Structure of the North Atlantic Languages
Consonant Mutation

Consonant Mutation/Spirantization in Bantu

In many Bantu languages, the causative, perfective, passive, etc. affixes trigger consonant/vowel changes of the final consonant of the verb root.

(1) Bemba

<table>
<thead>
<tr>
<th>Verb</th>
<th>Causative</th>
</tr>
</thead>
<tbody>
<tr>
<td>leep- ‘be long’</td>
<td>leef-į ‘lengthen’</td>
</tr>
<tr>
<td>lub- ‘be lost’</td>
<td>luf-į ‘lose (tr.)’</td>
</tr>
<tr>
<td>fiit- ‘be dark’</td>
<td>fiis-į ‘darken (tr)’</td>
</tr>
<tr>
<td>buuk- ‘get up (intr)’</td>
<td>buus-į ‘get someone up’</td>
</tr>
<tr>
<td>lil- ‘cry’</td>
<td>lis-į ‘make cry’</td>
</tr>
</tbody>
</table>

The causative can be combined with the applicative –es:

(2) leef-es-į ‘lengthen for/at’
fiis-is-į ‘lose for/at’
buus-is-į ‘get someone up for/at’
lis-is-į ‘make cry for/at’

Kinyakusa

(3)

<table>
<thead>
<tr>
<th>stative</th>
<th>Causative</th>
</tr>
</thead>
<tbody>
<tr>
<td>sat ‘be in pain’</td>
<td>sas-į ‘give pain’</td>
</tr>
<tr>
<td>tup ‘become thick’</td>
<td>tuf-į ‘thicken (tr)’</td>
</tr>
<tr>
<td>sok ‘go out’</td>
<td>sos-į ‘take out’</td>
</tr>
</tbody>
</table>

“Imbrication” refers to a process of interleaving of morphemes. In the context of imbrication, consonant mutation may change stem-final consonants when they precede specific morphemes, typically the perfective. Imbrication is widespread in the Bantu languages of East Africa.

Kinyarwanda (perfect, causative, and nominalizer trigger mutation)

(4) a. /in-ruh-yi/ → [in-ruç-į]
   it-miserable-PERF
   ‘It is miserable.”

b. /ku-teek-a/ → [gu-teek-a]
   INF-cook-a
   “to cook”

c. /umu-teek-yi/ → [umu-teets-ţi]
   CL-cook-NOM
   “cook”
d. /ku-ras-a/  →  [ku-ras-a]  
INF-shoot-a  
“to shoot”

e. /umu-ras-yi/  →  [umu-rac-yi]  
CL-shoot-NOM  
“shooter”

f. /ku-rog-a/  →  [ku-rog-a]  
INF-poison-a  
“to poison”

g. /umu-rog-yi/  →  [umu-roz-i]  
CL-poison-NOM  
“witch, poisoner”

The consonant mutation pattern in Kinyarwanda is:

(5) p,b  →  py  
m  →  mñ  
n  →  nñ  
s  →  c  
z  →  sh,j  
h  →  ç  
t  →  s  
r,d,g  →  z  
k  →  ts

The rule of consonant mutation is not just a palatalization rule, since the perfect -ye , causative -y , and nominalizer –yi pattern differently from ordinary glides.

Kinyarwanda does not allow vowels in hiatus, when a non-low vowel is followed another vowel, the non-low vowel becomes a glide:

(6) /ku-se-a/  →  [ku-sy-a]  
INF-grind-a

When a consonant is followed by a glide, another consonant is inserted and the glide is deleted:

(7) /ku-ri-a/  →  ku-ry-a  →  ku-rjy-a  →  [ku-rj-a]  
INF-eat-a  glide insertion  C-insertion  glide deletion

(8) /umu-re-r-yi/  →  [umu-rez-i]  
CL-educate-NOM  C-mutation
Yao (from Kimenyi)

Monosyllabic stems

(9) a. ch-a “dawn”
   b. ch-\textit{ele} “dawn (perf)”
      c. put-a “strike”
      d. put-\textit{ile} “strike (perf)”

Bisyllabic stems that end in [k,g,l] take –\textit{ile}, with consonant mutation:

(10) a. lwa-l-a “be sick”
      b. lwas-ile “be sick (perf)”
         c. lag-a “suffer”
         d. las-ile “suffer (perf)”
         e. ching-a “herd cattle”
         f. chinj-ile “herd cattle (perf)”
         g. sak-a “want”
         h. sach-ile “want (perf)”

-nola/nosile 'to sharpen'; -pola/posile 'to cool/to heal'; -sala/sasile 'to say'; -wola/wosile 'to rot'; -pela/pesile 'suppose'; -mala/masile 'to finish'; -myola/myosile 'to shave'

