶ To study the life-cycle of grammatical gender systems: emergence, expansion, reduction, loss.
▶ To study the sociohistorical correlates of these patterns of change.
My research in diachronic and sociolinguistic typology
The evolution of gender agreement systems and the role of language contact

Aims:

▶ To study the life-cycle of grammatical gender systems: emergence, expansion, reduction, loss.
▶ To study the sociohistorical correlates of these patterns of change.

Points of departure:

▶ Gender systems are very stable (Nichols 1992); they tend to “cluster in adjacent or nearby languages” (Nichols 2003: 300-303).
My research in diachronic and sociolinguistic typology

The evolution of gender agreement systems and the role of language contact

Aims:

▶ To study the life-cycle of grammatical gender systems: emergence, expansion, reduction, loss.
▶ To study the sociohistorical correlates of these patterns of change.

Points of departure:

▶ Gender systems are very stable (Nichols 1992); they tend to “cluster in adjacent or nearby languages” (Nichols 2003: 300-303).
▶ Contact-induced loss and emergence of gender presuppose intensive bilingualism and heavy borrowing (Thomason 2001: 71).
Domain of analysis

- Morphosyntax of gender agreement patterns
Domain of analysis

- **Morphosyntax of gender agreement patterns**
- How the marking of grammatical gender on modifiers, predicates, pronouns changes over time and under the pressure of language contact.
Method

- Convenience sample of 15 sets of closely related languages (36 langs in total), each representing:
  
  - Reduction/loss/expansion/emergence of gender agreement
  - A diverse range of sociohistorical profiles: e.g., standard/prestige languages vs. minority varieties; high-contact varieties vs. low-contact varieties.

  Data collected through a questionnaire and descriptive resources.
Method

- Convenience sample of 15 sets of closely related languages (36 langs in total), each representing:
  - Reduction/loss/expansion/emergence of gender agreement
Method

- Convenience sample of 15 sets of closely related languages (36 lngs in total), each representing:
  - Reduction/loss/expansion/emergence of gender agreement
  - A diverse range of sociohistorical profiles:
    e.g., standard/prestige languages vs. minority varieties; high-contact varieties vs. low-contact varieties.
Method

- Convenience sample of 15 sets of closely related languages (36 lngs in total), each representing:
  - Reduction/loss/expansion/emergence of gender agreement
  - A diverse range of sociohistorical profiles:
    e.g., standard/prestige languages vs. minority varieties; high-contact varieties vs. low-contact varieties.
- Data collected through a questionnaire and descriptive resources.
Two case-studies

- Diachronic change in gender marking systems (Di Garbo & Miestamo under revision)
- Sociohistorical correlates of gender systems’ simplification and complexification (Di Garbo under review)
Two paths of loss/reduction

1. Morpho-phonological erosion of agreement morphology
2. Redistribution of agreement patterns

1\(^{\text{a.k.a.}}\) *deflection* (cf. also Audring 2009; Marchese 1988)
Two paths of loss/reduction

1. Morpho-phonological erosion of agreement morphology ¹

¹a.k.a. *deflection* (cf. also Audring 2009; Marchese 1988)
Two paths of loss/reduction

1. Morpho-phonological erosion of agreement morphology
   a.k.a. *deflection* (cf. also Audring 2009; Marchese 1988)

2. Redistribution of agreement patterns
Two paths of loss/reduction

1. Morpho-phonological erosion of agreement morphology
2. Redistribution of agreement patterns

\begin{itemize}
  \item Morpho-phonological erosion of agreement morphology \(^1\)
  \item Redistribution of agreement patterns
\end{itemize}

\(^1\) a.k.a. *deflection* (cf. also Audring 2009; Marchese 1988)
Reduction/loss by morphophonological erosion

Standard Swedish (Indo-European, Germanic)

- Adnominal gender agreement: Common vs. Neuter Gender
  - *en person* ‘a person’
  - *ett hus* ‘a house’

Table 1: Personal Pronouns

<table>
<thead>
<tr>
<th>Hum. and Higher Anim.</th>
<th>M</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>han</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>de</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inanim.</th>
<th>C</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>den</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>det</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>de</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comparative evidence from other Swedish dialects

