Pronouncing PRO in Wolof*

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PLC 2022, March/2022

1 Introduction

A. Obligatory control

- Phenomenon whereby the subject of an embedded clause, which is usually nonfinite, is null and coindexed with a matrix argument.
- The embedded null subject is indicated with 'PRO'.[1]

(1) a. Sindhu$_1$ tried [PRO$_{1/*2}$ to run a marathon]. *subject control*
b. Lasha convinced Sindhu$_1$ [PRO$_{1/*2}$ to run a marathon]. *object control*

- The phonological nullness of PRO is usually obligatory:

(2) a. * Sindhu$_1$ tried [**she** to run a marathon]. *subject control*
b. * Lasha convinced Sindhu$_1$ [**she** to run a marathon]. *object control*

B. Typology of control theories

- Based on the phonological nullness of PRO, we can divide control theories in the following way:

(3) *Control theory typology*
i. Inherent theories: phonological nullness is an inherent property of either PRO or of the control clause.
ii. Derivational theories: the phonological nullness of PRO is acquired during the derivation.
iii. Arbitrary theories: there is no necessary relationship between the syntax and semantics and PRO and its phonological realization. It can be null, but it does not have to be.

*Many thanks to Sidy Mockhtar Ndao, whose partnership was essential in this project. The data presented here was collected online between June and August, 2021 and it was financed by the Ken Hale Fund (MIT Linguistics). Thank you also to Mouhamadou Deme for putting me in contact with Ndao (and thank you to Izabela Jordanoska for putting me in contact with Deme). I first became interested in object control when working with Lamine Touré.

[1]For overviews on control phenomena and theories, see Potsdam & Haddad (2017) and, specially, Landau (2013).

C. Inherent theories

- In these theories, the embedded subject of control clauses is null either because this is a property of the lexical item PRO (Chomsky, 1981) or because there is not space in such clause for a subject (Wurmbrand, 1998, et seq.).

D. Derivational theories

- In derivational theories, PRO does not start out phonologicall null. This property is a consequence of some independent process or principle that occurs during the course of the derivation.
- For the Movement Theory of Control (Hornstein, 1999; Boeckx *et al.*, 2010), there is no PRO per se, nor is there a dedicated control module.
- Rather, control reduces to raising and the embedded subject of a control clause is null because this is the residue of movement of a DP (the controller) through multiple thematic positions.

(4) *MTC analysis of (1a)*

[Sindhu tried [$_{TP}$ <Sindhu> to [$_{vP}$ <Sindhu> run a marathon]]]

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- In other words, for the MTC, the phonological nullness of PRO reduces to the rules that regulate linearization. Notably, the residue of movement is usually null.
- **Prediction:** if something prevents a lower copy from being deleted, the embedded subject in control clauses can be pronounced.
  - Certain theories of linearization (e.g. Nunes 2004) suggest that a lower copy can be exempt from deletion if it undergoes some operation (e.g. morphological merger) that renders it invisible to the linearization algorithm.
  - Lee (2003) shows that this is the case in copy control in San Lucas Quiaviní Zapotec.[2]

(5) *Copy control in San Lucas Quiaviní Zapotec*

R-càà**a**'z **Lia Paamm** [g-ahcnè **Lia Paamm** Gye'eihlly].
HAB-want FEM Pam [IRR-help FEM Pam Mike]
'Pam wants to help Mike.'

(Lee, 2003, (62), adapted)

  - Lee's proposal is that the embedded instance of *Lia Paamm* is a fully pronounced copy of movement.

(6) *Lee's MTC analysis of (5)*

[**Lia Paamm** wants [$_{TP}$ **Lia Paamm** to [$_{vP}$ <Lia Paamm> help Mike]]]

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[2] See also backwards control (Polinsky & Potsdam, 2002). See however Pietraszko (2021) for a movement-free analysis of backwards control.

- More generally, in derivational theories of control, it is in principle possible for PRO to be pronounced.

