vP infinitives in Wolof: on Ā-movement to Spec vP

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1 Introduction

⋆ Consider the Wolof examples in (1), which are synonymous in English

- There is an optional relativizing head *bu*

(1) a. Kadeer jox na ma jën **bu** ma jox Roxaya
K give 3s-PFV me fish C-REL 1s-MU give R
"Kadeer gave me a fish to give to R."

b. Kadeer jox na ma jën ma jox Roxaya
K give 3s-PFV me fish 1s-MU give R
"Kadeer gave me a fish to give to R."

⋆ The presence or absence of *bu* correlates with other properties:

- I will later argue that (1a) is an infinitival relative while (1b) is a purpose clause, but for now I will refer to them as the *bu*-full and *bu*-less clauses respectively.

Clause type	*bu*-full	*bu*-less
Supports aspect	✓	*
Clitics climb	✓	*

Table 1: Summary of the properties of these two clauses.

⋆ Conclusion: the *bu*-less clause is smaller (vP-sized?)

- **Additional finding: gaps in both *bu*-full and *bu*-less clauses appear to have Ā-properties**

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→ *Theoretical consequence:* v must have an Ā-probe in these constructions, despite the fact that there is no higher Ā-probe in the clause

- This not only supports theoretical claims and empirical findings that Ā-movement is successive cyclic through vP...
- ...but also provides evidence that Ā-movement can *terminate* at the edge of vP, which may have consequences for theories of what drives successive cyclic movement to begin with

⋆ Plan for today:

1. Clitic climbing patterns in finite and non-finite clauses
2. *bu*-full vs. *bu*-less clauses
3. Diagnosing Ā-movement (warning: island sensitive resumptive pronouns!)
4. Other questions about *bu*-less clauses and a possible analysis

2 Clitic climbing

- Wolof has what others have called both 'weak' and 'strong' pronouns. I'll henceforth refer to the weak pronouns as *clitics* (following Dunigan 1994, Torrence 2005, Russell 2006, and Martinovic 2015):
- We will primarily be concerned with object clitics

Singular	Plural
ma	nu
la	leen
ko	leen

Table 2: Full paradigm of object clitics in Wolof.

- Clitics have a different distribution than corresponding full DP's: sometimes they appear "in situ"... but often not. Generalization: **Clitics must appear next to the *subject particle* in the clause**
- Wolof has a number of subject particles: particles that bear the φ-features of the subject, convey something about tense/aspect/information structure, and appear either pre- or post-verbally

(2) Post-verbal s.p. NA (perfective, neutral focus): DP's and clitics next to NA

a. Roxaya lekk *na* mango bi
R eat 3s-PFV mango def
"Roxaya ate the mango."

b. Roxaya lekk *na* **ko**
R eat 3s-PFV it
"Roxaya ate it."

(3) Pre-verbal s.p.'s MOO, DAFA, DINA (subject focus, verb focus, future): Only clitics next to s.p.

Roxaya wax na ma ne...
R say 3s-PFV me that...

"Roxaya told me that..."

a. *moo* lekk **mango bi**
3s.S-FOC eat mango def
"SHE ate the mango."

b. *dafa* lekk **mango bi**
3s.V-FOC eat mango def
"she ATE the mango."

c. *dina* lekk **mango bi**
3s.FUT eat mango def
"she will eat the mango."

d. *moo* **ko** lekk
3s.S-FOC it eat
"SHE ate it."

e. *daf* **ko** lekk
3s.V-FOC it eat
"she ATE it."

f. *dina* **ko** lekk
3s.FUT it eat
"she will eat it."

- Martinovic (2015) proposes that clitics adjoin to the sister of the highest functional projection in their phase, which for her is the C/T complex[1]
- Clitics might not look like they are moving in (2), but they are in fact moving to the right of the φ-particle NA: ditransitives have free order for DP's, but not for clitics
  - The verb is higher in NA constructions than in the presence of other particles

(4) a. jox *naa* [xale yi teere bi]
give 1s child def-pl book def

b. jox *naa* [teere bi xale yi]
give 1s book def child def-pl
"I gave the children the book."

c. *jox *naa* [xale yi **ko**]
give 1s- child def-pl it

d. jox *naa* [**ko** xale yi]
give 1s it child def-pl
"I gave it to the children."

⋆ We have looked at tensed clauses, what about non-finite clauses?

- Wolof non-finite clauses are identifiable by the subject particle MU: clitics **do not** climb to MU

[1]Clitics also have a fixed hierarchy that determines their ordering in a cluster: 1st person > 2nd person > 3rd person plural > 3rd person singular > locative *fa/fi*, this is potentially relevant to an analysis of clitic climbing but will not bear on the proposal here.

(5) a. Roxaya wax na Kadeer *mu* togg-al **ko** jën
R say 3s-PFV K 3s-MU cook-BEN her fish

b. *Roxaya wax na Kadeer *mu* **ko** togg-al jën
R say 3s-PFV K 3s-MU her cook-BEN fish
"Roxaya told Kadeer to cook her fish."