- Elfdalian Sw., conservative variety: triparite gender system maintained throughout the agreement system (˚Akerberg 2012)
- Karleby Sw., spoken in Finland: complete gender loss except for definite article, personal and demonstrative pronouns (Huldén 1972; Hultman 1894).
Reduction/loss by morphophonological erosion

Standard Swedish (Indo-European, Germanic)

▶ Adnominal gender agreement: Common vs. Neuter Gender
  ▶ *en person* ‘a person’
  ▶ *ett hus* ‘a house’

Table 1: Personal Pronouns

<table>
<thead>
<tr>
<th>Hum. and Higher Anim.</th>
<th>M</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>han</em> ‘he’</td>
<td></td>
<td><em>hon</em> ‘she’</td>
<td><em>de</em> ‘they’</td>
</tr>
<tr>
<td><em>den</em> ‘it’</td>
<td></td>
<td><em>det</em> ‘it’</td>
<td></td>
</tr>
</tbody>
</table>

Comparative evidence from other Swedish dialects

▶ Elfdalian Sw., conservative variety: triparite gender system maintained throughout the agreement system (˚Akerberg 2012)

▶ Karleby Sw., spoken in Finland: complete gender loss except for definite article, personal and demonstrative pronouns (Hulden 1972; Hultman 1894).
Reduction/loss by morphophonological erosion

Standard Swedish (Indo-European, Germanic)

- Adnominal gender agreement: Common vs. Neuter Gender
  - *en person* ‘a person’
  - *ett hus* ‘a house’

<table>
<thead>
<tr>
<th>Table 1: Personal Pronouns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hum. and Higher Anim.</td>
</tr>
<tr>
<td>han ‘he’</td>
</tr>
<tr>
<td>hon ‘she’</td>
</tr>
<tr>
<td>de ‘they’</td>
</tr>
<tr>
<td>Inanim.</td>
</tr>
<tr>
<td>den ‘it’</td>
</tr>
<tr>
<td>det ‘it’</td>
</tr>
</tbody>
</table>

- Comparative evidence from other Swedish dialects
Reduction/loss by morphophonological erosion

Standard Swedish (Indo-European, Germanic)

- Adnominal gender agreement: Common vs. Neuter Gender
  - *en person* ‘a person’
  - *ett hus* ‘a house’

**Table 1: Personal Pronouns**

<table>
<thead>
<tr>
<th>Hum. and Higher Anim.</th>
<th>M</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>han</em> ‘he’</td>
<td><em>hon</em> ‘she’</td>
<td><em>de</em> ‘they’</td>
<td></td>
</tr>
<tr>
<td><em>den</em> ‘it’</td>
<td><em>det</em> ‘it’</td>
<td><em>de</em> ‘they’</td>
<td></td>
</tr>
<tr>
<td>Inanim.</td>
<td>C</td>
<td>N</td>
<td>P</td>
</tr>
<tr>
<td><em>den</em> ‘it’</td>
<td><em>det</em> ‘it’</td>
<td><em>de</em> ‘they’</td>
<td></td>
</tr>
</tbody>
</table>

- Comparative evidence from other Swedish dialects
  - **Elfdalian Sw., conservative variety:** triparite gender system maintained throughout the agreement system (Åkerberg 2012)
  - **Karleby Sw., spoken in Finland:** complete gender loss except for definite article, personal and demonstrative pronouns (Huldén 1972; Hultman 1894).
Reduction/Loss by redistribution

(7) Axó Cappadocian (Indo-European, Greek; Karatsareas 2014: 79-80)

\[
t\text{ spitçú} \quad ta \quad \text{ ndix(u)s xtizména} \\
\text{DEF.SG.GEN} \quad \text{house.SG.GN} \quad \text{DEF.PL} \quad \text{wall.PL} \quad \text{built.PL}
\]

‘The walls of the house (are) built.’
Reduction/Loss by redistribution

(7) Axó Cappadocian (Indo-European, Greek; Karatsareas 2014: 79-80)

\[ \text{t spitçú ta ndix(u)s xtizména} \]
\[ \text{DEF.SG.GEN house.SG.GN DEF.PL wall.PL built.PL} \]

‘The walls of the house (are) built.’