E. Arbitrary theories

- For these theories, the phonological nullness of PRO is an accidental property of this lexical item. In principle, nothing prevents it from being phonologically overt.

F. **Control in Wolof**[3]

- Wolof has constructions that resemble subject control (1a). The complement clause of verbs like *jéem* 'try' is headed by a bare verb with a null subject, interpreted as the matrix subject.

(7) *Subject control in Wolof*

a. Xadi jéem-na togg ginaar.
Xadi try-NA.3SG cook chicken
'Xadi tried to cook chicken.'

b. Maymuna fas-na jàng taalif b-i.
Maymuna try-NA.3SG read poem CM.SG-DEF
'Maymuna wants to read the poem.'

- Wolof also has constructions that resemble object control (1b). However, **the embedded subject is an overt pronoun, instead of being phonologically null**.

(8) *Object control in Wolof*

a. Dimbali-na-a a-b xale **mu** jàng téere b-i.
help-NA-1SG INDEF-CM.SG child 3SG.SUBJ read book CM.SG-DEF
'I helped a child read the book.'

b. Dimbali-na-a a-y xale **ñu** jàng téere b-i.
help-NA-1SG INDEF-CM.PL child 3PL.SUBJ read book CM.SG-DEF
'I helped some children read the book.

- Such a pronoun is obligatory, at least in the Wolof dialect surveyed here.[4]

(9) *Embedded pronoun is obligatory in object control*

a. * Dimbali-na-a a-b xale jàng téere b-i.
help-NA-1SG INDEF-CM.SG child read book CM.SG-DEF
Int.: 'I helped some child read the book.'

[3]Abbreviations: CM = class marker, COMP = complementizer, DEF = definite, FOC = focus, IMPF = imperfective, LNK = linker, NA = sentential particle for neutral sentences (*na*), NEG = negation, OBJ = object, OBL = oblique, PL = plural, POSS = possessive, PREP = preposition, PROG = progressive, RECIP = reciprocal, REFL = reflexive, SG = singular, SUBJ = subject.

[4]See data in Dione (2019), where the pronoun is descriptively optional. As we are going to see below, the overtness of the embedded subject in object control correlates with other properties (e.g. impossibility of clitic climbing and obligatoriness of resumptive pronoun under *Wh*-movement). The opposite set of properties obtains with subject control, where the embedded subject is null. It would be interesting to check whether these properties dovetail in the same way in Dione's data.

b. * Dimbali-na-a a-y xale jàng téere b-i.
help-NA-1SG INDEF-CM.PL child read book CM.SG-DEF
Int.: 'I helped some children read the book.

- Conversely, the same type of pronoun is prohibited in subject control:

(10) *Embedded pronoun is prohibited in subject control*

a. * Xadi jéem-na **mu** togg ginaar.
Xadi try-NA.3SG 3SG.SUBJ cook chicken
Lit.: 'Xadi tried she to cook chicken.'

b. * Maymuna fas-na **mu** jàng taalif b-i.
Maymuna try-NA.3SG 3SG.SUBJ read poem CM.SG-DEF
Lit.: 'Maymuna wants she to read the poem.'

G. Given these data, we may ask the following questions:

(11) i. Why is there a difference between subject and object control in Wolof?
ii. Why is the controlled subject in object control a pronounced pronoun?
iii. Can object control in Wolof help tease apart control theories with respect to the phonological properties of PRO (see typology in (3))?

H. Structure of this handout

- The questions in (11) can only be asked if sentences like (8) are indeed instances of object control. The presence of the overt pronoun in the embedded clause makes them not look like true cases of object control, given that PRO is usually phonologically null.
  - In §2, we apply standard tests for control (e.g. *de se* reading, sloppy reading under ellipsis, bound reading) and conclude that this overt pronoun is a bound variable, just like obligatory control PRO.
- In §3, we bring back subject control and compare it with object control with respect to clause size. Specifically, we will how these clauses differ with respect to:
  - Ā-resumption (obligatory in object control, prohibited in subject control).

