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Auxiliary verb constructions in Wolof and neighboring languages
a case-study to rethink the notion of auxiliary in general linguistics
• **Wolof conjugation**

• Wolof verbal periphrases

• The concept « auxiliary »

• Toward a new typological approach of auxiliaries

• Wolof auxiliary constructions

• Conclusion
Wolof language

- Classification:
  - Niger-Congo
  - Atlantic

- Agglutinative morphology

- Spoken in Senegambia
- Vehicular in Senegal
Wolof conjugation

- Based on phrasal patterns
  Predicative constructions

- Predicative Constructions ≈ Conjugations
tense, aspect, mood, information structure

- Complex predicates

- Verb + Predicative Marker
  - Verb
    lexical meaning
  - Predicative Marker
    grammatical information + subject affix
Predicative constructions

- **Subject Focus**
  
  \[ \text{Ma-a dem.} \]
  
  1SG-PM go

- **Presentative**
  
  \[ \text{Ma-angi dem.} \]
  
  1SG-PM go

- **Complement Focus**
  
  \[ \text{Fii la-a dem.} \]
  
  here PM-1SG go

- **Verb Focus**
  
  \[ \text{Da-ma dem.} \]
  
  PM-1SG go

- **Perfect**
  
  \[ \text{Dem na-a. go} \]
  
  PM-1SG

- **Future**
  
  \[ \text{Dina-a dem. go} \]
  
  PM-1SG

- **Optative**
  
  \[ \text{Na-a dem! go} \]
  
  PM-1SG

- **Imperative**
  
  \[ \text{Dem-al! go-IMP.2SG} \]
Predicative constructions

- **Negative Perfect**
  
  *Dem-\textbf{u}-ma.*
  
  go-\textbf{PRF;NEG-1SG}

- **Negative Future**
  
  *Du-\textbf{ma} \hspace{1em} \text{dem.}*
  
  \textbf{PM-1SG} \hspace{1em} go

- **Prohibitive**
  
  *Bu-\textbf{ma} \hspace{1em} \text{dem.}*
  
  \textbf{PM-1SG} \hspace{1em} go

- **Subjunctive**
  
  (... \hspace{1em} \text{ma \hspace{1em} \text{dem.}}
  
  1SG \hspace{1em} go
Other verbal categories

- **Past**: suffix/clitic -(w)oong
  
  *Da-ma dem-oong.*
  
  VFOC-1SG go-PST
  
  'I left.'

- **Negation**: suffix -(w)ul [except specific constructions]
  
  *Da-ma dem-ul.*
  
  VFOC-1SG go-NEG
  
  'I didn’t leave.'

- **Imperfective**: auxiliary *di / =y*
  
  *Da-ma=y dem.*
  
  VFOC-1SG=IPFV go
  
  'I’m leaving.'
## Conjugation Paradigm

<table>
<thead>
<tr>
<th>POL</th>
<th>PERFECTIVE</th>
<th>IMPERFECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NON-PAST</td>
<td>PAST</td>
</tr>
<tr>
<td>SFOC</td>
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<tr>
<td>+</td>
<td>maa dem</td>
<td>maa demoon</td>
</tr>
<tr>
<td>-</td>
<td>maa demul</td>
<td>maa demuloon</td>
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<tr>
<td>PRST</td>
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<tr>
<td>+</td>
<td>maangi dem</td>
<td>maangi demoon</td>
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<td>CFOC</td>
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<tr>
<td>PRF</td>
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<tr>
<td>+</td>
<td>dem =naa</td>
<td>demoon =naa</td>
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<tr>
<td>-</td>
<td>demuma</td>
<td>demuma =woon</td>
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<td>FUT</td>
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<tr>
<td>+</td>
<td>dinaa dem</td>
<td>doon =naa dem</td>
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<td>-</td>
<td>duma dem</td>
<td>?duma =woon dem</td>
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<tr>
<td>OPT</td>
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<td></td>
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<tr>
<td>+</td>
<td>naa dem</td>
<td>n/a</td>
</tr>
<tr>
<td>-</td>
<td>buma dem</td>
<td>n/a</td>
</tr>
<tr>
<td>IMP</td>
<td></td>
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<tr>
<td>+</td>
<td>demal</td>
<td>n/a</td>
</tr>
<tr>
<td>-</td>
<td>bul dem</td>
<td>n/a</td>
</tr>
<tr>
<td>SUBJ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+</td>
<td>ma dem</td>
<td>ma demoon</td>
</tr>
<tr>
<td>-</td>
<td>ma baña dem</td>
<td>ma bañoona dem</td>
</tr>
</tbody>
</table>
Wolof conjugation