(8) Modern Standard Greek (Indo-European, Greek; Karatsareas 2014: 79-80)

\[ \text{i tíçi ine xtixméni} \]
\[ \text{DEF.M.PL wall.M.PL be.PRS.3PL built.M.PL} \]

‘the walls are built’.
Reduction/Loss by redistribution

(7)  Axó Cappadocian (Indo-European, Greek; Karatsareas 2014: 79-80)

t spitçú ta ndix(u)s xtizména
DEF.SG.GEN house.SG.GN DEF.PL wall.PL built.PL

‘The walls of the house (are) built.’

(8)  Modern Standard Greek (Indo-European, Greek; Karatsareas 2014: 79-80)

i tíçi ine xtixméni
DEF.M.PL wall.M.PL be.PRS.3PL built.M.PL

‘the walls are built’.

▶ Comparative evidence from other Asia Minor Greek dialects:
Reduction/Loss by redistribution

(7) Axó Cappadocian (Indo-European, Greek; Karatsareas 2014: 79-80)

t spitçú ta ndix(u)s xtizména
DEF.SG.GEN house.SG.GN DEF.PL wall.PL built.PL

‘The walls of the house (are) built.’

(8) Modern Standard Greek (Indo-European, Greek; Karatsareas 2014: 79-80)

i tíçi ine xtixméni
DEF.M.PL wall.M.PL be.PRS.3PL built.M.PL

‘the walls are built’.

▶ Comparative evidence from other Asia Minor Greek dialects:

▶ Pontic Greek: the expansion of neuter agreement is semantically and syntactically constrained (inanimate nouns, agreement targets non-adjacent to nouns).
Emergent gender agreement patterns

The diachrony of many gender systems “can at best be reconstructed, but not directly observed” (Luraghi 2011: 435).
Emergent gender agreement patterns

The diachrony of many gender systems “can at best be reconstructed, but not directly observed” (Luraghi 2011: 435).

- Focus of the project: young, and grammatically non-pervasive gender systems.
Emergent gender agreement patterns

The diachrony of many gender systems “can at best be reconstructed, but not directly observed” (Luraghi 2011: 435).

- Focus of the project: young, and grammatically non-pervasive gender systems.
  1. Resulting from light nouns, e.g., ‘man’, ‘woman’, grammaticalizing as anaphoric devices (Wälchli under revision).
Emergent gender agreement patterns

The diachrony of many gender systems “can at best be reconstructed, but not directly observed” (Luraghi 2011: 435).

- Focus of the project: young, and grammatically non-pervasive gender systems.
  1. Resulting from light nouns, e.g., ‘man’, ‘woman’, grammaticalizing as anaphoric devices (Wälchli under revision)
  2. Resulting from borrowing of nouns and agreeing adnominal modifiers.
Emergent gender agreement patterns

The diachrony of many gender systems “can at best be reconstructed, but not directly observed” (Luraghi 2011: 435).

- Focus of the project: young, and grammatically non-pervasive gender systems. Two types:
  1. Resulting from light nouns, e.g., ‘man’, ‘woman’, grammaticalizing as anaphoric devices (Wälchli under revision)
  2. Resulting from borrowing of nouns and agreeing adnominal modifiers.
Borrowed gender agreement

Languages

- Chamorro (Austronesian)
  - Contact language: Spanish
- Lekeitio Basque (Basque)
  - Contact language: Spanish
- Schumcho, Jangshung (Bodic, Thebor)
  - Contact language: Northern India
    Indo-European languages
Borrowed gender agreement

Languages

- Chamorro (Austronesian)
  - Contact language: Spanish
- Lekeitio Basque (Basque)
  - Contact language: Spanish
- Schumcho, Jangshung (Bodic, Thebor)
  - Contact language: Northern India
  - Indo-European languages

Shared characteristics

✓ Gender agreement patterns passed through borrowing of inflected forms.
✓ Gender agreement targets are a closed class of property words.
✓ Gender agreement patterns are always semantic (natural gender distinctions).
Borrowed gender agreement

Chamorro (Austronesian, Marian Islands; Huber 2011: 67)

(9) Chamorro Feminine Gender (Stolz 2012: 123)
Ma-nobena-na-ye
pass-novena-red-ref
mi-milagros-a
abound-miraculous-na
Bithen.
Virgin 'A novena is being conducted for the abundantly miraculous Virgin.'