Polysyllabic stems with a round vowel in the second syllable undergo glide formation so that /o/ becomes [we] and /u/ becomes [wi]:

(11) a. choch\textit{ol}-a “clear the bush”
      b. choch\textit{wel}-e “clear the bush (perf)” /o/ $\rightarrow$ [we]
         c. chul\textit{uk}-a “be many”
         d. chul\textit{wich}-e “be many (perf)” /u/ $\rightarrow$ [wi]

-chochola/chochwele 'to clear the bush'; -dodoma/dodweme 'to hesitate'; -koloma/kolweme 'to snore'; -pomola/pomwele 'to husk' (maize); -songona/songwene 'to wisper'; -tokota/tokwete 'to boil'; -kongola/kongwele 'to lend/to borrow'

-chuluka/chulwiche 'to be many'; guluka/gulwiche 'to fly'; -jumula/jumwile 'to be dry'; -kumbusya/kumbwisye 'to remind'; -sangusa/sangwise 'to shake'; -tuluka/tulwiche 'to descend'; -nandupa/nandwipe 'to be few/small'.

Verb stems with a final [k] exhibit vowel coalescence and consonant mutation:

-jimbala/jimbele 'to be fat'; -gawanya/gawenye 'to divide'; -sakala/sakele 'to be bad'; -simana/simene 'to meet'; -jinama/jineme 'stoop'; -tukana/tukene 'to swear/to use abusive language'; -wangala/wangele 'to ressemble'; -watama/wateme 'to be flat'.

3
There is no change with polysyllabic stems with front vowels:

-chalila/chalile 'to persist'; -jasima/jasime 'to lend/to borrow'; -jinjila/jinjile 'to enter'; -lepela/lepele 'to fall'; -nonyela/nonyele 'to love/to like'; -n'gambila/n'gambile 'to swim'

Luganda

Monosyllabic stems

(12) a. nyw-a “drink”
   b. nywe-dde “drink (perf)"

Polysyllabic stems ending in a liquid or after a long vowel:

(13) a. wumul-a “rest”
   b. wumu-dde “rest (perf)"

Stems ending in /k,g,l,t,d/

(14) a. kol-a “work”
   b. koz-e “work (perf)"
   c. lind-a “rule”
   d. linz-e “rule (perf)”
   e. yit-a “call”
   f. yis-e “call (perf)”
   g. teek-a “put”
   h. tees-e “put (perf)”

Cilungu

Based on Bickmore (tones omitted throughout)

(15) a. u-ku-ziik-a ‘to bury’
   b. u-ku-ziik-an-a ‘to bury each other’
   c. ya-a-ziis-il-e
      3PL-PAST-bury-PERF-a
      ‘They buried yesterday.’
   d. ya-a-ziik-iin-e
      3PL-PAST-bury-RECIP-e
      ‘They buried each other.’

The causative, perfective, and deverbal nominalizer trigger mutation of the preceding consonant.

The short causative, /i/, also triggers consonant mutation. When it precedes a vowel, like the final –a, it glides to [y]:

4
(16) a. u-ko-op-a ‘to fear’
   u-ko-of-y-a ‘to frighten’

   b. u-ku-taliimp-a ‘become long or tall (for a person)’
   u-ku-taliimf-y-a ‘to lengthen or make long (e.g., poles for a mud hut)’

   c. u-ku-telep-a ‘to be slippery’
   u-ku-telef-y-a ‘to make slippery’

   d. u-ku-tuump-a ‘to be stupid’
   u-ku-tumf-y-a ‘to ridicule’

   e. u-ku-oomb-a ‘to get wet’
   u-ku-oomv-y-a ‘to make wet’

   f. u-ko-ond-a ‘to be thin’
   u-ko-onz-y-a ‘to make thin’

   g. u-ku-liil-a ‘to cry’
   u-ku-liiz-y-a ‘to make cry’

   h. u-ku-poong-a ‘to get lost’, ‘to err’
   u-ku-poonz-y-a ‘to lose’, ‘to misdirect’

   i. u-ku-byaat-a ‘to flash’
   u-ku-byaash-a ‘to cause to flash’

   j. u-k-oonk-a ‘to drink breast milk’
   u-k-oonsh-a ‘to suckle/give breast milk’

The –i nominalizer also triggers mutation:

(17) a. u-ku-luung-a ‘to hunt’
   u-mu-luunz-i ‘hunter’

   b. u-ku-vyaal-a ‘to bear a child’
   u-mu-vyaaz-i ‘parent’

   c. u-ku-oomb-a ‘to work’
   u-mu-oomv-i ‘worker’

The consonant mutation cannot be purely phonological since other [i] initial affixes do not trigger mutation.