(12) K-an la jàngelekat b-i dimbali ndongo l-i
CM.SG-who FOC.OBJ teacher CM.SG-DEF help student CM.SG-DEF
mu nataal*(=**ko**)?
3SG.SUBJ draw*(=3SG.ACC)
'Who did the teacher help the student draw?'

  - Clitic climbing (prohibited in object control, obligatory in subject control).
- In §4, I propose an analysis where the complement of object control predicates like *dimbala* 'help' is a ΣP that "impedes" movement.

(13) [$_{CP}$ ↓ [I helped a child [$_{\Sigma P}$ **she** to [$_{vP}$ <a child> read the book]]]]

- A-movement to a further θ-position (resulting in control) or *Wh*-movement across ΣP leaves behind a resumptive pronoun.
- The resumptive pronoun is a partially pronounced copy in a movement chain (Van Urk, 2018).

I. Relevance

- This analysis captures why a pronounced PRO and Ā-resumption dovetail in the same construction.
- Furthermore, it rounds out the typology of control as A-movement expected from the Copy Theory of Movement.

2 Bound variable properties of the embedded pronoun

A. Landau (2013) formulates the following generalization to describe the properties of obligatory control PRO:

(14) *The Obligatory Control signature*

In a control construction [… X_k … [$_S$ PRO_k …] …], where *X* controls the PRO subject of the clause S:

i. The controller(s) *X* must be (a) co-dependent(s) of S.

ii. PRO (or part of it) must be interpreted as a **bound variable**.

- That obligatory control PRO is a bound variable can be diagnosed by the following properties:
  - Obligatory coreference [see appendix]
  - Obligatory sloppy reading under ellipsis
  - Obligatory *de se* interpretation
- In this section: I show that pronounced pronouns in Wolof object control sentences display the properties of bound variables.[5]

B. **Obligatory sloppy reading under ellipsis:** as a bound variable, obligatory control PRO should yield only sloppy readings under VP ellipsis.

(15) *Obligatory sloppy reading under ellipsis*

Bu dee Isaa moon, wax-na-a Kumba mu jàng a-b téere, waaye
BU DEE Isaa 3SG.OB say-NA-1SG Kumba 3SG.SUBJ read INDEF-CM.SG book but
wax-ul ma Roxaya < mu jàng a-b téere >.
say-NEG 1SG.SUBJ Roxaya 3SG.SUBJ read INDEF-CM.SG book
'As for/According to Isaa, I told Kumba to read a book, but not Roxaya.'

i. ✓ I didn't tell Roxaya for her (= Roxaya) to read the book.

ii. * I didn't tell Roxaya for Kumba to read the book.

[5]Dropped subjects, on the other hand, display the opposite properties. The data is omitted here because of time and space constraints, but is available upon request.

C. **Obligatory *de se* or *de te* interpretation:** In attitude contexts, obligatory control PRO should be obligatorily interpreted *de se* (relative to its controller).

(16) Maryam wax-na Kadeer mu dem.
Maryam say-NA.3SG Kadeer 3SG.SUBJ leave
'Maryam told Kadeer to leave.'

i. # Maryam is hosting a party. She hears that a certain waiter named Kadeer is being a nuisance. Maryam tells the nearest waiter "Kadeer has to go." Unbeknownst to her, she's talking to Kadeer.

ii. ✓ Maryam is hosting a party. She hears that a certain waiter named Kadeer is being a nuisance. Maryam tells Kadeer "You have to go."

(context taken and adapted from Sportiche 2019, (58))

D. **Bound reading with *no*[6]**

(17) # I hate Kadeer. I am throwing a party and am inviting my students to it. But I tell each of them that Kadeer is not invited, and therefore if they come they shouldn't bring Kadeer along with them. Kadeer was very sad because:[7]

Wax-u-ma b-enn ndongo mu ñëw ci baal b-i.
say-NEG-1SG CM.SG-one student 3SG.SUBJ come PREP party CM.SG-DEF
'I told no student to come to the party.' (Lit.: I didn't tell a student to come to the party.)