(10) Chamorro Non-Feminine Gender (Stolz 2012: 125)
Desde antitites red:
tiempo esta gof bunit-u
na
siuda Hag˚ atˆ na.

'Hag˚ atˆ na very long time ago, Hag˚ atˆ na was a very pretty town already.'
Borrowed gender agreement

Chamorro (Austronesian, Marian Islands; Huber 2011: 67)

(9) Chamorro Feminine Gender (Stolz 2012: 123)

Ma-nobena-na-ye i mi-milagros-a na Bithen.
PASS-novena-RED-REF DEF abound-miraculous-F LINK Virgin

‘A novena is being conducted for the abundantly miraculous Virgin.’

(10) Chamorro Non-Feminine Gender (Stolz 2012: 125)

desde antitites na tiempo esta gof bunit-u na siuda since RED:before LINK time already very nice-NF LINK town
i ya Hagåtña.
DEF TN Hagåtña

‘A very long time ago, Hagåtña was a very pretty town already.’
Pulling forces of change

Attributive modifiers and anaphoric pronouns/nouns are the most frequent locus of change.

Two possible functional pressures:

- towards syntactic cohesion between nouns and most adjacent agreement targets
- towards semantic agreement on non-adjacent agreement targets (anaphoric pronouns).
Pulling forces of change

- Attributive modifiers and anaphoric pronouns/nouns are the most frequent *locus of change*.
Pulling forces of change

- Attributive modifiers and anaphoric pronouns/nouns are the most frequent *locus of change*.
- Two possible functional pressures:
  - towards syntactic cohesion between nouns and most adjacent agreement targets
  - towards semantic agreement on non-adjacent agreement targets (anaphoric pronouns).
Within Eurasia, patterns of change cluster around language-family edges

<table>
<thead>
<tr>
<th>Languages</th>
<th>Family</th>
<th>Contact family</th>
<th>Observed pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cappadocian Greek</td>
<td>Greek</td>
<td>Turkic</td>
<td>Loss</td>
</tr>
<tr>
<td>Tamian Latvian</td>
<td>Balto-Slavic</td>
<td>Finnic</td>
<td>Loss</td>
</tr>
<tr>
<td>Aghul, Udi</td>
<td>Lezgic</td>
<td>Turkic</td>
<td>Loss</td>
</tr>
<tr>
<td>Karleby Swedish</td>
<td>North Germanic</td>
<td>Finnic</td>
<td>Near-loss</td>
</tr>
<tr>
<td>Kelasi, Kaftej</td>
<td>Northwestern Iranian</td>
<td>Turkic</td>
<td>Loss and expansion</td>
</tr>
<tr>
<td>Lekeitio Basque</td>
<td>Basque</td>
<td>Ibero-Romance</td>
<td>Emergence</td>
</tr>
<tr>
<td>Shumcho, Jangshung</td>
<td>Thebor</td>
<td>Indo-Aryan</td>
<td>Emergence</td>
</tr>
</tbody>
</table>
Within Eurasia, patterns of change cluster around language-family edges

<table>
<thead>
<tr>
<th>Languages</th>
<th>Family</th>
<th>Contact family</th>
<th>Observed pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cappadocian Greek</td>
<td>Greek</td>
<td>Turkic</td>
<td>Loss</td>
</tr>
<tr>
<td>Tamian Latvian</td>
<td>Balto-Slavic</td>
<td>Finnic</td>
<td>Loss</td>
</tr>
<tr>
<td>Aghul, Udi</td>
<td>Lezgic</td>
<td>Turkic</td>
<td>Loss</td>
</tr>
<tr>
<td>Karleby Swedish</td>
<td>North Germanic</td>
<td>Finnic</td>
<td>Near-loss</td>
</tr>
<tr>
<td>Kelasi, Kaftej</td>
<td>Northwestern Iranian</td>
<td>Turkic</td>
<td>Loss and expansion</td>
</tr>
<tr>
<td>Lekeitio Basque</td>
<td>Basque</td>
<td>Ibero-Romance</td>
<td>Emergence</td>
</tr>
<tr>
<td>Shumcho, Jangshung</td>
<td>Thebor</td>
<td>Indo-Aryan</td>
<td>Emergence</td>
</tr>
</tbody>
</table>