The stative –ik:

(18) a. u-ku-ful- ‘to wash’
   u-ku-ful-ik-a ‘to be washed’
b. u-ku-lol-a ‘to see’ 
   u-ku-lol-ek-a ‘to be seen’

The long causative, /iisi/, does not induce mutation:

(19) a. u-ku-ful-a ‘to wash’
   u-ku-ful-iish-a ‘to cause to wash’

b. u-ku-las-a ‘to hit’
   u-ku-las-iish-a ‘to cause to hit’

c. u-ku-leet- ‘to bring’
   u-ku-leet-eesh-a ‘to cause to bring’

**Topic and Focus in Atlantic**

Atlantic languages like Wolof may have a number of distinct clause types:

(20) **Table 1. Wolof Clause Types**

<table>
<thead>
<tr>
<th>Type</th>
<th>Example</th>
<th>Use</th>
</tr>
</thead>
</table>
| -Na Clause      | a. Xale yi lekk-na-ñu gato bi.  
   child the.PL eat-FIN-3PL cake the  
   ‘The children ate the cake.’ | The entire clause is new information.  No subconstituent is in focus. |
| Negative        | b. Xale yi lekk-u-ñu gato bi.  
   child the.PL eat-NEG-3PL cake the  
   ‘The children did not eat the cake.’ | No emphasis on anything.  Negative of na-clause |
| Subject Cleft 1 | c. Xale yi a lekk gato bi.  
   child the.PL COP eat cake the  
   ‘It’s the children who ate the cake.’ | Subject in focus |
| Subject Cleft 2 | d. Xale yi ñu a lekk gato bi.  
   child the.PL 3PL COP eat cake the  
   ‘It’s the children who ate the cake.’ | Subject in focus |
| Negative        | e. Xale yi a lekk-ul gato bi.  
   child the.PL COP eat-NEG cake the  
   ‘It’s not the children who ate the cake.’ | negative of subject cleft |
| Subject Cleft 1 | f. D-u xale yi a lekk gato bi.  
   IMPERF-NEG child the.PL COP eat cake the  
   ‘It’s not the children who ate the cake.’ | negative of subject cleft |
| Negative        | g. Gato bi l-a xale yi lekk.  
   cake the XPL-COP child the.PL eat  
   ‘It’s the cake that the children ate.’ | Non-Subject in focus |
| Subject Cleft 2 | h. Bëgg-na-a ñu lekk-ko.  
   want-FIN-1SG 3PL eat-3SG  
   ‘I want them to eat it.’ | CP complement of predicates of desire, command, wish, etc. |
<table>
<thead>
<tr>
<th>Clause Type</th>
<th>Example</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverbial</td>
<td>i. Tusuur ŋu lekk-koro. always 3PL eat-3SG ‘They always eat it.’</td>
<td>CP/TPs that are introduced by certain adverbs in the left periphery.</td>
</tr>
<tr>
<td></td>
<td>Optative</td>
<td>Wish or desire of speaker.</td>
</tr>
<tr>
<td></td>
<td>j. Xale yi na-ŋu lekk gato bi! child the.PL OPT-3PL eat cake the</td>
<td>‘The children, may they eat the cake!’</td>
</tr>
<tr>
<td></td>
<td>Negative Optative</td>
<td>Wish or desire of speaker.</td>
</tr>
<tr>
<td></td>
<td>k. Xale yi b-u ŋu lekk gato bi! child the.PL C-NEG-3PL eat cake the</td>
<td>‘The children, may they not eat the cake!’</td>
</tr>
<tr>
<td></td>
<td>Progressive</td>
<td>Ongoing actions or current states</td>
</tr>
<tr>
<td></td>
<td>l. Xale y-àng-i lekk gato bi. child CL-PROG-LOC eat cake the</td>
<td>‘The children are eating the cake.’</td>
</tr>
<tr>
<td></td>
<td>Subject Focus Progressive</td>
<td>Subject is in focus with ongoing actions or current states</td>
</tr>
<tr>
<td></td>
<td>m. Xale y-àng-ii di lekk gato bi. child CL-PROG-LOC IMPERF eat cake the</td>
<td>‘It’s the children who are eating the cake.’</td>
</tr>
<tr>
<td></td>
<td>Non-Subject Focus Progressive</td>
<td>Non-subject in focus</td>
</tr>
<tr>
<td></td>
<td>n. Gato b-àng-ii xale yi di lekk. cake CL-PROG-LOC child the.PL IMPERF</td>
<td>‘It’s the cake that the children are eating.’</td>
</tr>
<tr>
<td></td>
<td>Predicate Focus Cleft</td>
<td>Focus on predicate or predicate (and complement) of a clause, explanation</td>
</tr>
<tr>
<td></td>
<td>o. Xale yi da-ŋu lekk gato bi. child the.PL do-3PL eat cake the</td>
<td>‘The children did eat the cake.’</td>
</tr>
<tr>
<td></td>
<td>Modal</td>
<td>Request</td>
</tr>
<tr>
<td></td>
<td>p. Ma togg-al-la ceeb bi? 1SG cook-BEN-2SG rice the</td>
<td>‘Should I cook you the rice?’</td>
</tr>
<tr>
<td></td>
<td>Exclamative</td>
<td>Exclamations</td>
</tr>
<tr>
<td></td>
<td>q. Aka mu leen dóór! EXCL 3SG 3PL hit</td>
<td>‘How he hit them!’</td>
</tr>
</tbody>
</table>