**Wolof verbal periphrases**

The concept « auxiliary »

Toward a new typological approach of auxiliaries

Wolof auxiliary constructions

Conclusion
Inflectional periphrasis

- **Inflectional periphrasis** (Bonami 2014)
  - Multi-word construction.
  - Interacts with inflectional morphology in such a way that it is best integrated in the inflectional paradigm.

~ **Suppletive periphrasis** (Haspelmath 2000)
  - Fills a gap in the inflectional paradigm.
  - In order to create paradigm symmetry.
## Wolof verbal periphrases

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<tr>
<td>PRST</td>
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</tr>
<tr>
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<tr>
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<td>n/a</td>
</tr>
<tr>
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<td>n/a</td>
</tr>
<tr>
<td>IMP</td>
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<tr>
<td></td>
<td>ma baña dem</td>
<td>ma bañoona dem</td>
</tr>
</tbody>
</table>
12 periphrastic constructions:

- Sujet Focus: **maa dem**
- Presentative: **maangi dem**
- Complement Focus: **=laa dem**
- Verb Focus: **dama dem**
- Future: **dinaa dem**
- Negative Future: **duma dem**
- Optative: **naa dem**
- Prohibitive: **buma dem**
- Perfect: **dem =naa**
- Imperfective: **=y dem**
- Negative with aux. verb: **bañ=a dem**
- Clitic Past: **demuma =woon**
Wolof conjugation
Wolof verbal periphrases
**The concept « auxiliary »**
Toward a new typological approach of auxiliaries
Wolof auxiliary constructions
Conclusion
Wolof verbal periphrases, auxiliary constructions?

The concept « auxiliary »
- Problematic concept.
- No consensus in general linguistics or typology.
- Several definitions.
  - Not necessarily incompatible with each other.
  - Different according to the point of view.
Categorial definition(s)

Auxiliaries = lexical (sub)class:
- Either a verb subclass.
  - Most widely used definition (in most part of dictionary and reference articles).
  - Based primarily on data from Indo-European languages.
- Or a specific lexical class.

‘Universal’ definition

Auxiliary = universal category (AUX), i.e. category of the universal grammar.
- Within the framework of transformational-generative grammar.
What is an auxiliary?

- **Functional definition**
  Auxiliary = predicative element which expresses one or more verbal categories (its function).
  - But auxiliaries are not necessarily a specific lexical class.

- **Panchronic definition**
  Auxiliary = element on the lexical verb–functional affix grammaticalization continuum.
  - Proposed by Heine (1993).
  - Dominant definition in linguistic typology (at least in the literature).
Limitations of the panchronic definition

- If a word is to be viewed as an auxiliary:
  - Either has typical verbal features,
  - Or is from the grammaticalization of a verb.

- Problematic for several reasons:
  - Uses a diachronic criterion to define a lexical category.
    - Questionable choice
      (for synchronic description and analysis).
  - This criterion can only be used
    - if there are historical data, or
    - if it is possible to make reliable reconstructions.
      - For the most part of african languages,
        no data available prior to the XVIII\textsuperscript{th} century.
      - Genetic distance often very important
        cannot reconstruct reliable proto-forms.
Limitations of the panchronic definition

- Problematic for several reasons:
  - Cannot explain the distribution of TAM markers in some languages
  - There are languages in which TAM markers:
    - are independent words,
    - have no verbal features,
    - are in opposition,
    - share some morphosyntactic features,
  - Nevertheless:
    - some come from the grammaticalization of verbs,
    - whereas others have a different origin.
Case of Mandé languages

◆ Predicative markers in Mandinka:
  ▪ Closed class.
  ▪ No verbal features.
  ▪ Invariable.
  ▪ Always the same slot: \text{S} \ p \ (O) \ V \ (X)

◆ \textit{Perfective} - Origin of \textit{yé} = adposition
  \begin{center}
  \textit{Jatóo ye dánnóó barama.}
  \end{center}
  \begin{flushleft}
  \text{lion:DET PFV hunter:DET hurt}
  \end{flushleft}
  'The lion has hurt the hunter.'