E. Takeaway

- Even though there is an overt pronoun in sentences like those in (18), repeated from above, these constructions can be classified as instances of obligatory object control.

(18) a. Dimbali-na-a a-b xale **mu** jàng téere b-i.
help-NA-1SG INDEF-CM.SG child 3SG.SUBJ read book CM.SG-DEF
'I helped a child read the book.'

b. Dimbali-na-a a-y xale **ñu** jàng téere b-i.
help-NA-1SG INDEF-CM.PL child 3PL.SUBJ read book CM.SG-DEF
'I helped children read the book.

- The data examined in this section show that these pronouns are bound variables, just like obligatory control PRO in a language like English.

3 The size of control clauses in Wolof

A. In this section

- We just established that the pronoun in Wolof object control is a bound variable (just like obligatory control PRO). An obvious question to ask now is, why Wolof has what can be described as an overt PRO.

[6]Many thanks to Itai Bassi for patient discussion and numerous clarifications on this issue.
[7]Thank you to Itai Bassi for providing the context for this sentence!

- In order to answer this question, it is useful to compare subject and object control clauses in Wolof. To recall, in object control (19), a subject pronoun is obligatory in the embedded clause, while in subject control (20), the same pronoun is prohibited.

(19) Dimbali-na-a a-b xale *(**mu**) jàng téere b-i.
help-NA-1SG INDEF-CM.SG child *(3SG.SUBJ) read book CM.SG-DEF
'I helped a child read the book.'

(20) Xadi jéem-na (***mu**) togg ginaar.
Xadi try-NA.3SG (*3SG.SUBJ) cook chicken
'Xadi tried to cook chicken.'

B. Preview of data and analysis

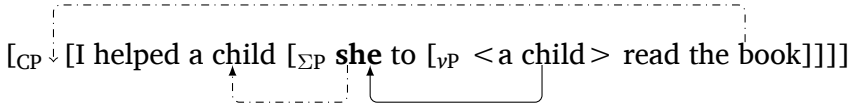
- This difference dovetails with other properties.

(21)

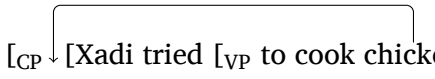
	Pronounced PRO	Ā-Resumption	Clitic climbing
Object control	✓	✓	*
Subject control	*	*	✓

- In order to account for these facts, I propose that object and subject control clauses differ in size and, furthermore, that object control clauses somehow make movement more difficult, though not impossible. An overt pronoun is a correction effect.

(19′) *Object control derivation*



(20′) *Subject control derivation*



- This analysis of object control is inspired by Lee's (2003) analysis of copy raising. There are empirical similarities between Wolof object control and copy control in San Lucas Quiaviní Zapotec.

3.1 Clitic climbing

A. Object and subject control differ with respect to clitic climbing.

- In object control, a clitic must stay inside embedded clause, while in subject control, it must climb into the matrix clause. The latter observation has already been made by Gowda & Wu (2020); Martinović (2021).
- As also observed by Martinović (2021), this difference suggests that subject control clauses can be analyzed in terms of restructuring (Wurmbrand, 1998, et seq.).

B. Object control: the clitic must stay inside the object control complement.

(22) a. Kadeer dimbali-na Mareem mu jënd=**ko**.
Kadeer help-NA.3SG Mareem 3SG.SUBJ buy=3SG.ACC
'Kadeer helped Mareem buy it.'

b. * Kadeer dimbali-na=**ko** Mareem mu jënd __.
Kadeer help-NA.3SG=3SG.ACC Mareem 3SG.SUBJ buy
Int.: 'Kadeer helped Mareem buy it.'

C. Subject control: clitic climbing is obligatory.

(23) a. * Maymuna fas-na jàng=**ko**.
Maymuna try-NA.3SG read=3SG.ACC
Int.: 'Maymuna wants to read it.'

b. Maymuna fas-na=**ko** jàng __.
Maymuna try-NA.3SG=3SG.ACC read
'Maymuna wants to read it.'