Each clause type is defined by different properties, such as the forms of the subject markers:

1 In more complex cases, it can be seen that the Adverbial and Subjunctive differ; for example, in the position of clitics and the distribution of tense morphemes.
Subject Agreement Markers-Surface Forms

<table>
<thead>
<tr>
<th>Clause Type</th>
<th>1sg</th>
<th>2sg</th>
<th>3sg</th>
<th>1pl</th>
<th>2pl</th>
<th>3pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjunctive</td>
<td>ma</td>
<td>nga</td>
<td>mu</td>
<td>nu</td>
<td>ngeen</td>
<td>ñu</td>
</tr>
<tr>
<td>i/a Relative</td>
<td>ma</td>
<td>nga</td>
<td>mu</td>
<td>nu</td>
<td>ngeen</td>
<td>ñu</td>
</tr>
<tr>
<td>u Relative</td>
<td>ma</td>
<td>a</td>
<td>Ø/mu</td>
<td>nu</td>
<td>ngeen/aleen</td>
<td>ñu</td>
</tr>
<tr>
<td>Subj Cleft</td>
<td>maa</td>
<td>yaa</td>
<td>moo</td>
<td>noo</td>
<td>yeena</td>
<td>ñoo</td>
</tr>
<tr>
<td>Non-Subj Cleft</td>
<td>laa</td>
<td>nga</td>
<td>la</td>
<td>lanu</td>
<td>ngeen</td>
<td>lañu</td>
</tr>
<tr>
<td>Neutral -na</td>
<td>naa</td>
<td>nga</td>
<td>na</td>
<td>nanu</td>
<td>ngeen</td>
<td>nañu</td>
</tr>
<tr>
<td>Negative</td>
<td>ma</td>
<td>oo</td>
<td>Ø</td>
<td>nu</td>
<td>leen/ngeen</td>
<td>ñu</td>
</tr>
<tr>
<td>Optative</td>
<td>naa/nama</td>
<td>nanga</td>
<td>na</td>
<td>nanu</td>
<td>nangeen</td>
<td>nañu</td>
</tr>
<tr>
<td>Optative Neg</td>
<td>buma</td>
<td>bul</td>
<td>bumu</td>
<td>bunu</td>
<td>buleen</td>
<td>buñu</td>
</tr>
<tr>
<td>Strong</td>
<td>man</td>
<td>yow</td>
<td>moom</td>
<td>ñun</td>
<td>yeen</td>
<td>ñoom</td>
</tr>
<tr>
<td>Genitive</td>
<td>sama</td>
<td>sa</td>
<td>-am</td>
<td>sunu</td>
<td>seen</td>
<td>seen</td>
</tr>
<tr>
<td>Predicate Focus</td>
<td>damaa</td>
<td>dangaa</td>
<td>dafaa</td>
<td>danoo</td>
<td>dangeena</td>
<td>dañoo</td>
</tr>
<tr>
<td>Progressive</td>
<td>màngi</td>
<td>yàngi</td>
<td>mungi</td>
<td>nungi</td>
<td>yeengi</td>
<td>ñungi</td>
</tr>
</tbody>
</table>

- Subject markers vary with clause type in both form and linear position.
- The presence of a wh/focused constituent in the clause and whether the focused constituent is a subject, non-subject, or verb determines which subject marker is used:

(22) a. Xaj y-i ñoo ñu leen ñoo Ayda. Subject Cleft
dog CL.PL-DEF.PROX 3PL.SC bite ayda
‘It’s the dogs that bit the Ayda.’

b. Xaj y-i Ayda lañu ñu leen ñoo Ayda. Non-Subject Cleft
dog CL.PL-DEF.PROX ayda 3PL.NSC bite
‘The dogs, it’s Ayda that they bit.’

c. Xaj y-i dañoo ñu leen ñoo Ayda. Verb Focus Cleft
dog CL.PL-DEF.PROX 3PL.VC bite ayda
‘What the dogs did is bite Ayda.’