- Outlier languages within a family are neighbor with each other.
Within Eurasia, patterns of change cluster around language-family edges

<table>
<thead>
<tr>
<th>Languages</th>
<th>Family</th>
<th>Contact family</th>
<th>Observed pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cappadocian Greek</td>
<td>Greek</td>
<td>Turkic</td>
<td>Loss</td>
</tr>
<tr>
<td>Tamian Latvian</td>
<td>Balto-Slavic</td>
<td>Finnic</td>
<td>Loss</td>
</tr>
<tr>
<td>Aghul, Udi</td>
<td>Lezgic</td>
<td>Turkic</td>
<td>Loss</td>
</tr>
<tr>
<td>Karleby Swedish</td>
<td>North Germanic</td>
<td>Finnic</td>
<td>Near-loss</td>
</tr>
<tr>
<td>Kelasi, Kaftej</td>
<td>Northwestern Iranian</td>
<td>Turkic</td>
<td>Loss and expansion</td>
</tr>
<tr>
<td>Lekeitio Basque</td>
<td>Basque</td>
<td>Ibero-Romance</td>
<td>Emergence</td>
</tr>
<tr>
<td>Shumcho, Jangshung</td>
<td>Thebor</td>
<td>Indo-Aryan</td>
<td>Emergence</td>
</tr>
</tbody>
</table>

- Outlier languages within a family are neighbor with each other.
- This is in alignment with Nichols’ (2003) observation whereby grammatical gender is a cluster phenomenon.
Asymmetries in the relationship between languages in contact (may) explain the direction of change

- Contact-induced loss and emergence of gender agreement morphology presuppose prolonged contact and extensive bilingualism.
Asymmetries in the relationship between languages in contact (may) explain the direction of change

- Contact-induced loss and emergence of gender agreement morphology presuppose prolonged contact and extensive bilingualism.
- The direction of change is predicted by the prestige dynamics and dominance relationships between the languages in contact.
Asymmetries in the relationship between languages in contact (may) explain the direction of change

- Contact-induced loss and emergence of gender agreement morphology presuppose prolonged contact and extensive bilingualism.
- The direction of change is predicted by the prestige dynamics and dominance relationships between the languages in contact

<table>
<thead>
<tr>
<th>Languages</th>
<th>Change</th>
<th>Dominant contact lng</th>
<th>GG in the dominant lngs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aghul, Udi (Lezgic)</td>
<td>Loss</td>
<td>Azerbaijani (Turkic), Georgian (Kartvelian)</td>
<td>NO</td>
</tr>
<tr>
<td>Karleby Swedish (North Germanic)</td>
<td>Near loss</td>
<td>Finnish (Finnic)</td>
<td>NO</td>
</tr>
<tr>
<td>Igo (Ghana-Togo-Mountain)</td>
<td>Loss</td>
<td>Ewe (Gbe)</td>
<td>NO</td>
</tr>
<tr>
<td>Tamian Latvian (Balto-Slavic)</td>
<td>Loss</td>
<td>Livonian, Estonian (Finnic)</td>
<td>YES</td>
</tr>
<tr>
<td>Chamorro (Chamorro)</td>
<td>Emergence</td>
<td>Spanish (Romance)</td>
<td>YES</td>
</tr>
<tr>
<td>Lekeitio Basque (Basque)</td>
<td>Emergence</td>
<td>Spanish (Romance)</td>
<td>YES</td>
</tr>
</tbody>
</table>
To sum up

Contributions:

▶ To highlight types of changes within gender agreement patterns, and possible directionalities in the spread of these changes.

▶ To highlight a number of sociohistorical variables that are related to the spreading of these changes.
To sum up

Contributions:
▶ To highlight types of changes within gender agreement patterns, and possible directionalities in the spread of these changes.
▶ To highlight a number of sociohistorical variables that are related to the spreading of these changes.