D. How to account for this difference?

- Subject control: restructuring, as already proposed by Gowda & Wu (2020); Martinović (2021).
  - Subject control clauses in Wolof are truncated, which is why a clitic can only find an appropriate host (the topmost projection of a verb phrase) in the matrix clause.
- Object control: cannot be as severely restructured.
  - They must be bigger than subject control clauses, so that clitic climbing is blocked.
  - But they must also be smaller than finite CPs because the clitic remains post-verbal. There does not seem to be an appropriate functional projection where the clitic can be hosted.

3.2 Resumptive pronoun with Ā-movement

A. Ā-resumption: occurrence of a clitic pronoun in the position where some phrase Ā-moves from.

(24) [$_{CP}$ *Wh* [SUBJ … (OBJ) [PRO … CL]]]
$\bar{A}$

B. If Ā-movement (*Wh* and clefting) proceeds from a control clause, the resulting sentence differs in each case.

- Object control: resumptive pronoun obligatory.
- Subject control: resumptive pronoun prohibited.

C. *Wh*-movement

(25) *Object control: resumptive pronoun obligatory*

a. K-an la jàngelekat b-i dimbali ndongo l-i
CM.SG-who FOC.OBJ teacher CM.SG-DEF help student CM.SG-DEF
dimbali mu nataal=**ko**?
help 3SG.SUBJ draw=3SG.ACC
'Who did the teacher help the student draw?'

b. * K-an la jàngelekat b-i dimbali ndongo l-i
CM.SG-who FOC.OBJ teacher CM.SG-DEF help student CM.SG-DEF
dimbali mu nataal?
help 3SG.SUBJ draw
Int.: 'Who did the teacher help the student draw?'

(26) *Subject control: resumptive pronoun prohibited*

a. * K-an la Roxaya d-oon jéem a nataal=**ko**?
CM.SG-who FOC.OBJ Roxaya IMPF-PST try INF draw=3SG.ACC
Int.: 'Who did Roxaya try to draw?'

b. K-an la Roxaya d-oon jéem a nataal?
CM.SG-who FOC.OBJ Roxaya IMPF-PST try INF draw
'Who did Roxaya try to draw?'

D. Clefting

(27) *Object control: resumptive pronoun obligatory*

Ginaar g-i la Maymuna dimbali Roxaya mu togg*(=**ko**).
chicken CM.SG-DEF OBJ.FOC.3SG Maymuna help Roxaya 3SG cook*(=3SG.ACC)
'The chicken, Maymuna helped Roxaya cook.'

(28) *Subject control: resumptive pronoun prohibited*

Ginaar g-i la Maymuna fas yéene togg(*=**ko**).
chicken CM.SG-DEF OBJ.FOC.3SG Maymuna want want cook(*=3SG.ACC)
'The chicken, Maymuna wanted to cook.'

4 Analysis

A. Summary of properties to account for: correlation of properties that can be related to complement clause size, as seen in §3:

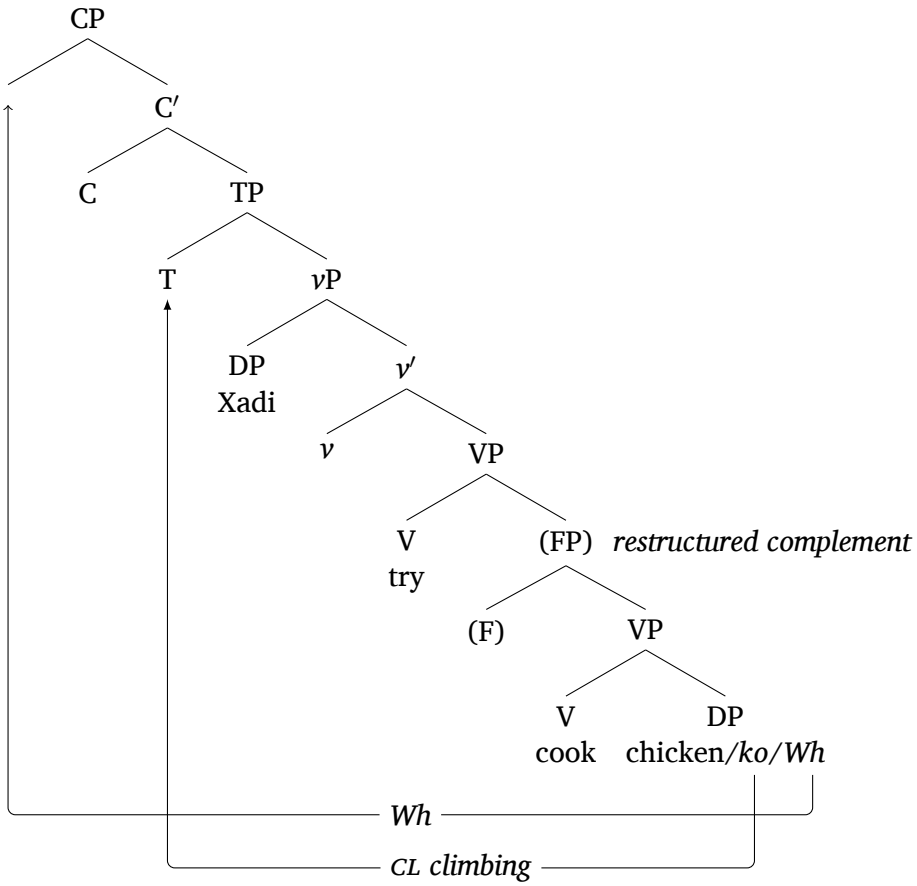
(29)

	Pronounced PRO	Ā-Resumption	Clitic climbing
Object control	✓	✓	*
Subject control	*	*	✓

B. How to **relate** these properties?

- Subject control: restructured complement (Gowda & Wu, 2020; Martinović, 2021).

(30) Xadi jéem-na togg ginaar.
Xadi try-NA.3SG cook chicken
'Xadi tried to cook chicken.'