- MU subject particles are used in a variety of biclausal constructions such as control predicates and subjunctive clauses

(6) Roxaya báyyi na Kadeer *mu* jënd **ko**
R let 3s-PFV K 3s-MU buy it
"Roxaya let Kadeer buy it."

(7) Bëgg naa mu taw
want 1s-PFV 3s-MU rain
"I want it to rain."

  - MU subject particles behave more like subject pronouns than φ particles: in complementary distribution with an overt external argument, instead controlled by an antecedent in the superordinate clause

- Clitics are not in principle averse to MU; adding imperfective aspect or negation to the infinitival clause causes clitics to climb to the right of MU[2]

(8) a. Roxaya wax na Kadeer *mu* **ko**-y togg-al jën
R say 3s-PFV K 3s-MU her-IPFV cook-BEN fish
"Roxaya told Kadeer to cook her fish (habitually)."

b. Roxaya wax na K bu *mu* **ko** togg-al jën
R say 3s-PFV K NEG-C 3s-MU her cook-BEN fish
"Roxaya told Kadeer not to cook her fish."

- Martinovic concludes: MU-clauses are typically bare vP's (she actually calls these "minimal clauses"), with clitics remaining low- climbing only to the right of the verb. Adding additional projections such as aspect or negation extends the domain enough for the clitic to climb past the verb.

(9) [*mu ko* [$_{stuff}$ ... [$_{vP}$ t_{mu} V t_{ko}]]] *Clitics only climb in clauses bigger than vP*

Summary: clitic climbing is a good diagnostic for clause size!

[2]These facts are the same for restructuring predicates, such as the complement of *try*. Clitic climbing is disallowed here unless you can add the relevant extra projections.

3 Returning to *bu*-full and *bu*-less clauses

⋆ Returning to (1): the relativizing head *bu* appears to be optional

(1) a. Kadeer jox na ma jën **bu** *ma* jox Roxaya
K give 3s-PFV me fish C-REL 1s-MU give R
"Kadeer gave me a fish to give to R."

b. Kadeer jox na ma jën *ma* jox Roxaya
K give 3s-PFV me fish 1s-MU give R
"Kadeer gave me a fish to give to R."

- *Only clauses with* ***bu*** *allow clitic climbing*

(10) a. Kadeer jox na ma jën **bu** *ma* **ko** jox
K give 3s-PFV me fish C-REL 1s-MU her give
"Kadeer gave me a fish to give to her."

b. *Kadeer jox na ma jën *ma* **ko** jox
K give 3s-PFV me fish 1s-MU her give
"Kadeer gave me a fish to give to her."

c. Kadeer jox na ma jën *ma* jox **ko**
K give 3s-PFV me fish 1s-MU give her
"Kadeer gave me a fish to give to her."

→ *bu*-less clauses are bare *v*P's

- For our speakers[3], *bu*-less relatives are even *obligatorily* small, can't even host aspect. Only clauses with *bu* can host aspect.

(11) Roxaya jox na Kadeer jën *(bu) *mu*-y togg
R give 3s-PFV K fish C-REL 3s-MU-IPFV cook
"Roxaya gave Kadeer a fish to cook."

⋆ **Summary**: there are both CP-and *v*P-infinitives with gaps. How are they derived?

4 Diagnosing Ā-movement

The gaps in both the *bu*-full and *bu*-less clauses seem to have the same properties:

1. Need resumptive pronoun when further embedded
2. Resumptive pronouns are island sensitive

[3]One of our three speakers seemed less sure about this judgment, occasionally allowing aspect in the *bu*-less clauses and occasionally not. The other two seemed quite sure about disallowing aspect. I wonder if this is a dialectal difference.

(12) Further embedding: need resumptive pronoun

Jox naa Roxaya jën (bu) *mu* fog ne moo *(ko) japp
give 1s-PFV Roxaya fish C-REL 3s.MU pretend that 3s.MOO it catch

"I gave Roxaya a fish to pretend that she caught it."

(13) Resumptive pronouns are island sensitive

Jox naa Roxaya jën (bu) mu fog ne xamul ne/*ndax ma
give 1s-PFV Roxaya fish C-REL 3s.MU pretend that know-NEG that/*if 1s.MU
*(ko) japp
it catch

"I gave Roxaya a fish to pretend that she didn't know that/*if I caught it."

Replacing the resumptive pronoun with a copy of the full DP rescues the sentence

(14) Jox naa Roxaya jën bi mu fog ne xamul ndax ma japp
give 1s-PFV Roxaya fish def 3s.MU pretend that know-NEG if 1s.MU catch
jën bi
fish def

"I gave Roxaya a fish to pretend that she didn't know if I caught the fish."

⋆ Resumptive pronouns are everywhere, even long-distance *wh*-questions (p.c. Colin Davis)[4].

(15) Lan la suunu yaay wax ne war *nanu* **ko** jënd?
what 3s.LA our mother say that should 1pl it buy
"What did our mother say that we should buy?"