Limitations:
▶ Only a limited number of languages per family.
▶ Scarce amount of data for some of the languages in the sample.
How to continue

- To use the results of this qualitative study as a starting point for further hypothesis testing on larger data sets (one family in detail), and with the support of quantitative methods.
Correlates of restructuring in Bantu gender systems (with Annemarie Verkerk, MPI – Jena)
Correlates of restructuring in Bantu gender systems (with Annemarie Verkerk, MPI – Jena)

- Studying the diversity of the gender systems of the Bantu languages.
Correlates of restructuring in Bantu gender systems (with Annemarie Verkerk, MPI – Jena)

- Studying the diversity of the gender systems of the Bantu languages.
- Testing the models of language change that account best for within-family variation in this domain of grammar (using Phylogenetic Comparative Methods).
Correlates of restructuring in Bantu gender systems (with Annemarie Verkerk, MPI – Jena)

- Studying the diversity of the gender systems of the Bantu languages.
- Testing the models of language change that account best for within-family variation in this domain of grammar (using Phylogenetic Comparative Methods).
- Investigating socio-historical correlates of the distribution of this variation.
The Bantu languages and their gender systems

Gender marking in Chichewa (Kiso 2012: 18)

chi-nkhanira

cha-chi-kazi

chi-ku-dzi-kanda

“The female scorpion is scratching itself.”

Gender marking in Kinshasa Lingala (Meeuwis 2013: 30)

a. Mw-ana
   a-ko-kweya
   ‘The child will fall.’

b. Ndako
   e-ko-kweya
   ‘The house will fall.’
(11) Gender marking in Chichewa (Kiso 2012: 18)

chi-nkhanira cha-chi-kazi
CL7-scorpion ASS-CL7-female
chi-ku-dzi-kanda
CL7.SBJ-PRES-REFL-scratch

“The female scorpion is scratching itself”.

(12) Gender marking in Kinshasa Lingala (Meeuwis 2013: 30)

a. Mw-ana cl1-child a-ko-kweya 3sg.anim-fut-fall
‘The child will fall.’

‘The house will fall.’
(11) Gender marking in Chichewa (Kiso 2012: 18)

chi-nkhanira cha-chi-kazi
CL7-scorpion ASS-CL7-female
chi-ku-dzi-kanda
CL7.SBJ-PRES-REFL-scratch

“The female scorpion is scratching itself”.

(12) Gender marking in Kinshasa Lingala (Meeuwis 2013: 30)

a. Mw-ana a-ko-kweya
CL1-child 3SG.ANIM-FUT-fall
‘The child will fall.’

b. Ndako e-ko-kweya
CL9.book 3SG.INAN-FUT-fall
‘The house will fall.’
The Bantu languages and their gender systems

(13) Gender marking in Chichewa (Kiso 2012: 18)

chi-nkhanira cha-chi-kazi
CL7-scorpion ASS-CL7-female
chi-ku-dzi-kanda
CL7.SBJ-PRES-REFL-scratch

“The female scorpion is scratching itself”.

(14) Gender marking in Kinshasa Lingala (Meeuwis 2013: 30)

a. Mw-ana a-ko-kweya
CL1-child 3SG.ANIM-FUT-fall
‘The child will fall.’

b. Ndako e-ko-kweya
CL9.book 3SG.INAN-FUT-fall
‘The house will fall.’

Questions

▶ How do we go from the Chichewa type to the Kinshasa Lingala type?
▶ Why does this happen?
The evolution of Bantu gender marking systems

Questions
1. Which word classes carry gender marking besides nouns (e.g., pronouns, verbs, adjectives)?
2. Are animacy-based distinctions part of the gender system?

Quantitative data analysis
The coding will be mapped on the Bantu phylogenetic tree (Grollemund et al. 2015) to estimate transition probabilities between attested systems.

Hypotheses
1. Animacy-based distinctions encroach the gender marking system starting from anaphoric pronouns and gender markers on verbs.
2. Marking on nouns is more stable than marking on other word classes. (Wald 1975)
The evolution of Bantu gender marking systems

Questions

1. Which word classes carry gender marking besides nouns (e.g., pronouns, verbs, adjectives)?
2. Are animacy-based distinctions part of the gender system?

Quantitative data analysis

The coding will be mapped on the Bantu phylogenetic tree (Grollemund et al. 2015) to estimate transition probabilities between attested systems.