◆ \textit{Imperfective} - Origin of \textit{ká} = verb
  \begin{center}
  \textit{Saayáa ka mǒolu kumbondi.}
  \end{center}
  \begin{flushleft}
  \text{death:DET IPFV person:DET:PL cry:CAUS}
  \end{flushleft}
  'Death makes the people cry.'
According to the panchronic definition:

- \( k\acute{a} = \) auxiliary \( \neq \) auxiliary
  - Problematic for a synchronic analysis,
  - \( \downarrow \) separates two words belonging to the same class!

- If the word \( k\acute{a} \) is not an auxiliary,
  - \( \downarrow \) then elements on the verb–TAM continuum
  - are not all auxiliaries.
  - 😞 contradicts the panchronic definition!

- If the word \( y\acute{e} \) is an auxiliary,
  - \( \downarrow \) then elements without any verbal origin
  - may also be auxiliaries
  - 😞 contradicts the panchronic definition!

- These problems are not limited to Mandé languages.
  - songhay, atlantic, chadic, cushitic

Case of Mandé languages
Outline

- Wolof conjugation
- Wolof verbal periphrases
- The concept « auxiliary »
- **Toward a new typological approach of auxiliaries**
- Wolof auxiliary constructions
- Conclusion
Functional definition:
Autonomous predicative element which combines with a lexical verb to mark a verbal category (tense, aspect, mood, polarity, voice, etc.)
↳ Is not a lexical category, but a function.

<table>
<thead>
<tr>
<th>Full Verb</th>
<th>Catenative Verb</th>
<th>Semi-auxiliary Verb</th>
<th>Auxiliary Verb</th>
<th>Predicative Marker</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Verb</td>
<td></td>
<td></td>
<td></td>
<td>– Verb</td>
</tr>
<tr>
<td>– Auxiliary</td>
<td></td>
<td></td>
<td></td>
<td>+ Auxiliary</td>
</tr>
</tbody>
</table>
Kinds of predicative elements:

- **Full verb**
  - All the morphosyntactic verbal features.
  - Fully lexical meaning.

- **Catenative verb**
  - All the morphosyntactic verbal features.
  - Can take specific sentential complements (subjunctive, infinitive, etc.).
  - Fully lexical meaning.

- **Semi-auxiliary verb**
  - All the morphosyntactic verbal features.
  - May be defective.
  - Can (or must) take specific sentential complements (subjunctive, infinitive, etc.).
  - Fully lexical meaning.
  - May express TAM categories.
Kinds of predicative elements:

- **Auxiliary verb**
  - Not all the morphosyntactic verbal features.
  - May be defective.
  - May present morphophonological or combinatorial idiosyncrasies.
  - Must take specific sentential complements (subjunctive, infinitive, etc.).
  - Function = mainly grammatical.
  - Integrated within the conjugation paradigm.

- **Predicative marker**
  - No morphosyntactic verbal feature.
  - May present morphophonological or combinatorial idiosyncrasies.
  - Combines with a finite verb.
  - Function = exclusively grammatical.
  - Integrated within the conjugation paradigm.
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- Wolof conjugation
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- The concept « auxiliary »
- Toward a new typological approach of auxiliaries
- **Wolof auxiliary constructions**
- Conclusion
Are Wolof verbal periphrases auxiliary constructions?

Are ancillary elements (ie no lexematic elements) auxiliaries?