A second variable is whether the clause is affirmative or negative:
(23) a. Lekk-*naa*.
Neutral *na*-clause

\[
\text{eat-1SG.NEUT} \\
\text{‘I have eaten.’}
\]

b. Lekk-*u-ma*.
Negative
\[
\text{eat-NEG-1SG.NEG} \\
\text{‘I have not eaten.’}
\]

• A third variable is mood. Specifically, the form of subject markers in subjunctive and optative is different:

(24) a. Bëgg-*na-a* [CP *mu* toog].
Subjunctive
\[
\text{want-FIN-1SG} \\
\text{3SG.SUBJNC sit} \\
\text{‘I want him to sit.’}
\]

b. Na toog!
Optative
\[
\text{3SG.OPT sit} \\
\text{‘Would that he sit!’; ‘(I wish) he would sit.’}
\]

Focus and Emphasis in Wolof

Focus in Wolof is typically expressed through cleft clauses, of which there are three types, as noted previously:

(25) a. Ayda *mu a lekk dibi*.
Subject Cleft
\[
\text{ayda 3SG COP eat dibi} \\
\text{‘It is Ayda who ate dibi.’}
\]

b. Dibi l-a Ayda lekk.
Non-Subject Cleft
\[
\text{dibi XPL-COP ayda eat} \\
\text{‘It is dibi that Ayda ate.’}
\]

c. Ayda daf-a lekk dibi.
Predicate Focus Cleft
\[
\text{ayda do-COP eat dibi} \\
\text{‘Adya did eat dibi.’}
\]

Cleffing in Wolof is much freer than in a language like English and phrases from several syntactic categories can be clefted in Wolof, including VPs ((26)d) and CPs ((26)e):

(26) a. Xale b-i l-a-a gis.
DP
\[
\text{child CL-DEF.PROX XPL-COP-1SG see} \\
\text{‘It’s the child that I saw.’}
\]

b. Ca_ lekkool b-a l-a-a gis-e Isaa.
PP
\[
\text{P school CL-DEF.DIST XPL-COP-1SG see-APPL isaa} \\
\text{‘It’s at school that I saw Isaa.’}
\]

c. Gaaw l-a-a ubbe-e bunt b-i.
AdvP
\[
\text{quickly XPL-COP-1SG open-MANN door CL-DEF.PROX} \\
\text{‘It’s quickly that I opened the door.’}
\]
Many West African languages have a verb focusing construction, a *predicate cleft*, which involves copying of a verb.

Krachi, a North Guang language of eastern Ghana, is one such language.

(27) a. ɔkyi  wo e-dike i-gyo.  
  woman  the PST-cook PL-yam  
  ‘The woman cooked yams.’

b. Kɛ- [dike] yɛ  ɔkyi  wo e-dike i-gyo.  
   NOM  cook  FOC  woman  the PST-cook PL-yam  
  ‘It was COOKING that the woman did to yams (not, say, eating).’
  ‘It was only cooking that the woman did to the yams.’

Yoruba

(28) a. Jimo ̣ o ̣   ra  adie ̣  
   jimo  SUBJ  buy chicken  
   ‘Jimo bought a chicken.’

b. ri-ra ti Jimo ̣ o ̣   ra  adie ̣  
   NOM-buy TI jimo SUBJ buy chicken  
   ‘the fact/way that Jimo bought a chicken’

Asante Twi

(29) a. Kofi  a-si dan  
   kofi  3SG-build house  
   ‘Kofi has built a house.’

b. dan na Kofi  a-si  
   house  FOC kofi PRF-build  
   ‘Kofi has built a HOUSE.’

c. si-e na Kofi  a-si dan  
   build-NOMLZR  FOC kofi PRF-build house  
   ‘Kofi has BUILT a house.’

As a side note, predicate clefting is found in many Atlantic creoles and various colloquial dialects of English:
Trinidadian Dialectal English (Cozier)

(30) a. Tim go walk ‘Tim will walk.’
   b. Is WALK (that) Tim go walk ‘Tim will walk (as opposed to run, jump, etc.)’
      ‘Tim really will WALK.’
   c. Is still sleep he sleeping ‘He is still SLEEPING (as opposed to doing something else).’
      ‘He is still SLEEPING.’
   d. Is cleverly AVOID he avoid the question ‘He cleverly avoided the question (as opposed to doing something else cleverly to it, like answering it).
      ‘He cleverly AVOIDED the question.’