Hypotheses

1. Animacy-based distinctions encroach the gender marking system starting from anaphoric pronouns and gender markers on verbs.
2. Marking on nouns is more stable than marking on other word classes. (Wald 1975)
Questions

1. Which word classes carry gender marking besides nouns (e.g., pronouns, verbs, adjectives)?
2. Are animacy-based distinctions part of the gender system?
The evolution of Bantu gender marking systems

- Questions
  1. Which word classes carry gender marking besides nouns (e.g., pronouns, verbs, adjectives)?
  2. Are animacy-based distinctions part of the gender system?

- Quantitative data analysis
The evolution of Bantu gender marking systems

Questions

1. Which word classes carry gender marking besides nouns (e.g., pronouns, verbs, adjectives)?
2. Are animacy-based distinctions part of the gender system?

Quantitative data analysis

The coding will be mapped on the Bantu phylogenetic tree (Grollemund et al. 2015) to estimate transition probabilities between attested systems.
The evolution of Bantu gender marking systems

Questions

1. Which word classes carry gender marking besides nouns (e.g., pronouns, verbs, adjectives)?
2. Are animacy-based distinctions part of the gender system?

Quantitative data analysis

- The coding will be mapped on the Bantu phylogenetic tree (Grollemund et al. 2015) to estimate transition probabilities between attested systems.

Hypotheses

1. Animacy-based distinctions encroach the gender marking system starting from anaphoric pronouns and gender markers on verbs.
2. Marking on nouns is more stable than marking on other word classes.
The evolution of Bantu gender marking systems

Questions

1. Which word classes carry gender marking besides nouns (e.g., pronouns, verbs, adjectives)?
2. Are animacy-based distinctions part of the gender system?

Quantitative data analysis

The coding will be mapped on the Bantu phylogenetic tree (Grollemund et al. 2015) to estimate transition probabilities between attested systems.

Hypotheses

1. Animacy-based distinctions encroach the gender marking system starting from anaphoric pronouns and gender markers on verbs.
2. Marking on nouns is more stable than marking on other word classes. (Wald 1975)
Sociohistorical correlates

Variables we plan to work with:

▶ Population size
▶ Proportion of L2 users
▶ Presence/absence of gender systems in neighboring languages

Hypotheses

1. Large populations with high proportions of L2 users and intense language contact predict reduction and/or loss of gender marking.

2. Small populations with low proportions of L2 users and intense language contact predict retention of gender marking (group identity marking) or its reduction/loss (shift-induced interference).

3. Geographic proximity between related and unrelated languages predicts convergence in the domain of gender marking.
Sociohistorical correlates

- Variables we plan to work with:
  - Population size
  - Proportion of L2 users
  - Presence/absence of gender systems in neighboring languages

Hypotheses

1. Large populations with high proportions of L2 users and intense language contact predict reduction and/or loss of gender marking.

2. Small populations with low proportions of L2 users and intense language contact predict retention of gender marking (group identity marking) or its reduction/loss (shift-induced interference).

3. Geographic proximity between related and unrelated languages predicts convergence in the domain of gender marking.
Sociohistorical correlates

- Variables we plan to work with:
  - Population size
  - Proportion of L2 users
  - Presence/absence of gender systems in neighboring languages

Hypotheses

1. Large populations with high proportions of L2 users and intense language contact predict reduction and/or loss of gender marking.

2. Small populations with low proportions of L2 users and intense language contact predict retention of gender marking (group identity marking) or its reduction/loss (shift-induced interference).

3. Geographic proximity between related and unrelated languages predicts convergence in the domain of gender marking.
Variables we plan to work with:

- Population size
- Proportion of L2 users
- Presence/absence of gender systems in neighboring languages

Hypotheses
Sociohistorical correlates

- Variables we plan to work with:
  - Population size
  - Proportion of L2 users
  - Presence/absence of gender systems in neighboring languages

Hypotheses

1. Large populations with high proportions of L2 users and intense language contact predict reduction and/or loss of gender marking.
Sociohistorical correlates

- Variables we plan to work with:
  - Population size
  - Proportion of L2 users
  - Presence/absence of gender systems in neighboring languages

Hypotheses

1. Large populations with high proportions of L2 users and intense language contact predict reduction and/or loss of gender marking.
2. Small populations with low proportions of L2 users and intense language contact predict retention of gender marking (group identity marking) or its reduction/loss (shift-induced interference).
Sociohistorical correlates

- Variables we plan to work with:
  - Population size
  - Proportion of L2 users
  - Presence/absence of gender systems in neighboring languages

Hypotheses

1. Large populations with high proportions of L2 users and intense language contact predict *reduction* and/or *loss* of gender marking.