Conclusion: I propose that the gaps in both the *bu*-full and *bu*-less clauses are derived by Ā-movement; Wolof prefers to pronounce long-distance gaps as resumptive pronouns in general (Sichel 2014)

→ ... so v has an independent Ā-probe that is not dependent on higher CP probes! (in line with work on mixed A-Ā-probes on v, van Urk & Richards 2015, Longenbaugh 2017)

[4]The generalization about when one needs a resumptive pronoun with long-distance wh-movement is somewhat complicated because long-distance chains seem to have two possible realizations; one with a resumptive pronoun and one with a wh-like complementizer that can be used instead of a resumptive pronoun. Martinovic (p.c.) reports that her consultants rejected examples like (15), saying that extraction was impossible across certain subject particles, with or without a resumptive pronoun. This likely reflects a dialectal difference; some dialects have two strategies for long distance wh-movement and some have one.

5 What are the vP-infinitives?

... are they even relative clauses? constituency tests suggest not: only *bu*-full clauses form a constituent with the object

(16) **Jën** *(bu) mu togg mungi ci kaw tabal bi
fish C-REL 3s-MU cook 3s.IMPF on top table def
"A fish to cook is on the table."

- Wolof resists relative clause extraposition across a definite DP (Colin Davis p.c.)

(17) Relative clause extraposition sensitive to definiteness
a. Gis naa fas démb wu nga sopp
see 1s-PFV horse yesterday AGR-C 2s-MU like
"I saw a horse yesterday that you like."
b. *Gis naa fas **wi** démb wu nga sopp
see 1s-PFV horse def yesterday AGR-C 2s-MU like
"I saw the horse yesterday that you like."

- *bu*-less clauses have no problem showing up far on the right, controlled by a definite DP

(18) Tekk naa [jën bi] ci tabal bi [(pur/*bu) mu togg]
put 1s-PFV fish def on table def (for/*REL) 3s.MU cook
"I put the fish on the table to cook."

⋆ So the *bu*-less clauses must be higher than the object, possibly adjoining to the matrix vP as an adjunct → a purpose clause

→ If everything I've said so far is right, we are left with an adjunct clause that has a gap with $\bar{\text{A}}$ properties that is controlled by the matrix object, which does not c-command the adjunct. **could the gap be parasitic?** (this would suggest covert object movement)

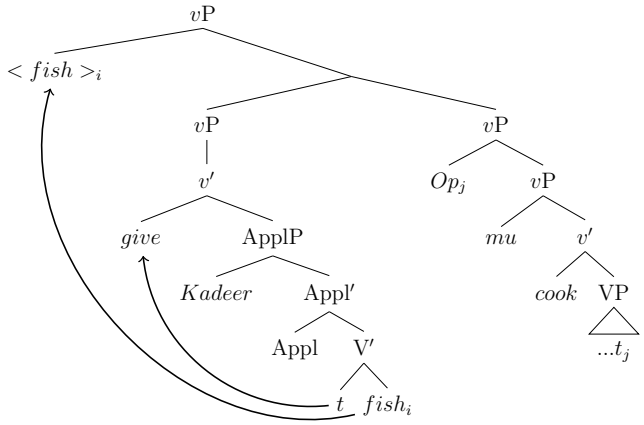

Figure 1: A schematic of Nissenbaum's parasitic gap configuration with the MU-clause as the parasitic gap-containing vP adjunct.

Questions for future research: what other infinitival clauses with gaps might have such an analysis? English tough constructions? How do we detect covert movement of the object, and do we need it?

6 Conclusion

Takeaway points:

1. Wolof has vP-sized infinitival clauses with gaps
2. these gaps have $\bar{\text{A}}$ properties like their CP-sized counterparts... $\bar{\text{A}}$-movement can target Spec vP and stop there
3. Wolof has island sensitive resumptive pronouns that show up in long distance $\bar{\text{A}}$-chains
4. maybe parasitic gap configurations are more common than we thought

References

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A Another clause masquerading as a member of this paradigm...

Apparently plugging the gap allows the *bu*-less clauses to host aspect...

(19) Roxaya jox na Kadeer jën mu **ko**-y togg
R give 3s K fish 3s-MU it-IPFV cook
"≈ Roxaya gave Kadeer a fish, he cook it."

⋆ Note the different translation... not a resumptive pronoun. Several differences:

- Can't have *bu*
- Bad under negative matrix clauses
- Fine with matrix clauses that don't license good relative clause interpretations

(20) a. Roxaya jox na Kadeer jën (*bu) mu togg ko
R give 3s K fish (*C-REL) 3s.MU cook it
"≈ Roxaya gave K a fish to cook."

b. Joxuma Roxaya jën mu togg (*ko)
give-1s.NEG.PERF Roxaya fish 3s-MU cook (*it)
"I didn't give Roxaya a fish to cook."

(21) a. togg naa jën, ma lekk (ko)
cook 1s fish, 1s-MU eat (it)
"I cooked a fish {to eat/I eat it}."

b. sopp naa jën, ma lekk *(ko)
like 1s fish, 1s-MU eat *(it)
"I like fish { * to eat/✓I eat it}."

⋆ I'll call this a subordinative clause, not derived by movement.