Unlike many West African languages, Wolof does not have a predicate cleft construction where two copies of the verb appear, one being in the cleft position and the other in the expected base position (Kandybowicz 2008 and references therein):

(31) *Suub l-a-a suub simis b-i.  *Predicate Cleft
dye XPL-COP-1SG dye shirt CL-DEF.PROX
Intended: ‘I DYED the shirt.’

At the same time, (32)b shows that it is possible for a VP to be clefted, with an obligatory resumptive verb def ‘do’. In fact, strings of verbs can be clefted together ((32)c):

(32) a. Door-na-a jéem ê suub simis b-i.
    begin-FIN-1SG try a\text{INF} dye shirt CL-DEF.PROX
    ‘I began to try to dye the shirt.’

    b. [Door a jéem ê suub ] l-a-a def simis b-i.
    begin a_{\text{INF}} try a_{\text{INF}} dye XPL-COP-1SG do shirt CL-DEF.PROX
    ‘Begin to try to dye the shirt is what I did.’

(33) a. Dudu a naan buy.
    dudu COP drink baobab
    ‘It’s Dudu who drank baobab juice.’

    b. Dudu mu a naan buy.
    dudu 3SG COP drink baobab
    ‘It’s Dudu who drank baobab juice.’

Clefting of a subject out of its clause however requires the presence of a resumptive subject marker (or demonstrative):

(1) Dudu l-a-a wax ne *(mu) a naan buy.
    dudu XPL-COP-1SG say that 3SG COP drink baobab
    ‘It’s Dudu who I said drank baobab juice.’

In contrast, clefted non-subjects cannot occur with resumptive clitics:
(2) *Ayda l-a-ko xale y-i nuyu.
    ayda XPL-COP-3SG child CL-PL-DEF.PROX greet

(34) Ayda l-a-nu foog ne l-a-a wax ne l-a Dudu nuyu.
    ayda XPL-COP-3PL think that XPL-COP-1SG say that XPL-COP dudu greet
    ‘It’s Ayda that they think that I said that Dudu greeted.’

Subject Long Distance Clefting
(35) a. Dudu l-a-nu defe ne (moom) l-a-a wax ne (moom)
    dudu XPL-COP-3PL think that 3SGSTR XPL-COP-1SG say that 3SGSTR
    l-a Bintë gëm ne (moom) mu a naan buy.
    XPL-COP binta believe that 3SGSTR 3SG COP drink baobab
    ‘It’s Dudu that they think that I said that Binta believes drank baobab juice.’

Non-Subject Long Distance Clefting
b. Buy l-a-nu defe ne (moom) l-a-a wax ne (moom)
    baobab XPL-COP-3PL think that 3SGSTR XPL-COP-1SG say that 3SGSTR
    l-a Bintë gëm ne (moom) l-a Dudu naan.
    XPL-COP binta believe that 3SGSTR XPL-COP dudu drink
    ‘It’s baobab juice that they think that I said that Binta believes Dudu drank.’

Topics
Subjects and non-subjects may participate in Clitic Left Dislocation (CLLD) constructions.

A non-subject topic must be resumed by one of the non-subject clitics:
(36) a. Xale b-i, gis-na-a-*kó).
    child CL-DEF.PROX see-FIN-1SG-3SG
    ‘The child, I saw him.’

b. Kër g-ë, gis-na-a-*fë) Gàllaay.
    house CL-DEF.DIST see-FIN-1SG-LOC gallaay
    ‘The house, I saw Gallaay there.’

Multiple CLLDing is possible:
(37) Xale b-i, garab y-i, jox-na-a-leen-ko.
    child CL-DEF.PROX tree CL-DEF.PROX give-FIN-1SG-3PL-3SG
    ‘The child, the trees, I gave them to him.’

The CLLDed elements can appear in any order. Contrast the ordering of the topics in (37) versus
(38), where the topics are in the opposite order:
(38) Garab y-i, xale b-i, jox-na-a-leen-ko.
    tree CL-DEF.PROX child CL-DEF.PROX give-FIN-1SG-3PL-3SG
    ‘The trees, the child, I gave them to him.’
Clitic Right Dislocation is also possible, however, this is generally permissible only with strong pronouns. As with CLLD, a resumptive clitic is obligatory:

(39) Gis-na-a-*\((léén)\) démb, ñoom.
    see-FIN-1SG-3PL yesterday 3PLSTR
    ‘I saw them yesterday, them.’

Clitic Right Dislocation and CLLD can occur together:

(40) Xale y-i, gis-na-a-*\((léén)\) démb, ñoom.
    child CL-DEF.PROX see-FIN-1SG-3PL yesterday 3PLSTR
    ‘The kids, I saw them yesterday, them.’