2. Small populations with low proportions of L2 users and intense language contact predict *retention* of gender marking (*group identity marking*) or its *reduction/loss* (*shift-induced interference*).

3. Geographic proximity between related and unrelated languages predicts convergence in the domain of gender marking.
What we’ve done so far

- Defined the coding procedure
- Collected data for 130+ Bantu languages.
What we’ve done so far

▶ Defined the coding procedure
▶ Collected data for 130+ Bantu languages.
Maho’s (1999) classification of Bantu noun class systems
Maho’s (1999) classification of Bantu noun class systems

<table>
<thead>
<tr>
<th>Nouns</th>
<th>1 = Tr.</th>
<th>2 = Tr. + An.</th>
<th>2' = Tr+Pl</th>
<th>3 = An. + Sg/Pl</th>
<th>4 = Sg/Pl</th>
<th>5 = None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elsewhere</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A = Tr.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B = Tr. + An.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C = An. + Sg/Pl</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D = Sg/Pl</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E = None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Maho’s (1999) typology of Bantu noun class marking systems

<table>
<thead>
<tr>
<th>Elsewhere</th>
<th>Nouns</th>
<th>Areal, diachronic, and sociolinguistic typology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1= Tr.</td>
<td>2= Tr. + An.</td>
</tr>
<tr>
<td>A = Tr.</td>
<td>Zulu</td>
<td></td>
</tr>
<tr>
<td>B = Tr. + An.</td>
<td>Swahili</td>
<td>Lunda</td>
</tr>
<tr>
<td>C = An. + Sg/Pl</td>
<td>Lingala</td>
<td>K. Lingala</td>
</tr>
<tr>
<td>D = Sg/Pl</td>
<td>Yans</td>
<td></td>
</tr>
<tr>
<td>E = None</td>
<td>Kituba</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The languages of the sample based on Maho's types
The northern Bantu borderlands
The northern Bantu borderlands

Two possible scenarios:

1. Substratum interference from pre-Bantu populations shifting to Bantu languages, including Pygmies.
2. Continued contact between Bantu and non-Bantu languages in the area.
Insights so far

The gender systems of several Bantu languages show a bias towards the overt expression of animacy distinctions.

The spread of this feature within the family is NOT a unitary process.

Multiple developments must be posited in different subareas of the Bantu speaking world, and in response to a diverse spectrum of sociohistorical scenarios.
Insights so far

▶ The gender systems of several Bantu languages show a bias towards the overt expression of animacy distinctions.
Insights so far

- The gender systems of several Bantu languages show a bias towards the overt expression of animacy distinctions.
- The spread of this feature within the family is NOT a unitary process.
Insights so far

- The gender systems of several Bantu languages show a bias towards the overt expression of animacy distinctions.
- The spread of this feature within the family is NOT a unitary process.
- Multiple developments must be posited in different subareas of the Bantu speaking world, and in response to a diverse spectrum of sociohistorical scenarios.
How we’ll continue in the immediate future

- Sampling extensively the northern-most Bantu speaking area (zones A, B, C, D), where reduced systems abound.
How we’ll continue in the immediate future

- Sampling extensively the northern-most Bantu speaking area (zones A, B, C, D), where reduced systems abound.
- Running the phylogenetic analysis
How we’ll continue in the immediate future

- Sampling extensively the northern-most Bantu speaking area (zones A, B, C, D), where reduced systems abound.
- Running the phylogenetic analysis
- Exploring the language contact situation within these areas.
To be continued...
To be continued...

Aitäh!

Thanks are also due to:

Anna Ahlströms och Ellen Terserus Stiftelse
References


Di Garbo, Francesca. under review. The complexity of gender and language ecology, .