According to the panchronic definition?
Accordind to the functional definition?
## Panchronic approach

<table>
<thead>
<tr>
<th></th>
<th>Ancillary Element</th>
<th>Verbal Features</th>
<th>Verbal Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negation with auxiliary verb</td>
<td>bañ</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Imperfective</td>
<td>di</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Verb Focus</td>
<td>da(fa)</td>
<td>±</td>
<td>+ (?)</td>
</tr>
<tr>
<td>Future</td>
<td>dina</td>
<td>±</td>
<td>+</td>
</tr>
<tr>
<td>Negative Future</td>
<td>du</td>
<td>±</td>
<td>+</td>
</tr>
<tr>
<td>Subject Focus</td>
<td>a</td>
<td>–</td>
<td>?</td>
</tr>
<tr>
<td>Presentative</td>
<td>a ng-</td>
<td>–</td>
<td>?</td>
</tr>
<tr>
<td>Complement Focus</td>
<td>la</td>
<td>–</td>
<td>?</td>
</tr>
<tr>
<td>Optative</td>
<td>na</td>
<td>–</td>
<td>?</td>
</tr>
<tr>
<td>Prohibitive</td>
<td>bu(l)</td>
<td>–</td>
<td>?</td>
</tr>
<tr>
<td>Perfect</td>
<td>na</td>
<td>–</td>
<td>?</td>
</tr>
<tr>
<td>Clitic Past</td>
<td>woon</td>
<td>±</td>
<td>–</td>
</tr>
</tbody>
</table>
According to the panchronic definition:

- \textit{dafa ; dina ; du} \approx \text{auxiliaries}
- \textit{a ; angi ; la ; na ; bul ; na} \neq \text{auxiliaries}
  
  But belong to the same paradigm:
  \begin{itemize}
  \item are in opposition,
  \item merge with the subject marker,
  \item are clitics.
  \end{itemize}

- \textit{di ; dafa} = \text{auxiliaries}
  
  But do not belong to the same paradigm:
  \begin{itemize}
  \item \textit{di / dafa} \rightarrow \text{same distribution as a verb}
  \item \textit{di / dafa} \rightarrow \text{support for past and negation affixes}
  \item \textit{di / dafa} \rightarrow \text{support for subject marker}
  \end{itemize}
According to the functional definition:

- All the ancillary elements are autonomous predicative elements which combine with a lexical verb to express a verbal category.
  - All the ancillary elements = auxiliaries
    (Verbal periphrases = auxiliary constructions)

- These auxiliaries have different features.
  They can be placed within a typology of predicative elements.
### Functional approach

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semi-auxiliary verb</td>
<td>bañ</td>
</tr>
<tr>
<td></td>
<td><em>(semi-auxiliary verb, but has some auxiliary verb features)</em></td>
</tr>
<tr>
<td>Auxiliary verb</td>
<td>di ; (woon)</td>
</tr>
<tr>
<td></td>
<td><em>(undoubtedly auxiliary verb)</em></td>
</tr>
<tr>
<td>Predicative marker</td>
<td>a ; angi ; la ; na ; bul ; na</td>
</tr>
<tr>
<td></td>
<td><em>(undoubtedly predicative marker)</em></td>
</tr>
</tbody>
</table>
Outline

- Wolof conjugation
- Wolof verbal periphrases
- The concept « auxiliary »
- Toward a new typological approach of auxiliaries
- Wolof auxiliary constructions
- Conclusion
In the literature, 3 kinds of definition for "auxiliary":
- categorial, functional, panchronic

Data from Wolof and other African languages show advantages and limitations of these definitions.

In a typological perspective, it favours a functional approach: 

**Auxiliary** = autonomous predicative element which combines with a lexical verb to mark a verbal category.

According to this definition:
- Wolof verbal periphrases = auxiliary constructions
General typology of predicative elements:
- Full verb,
- Catenative verb,
- Semi-auxiliary verb,
- Auxiliary verb,
- Predicative marker.

Can be compared to Heine’s typology

Differ on their principles:
- Heine’s typology → grammaticalization path
- My typology → synchronic criteria
Future research directions:

- Application of this typology to other languages.
  - Mandé, Chadic, Songhay, Cushitic

- Typological study of predicative markers.
  - Are PM attested in other languages?
  - Development of a more accurate PM typology.
Thank you for your attention

Jërëjëf
References

References