Complex left peripheral chains with multiple pronominal type elements can also be formed:

(41) Xale y-i, ñoom, ñu a dem kër g-a.
    child CL-PL-DEF.PROX 3PLSTR 3PL COP go house CL-DEF.DIST
    ‘The children, they, it’s them who went to the house there.’

The rest of the sentence expresses presupposed material.

- Wolof has a number of topic and ‘emphasis’ marking particles: nag, kat, de, kaay, naam, gaa, kañ (among others), none of which has been systematically investigated or described.
- The topic particles always occur on the right edge of the topicalized constituent. (42)a-b give examples of the topic/emphatic gaa and topic marker nag:

    woman CL-DEF.PROX gaa see-FIN-1SG-3SG
    ‘The woman indeed, I saw her.’

    woman CL-DEF.PROX nag see-FIN-1SG-3SG
    ‘As for the woman, I saw her.’

Unlike English expressions like “as for X” or “regarding X”, topic particles in Wolof can also occur with full clauses or inside of the verbal complex:

(43) a. Gis-na-a xaj b-i kaay.
    see-FIN-1SG dog CL-DEF.PROX kaay
    ‘I DID see the dog.’

b. Gis-na-a gaa xaj b-i.
    see-FIN-1SG gaa dog CL-DEF.PROX
    ‘I indeed SAW the dog.’

c. Gis-na-a xaj b-i gaa.
    see-FIN-1SG dog CL-DEF.PROX gaa
    ‘See the dog I did indeed.’

d. Gis-na-a xaj b-i de.
    see-FIN-1SG dog CL-DEF.PROX de
    ‘In fact, I saw the dog’, ‘I actually saw the dog.’
    dog CL-DEF.PROX \textit{gaa}, cat CL.PL-DEF.PROX \textit{nag} chase-FIN-3PL\textsubscript{OBJ}
    ‘The dog indeed, as for the cats, it chased them.’

   b. *\textit{Muus y-i} \textit{nag}, xaj \textit{b-i} \textit{gaa}, dàq-na-leen.
    cat CL.PL-DEF.PROX \textit{nag} dog CL-DEF.PROX \textit{gaa} chase-FIN-3PL\textsubscript{OBJ}

\textbf{Yes/No Questions}

Wolof possesses a number of particles that occur in interrogative clauses:

(45) a. Gis-na-ñu xale b-i?
    see-FIN-3PL child CL-DEF.PROX
    ‘Did they see the child?’

   b. \textit{Eske/ndax}\textsuperscript{2} gis-na-ñu xale b-i?\textsuperscript{3}
    \textit{Qy/N} see-FIN-3PL child CL-DEF.PROX
    ‘Did they see the child?’

   c. Gis-na-ñu xale b-i \textit{eske/ndax}?
    see-FIN-3PL child CL-DEF.PROX \textit{Qy/N}
    ‘Did they see the child?’

\textit{Biased} questions are marked by distinct particles:

(46) a. \textbf{D-u} gis-u-nu Isaa?
    IMPERF-NEG see-NEG-1PL isaa
    ‘We saw Isaa, right?’

   b. *Gis-u-nu Isaa \textbf{d-u}?
    see-NEG-1PL isaa IMPERF-NEG

   c. Ayda togg-na yaasa \textit{wàlla}?
    ayda cook-FIN yaasa or
    ‘Did Ayda ACTUALLY cook yaasa?’

   d. *\textit{Wàlla} Ayda togg-na yaasa?
    or ayda Cook-FIN yaasa

   e. \textbf{Te-d-u} gis-u-nu Isaa?
    COORD-IMPERF-NEG see-NEG-1PL isaa
    ‘We saw Isaa, right?’

   f. Gis-u-nu Isaa \textbf{te-d-u}?
    see-NEG-1PL isaa COORD-IMPERF-NEG
    ‘We saw Isaa, right?’

\textsuperscript{2} Wolof \textit{eske} is derived from French \textit{est-ce que} ‘is it that..?’ . However, in French, the string \textit{est-ce que} cannot occur on the right edge of the clause.

\textsuperscript{3} If (45)b-c were questions without the question particle, the verbal complex would be pronounced with pitch much higher than the rest of the sentence. That is, the higher pitch occurs on the left edge of the clause. See Rialland and Robert (2001) for details on the intonational system of Wolof.
Wh-Questions in Wolof

In Wolof, most wh-items are integrated into the noun class system:

(48) a. k-an ‘who’ nit k-i ‘the person’
   b. f-an ‘where’ fii ‘here’, ‘fale ‘there’
   c. l-an ‘what’
   etc.

Wolof is a wh-movement language, in both matrix and embedded questions:

(49) a. Mamadou lekk-na maafe. Mamadou eat-FIN maafe
   ‘Mamadou ate maafe.’
   b. L-an l-a Mamadou lekk? CL-an XPL-COP mamadou eat
   ‘What did Mamadou eat?’
   c. bëgg-na-a xam k-an l-a Awa nuyu want-NEUT-1SG know CL-an XPL-COP awa greet
   ‘I wonder who Awa greeted.’

Wolof has an optional wh-question particle:

(50) a. (An-a/i) l-an l-a Isaa lekk? an-a/i + an-Form
   Qwh-DET CL-an XPL-COP isaa eat
   ‘What is it that Isaa ate?’
   b. (An-a/i) k-an l-a Isaa door? ana/-i + an-Form
   Qwh-DET CL-an XPL-COP isaa hit
   ‘Who is it that Isaa hit?’

The wh-question particle seems to be related to the determiners:

(51) a. a-b xaj NDEF-CL dog
   ‘a dog’

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4 In some dialects, e.g., Gambian, mbaa corresponds to whether/if.
5 Maafe is a stew made from meat cooked in a sauce with ground peanuts, tomatoes, and palm oil and served over rice.
Consider the following difference:
(52) a. An-a k-an mu a lekk gato b-i?
   Q_{wh} DET CL-an 3SG COP eat cake CL-DEF.PROX
   ‘Who ate the cake?’

   b. An-i k-an mu a lekk gato b-i?
   Q_{wh} DET CL-an 3SG COP eat cake CL-DEF.PROX
   ‘Who (of the people I have in mind/under discussion) ate the cake?’

Left peripheral determiner-like elements are found in other Niger-Congo languages. In Asante Twi, for example, the definite determiner no appears in DPs ((53)a, as a 3SG object pronoun in (53)b, a resumptive (object) pronoun in (53)e, and as a (right peripheral) clausal determiner in (53)d:

Asante Twi (Kwa)\(^6\)
(53) a. buk no
   book DET
   ‘the book’

  b. Me bɔɔ no.
   1SG hit.PAST 3SG
   ‘I hit him/her.’

  c. Hena na Kofi bɔɔ no?
     who FOC Kofi hit.PAST 3SG
     ‘Who did Kofi hit?’

  d. Hena na ɔɔ-bɔ Kofi no?
     who FOC 3SG.PROG-hit Kofi DET
     ‘Who exactly is hitting Kofi?’

There is a second particle that occurs on the left edge of certain wh-the-hell (“aggressively non-D-linked” wh-questions):

(54) Waa l-an l-a xale b-i war-a lekk?\(^7\)
   waa CL-an XPL-COP child CL-DEF.PROX should-a\(_{\text{INF}}\) eat
   ‘What on earth did the child eat?’

Wolof has a second wh-question strategy:

(55) a. K-u togg ceeb ak jën
    CL-u cook rice and fish
    ‘Who cooked rice and fish?’

\(^6\) Thanks to Selassie Ahorlu for the Asante Twi data.
\(^7\) I do not know why this construction involves the epistemic/deontic modal war.
b. \textbf{Y-u} jìgéén j-i \textit{togg} Direct Object  
\textit{CM-u} woman \textit{CM-def.prox} cook  
‘What(pl) did the woman cook?’

c. \textbf{F-u} jìgéén j-i togg-e ceeb ak jên Locative Adjunct  
\textit{CM-u} woman \textit{CM-def.prox} cook-LOC rice and fish  
‘Where did the woman cook fish and rice?’

I don’t know of any interpretive difference between the two wh-constructions:

\textbf{(56) a. F-u} a dem démb?  
\textit{CM-u} 2sg go yesterday  
‘Where did you go yesterday?’

\textbf{b. F-an} nga \textit{dem démb}?  
\textit{CM-an} 2sg+XPL+COP go yesterday  
‘Where did you go yesterday?’

The second construction is related to relative clauses:

\textbf{(57) a. Y-an l-a jìgéén j-i togg?}  
\textit{CL.PL-an} XPL-COP woman \textit{CL-def.prox} cook  
‘What(pl) did the woman cook?’

\textbf{b. Y-u} jìgéén j-i \textit{togg}  
\textit{CM-u} woman \textit{CM-def.prox} cook  
‘What(pl) did the woman cook?’

\textbf{c. ñebbe y-u} jìgéén j-i \textit{togg}  
\textit{beans CL.PL-REL} woman \textit{CL-def.prox} cook  
‘beans that the woman cooked’