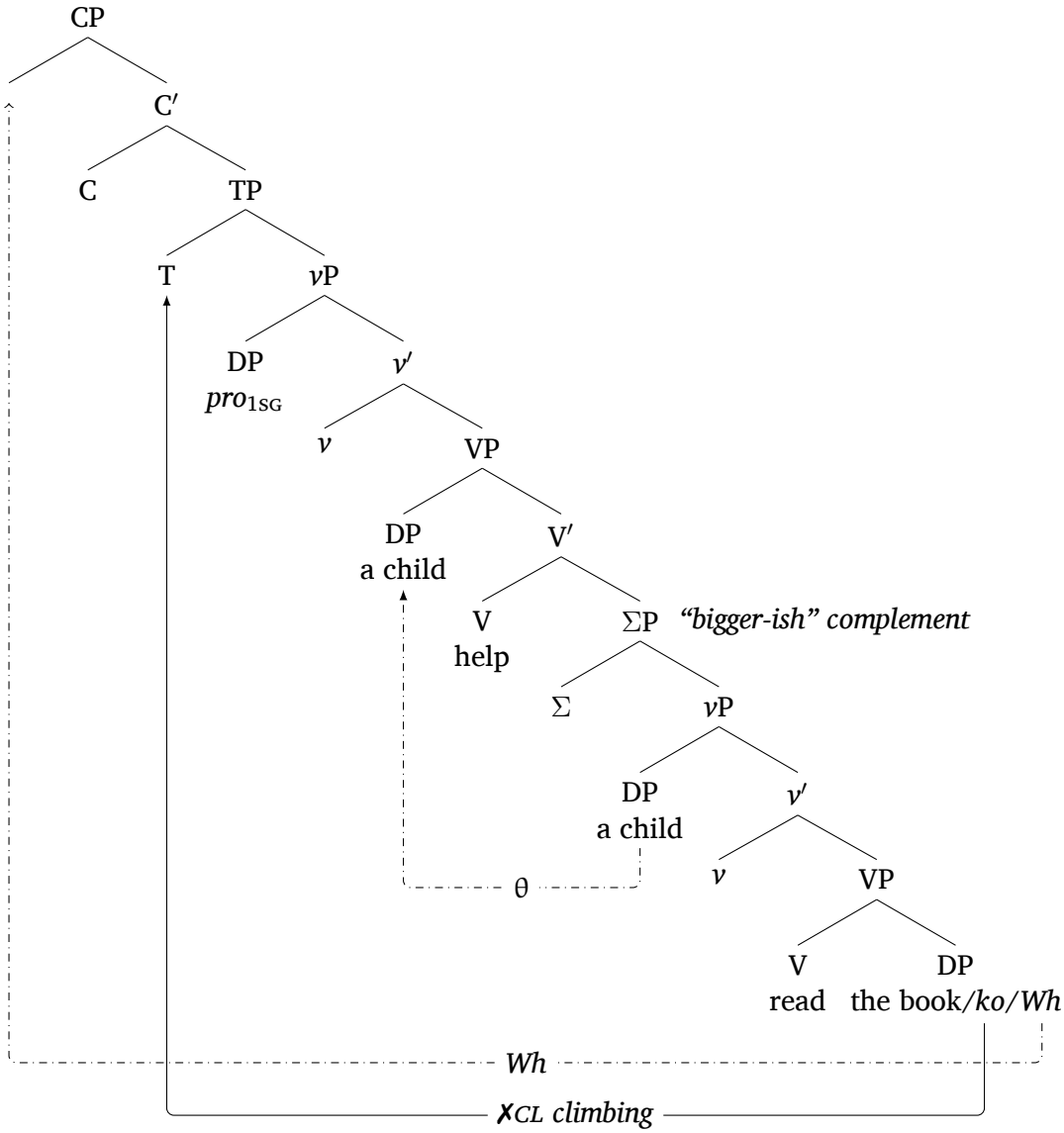


- Clitic climbing is obligatory because the only functional projection that can host the clitic is in the matrix clause.
- No Ā-resumption because the embedded clause is so small, it could not impede Ā-movement.
- Subject is obligatorily null because there is not enough for a subject.[8]

[8] Alternatively, the embedded clause is restructured and MTC-style A-movement (Hornstein, 1999) does not leave any overt residue (Martinović, 2021).

- Object control: complement clause is a ΣP, which is bigger than a restructured clause. ΣP is stipulated to somehow impede different types of movement.

(31) Dimbali-na-a a-b xale **mu** jàng téere b-i.
help-NA-1SG INDEF-CM.SG child 3SG.SUBJ read book CM.SG-DEF
'I helped a child read the book.'



  - Clitic climbing not possible because ΣP impedes movement and, for some reason, is not an appropriate host for a clitic, presumably because it is phonologically null.
  - Subject is an overt pronoun as a corrective effect of ΣP impeding A-movement through different thematic positions (Hornstein, 1999).[9]
  - Ā-resumption is a corrective effect of ΣP impeding Ā-movement.

[9] Martinović (2021) has already proposed a movement analysis for subject control in Wolof, though the author rejects that the structures analyzed here as object control are indeed instances of control. This cannot be the conclusion taken from §2.

- Pronoun cannot be accusative (see (46) above) because ΣP also somehow blocks accusative case assignment from a matrix source (*v* or a case competitor).

C. Evidence from binding for a bigger clausal structure in object control

- Evidence that object control clauses are bigger is provided by binding. A pronoun in this clauses can be coindexed with the matrix subject.

(32) a. Maymuna$_k$ wax-na Roxaya [mu xool=ko$_k$].
Maymuna say-NA.3SG Roxaya [3SG see=3SG.OBJ]
'Maymuna told Roxaya to look at her.'

b. Maymuuna$_k$ yey-na Roxaya [mu xool=ko$_k$].
Maymuna convince-NA.3SG Roxaya [3SG see=3SG.OBJ]
'Maymuna told Roxaya to look at her.'

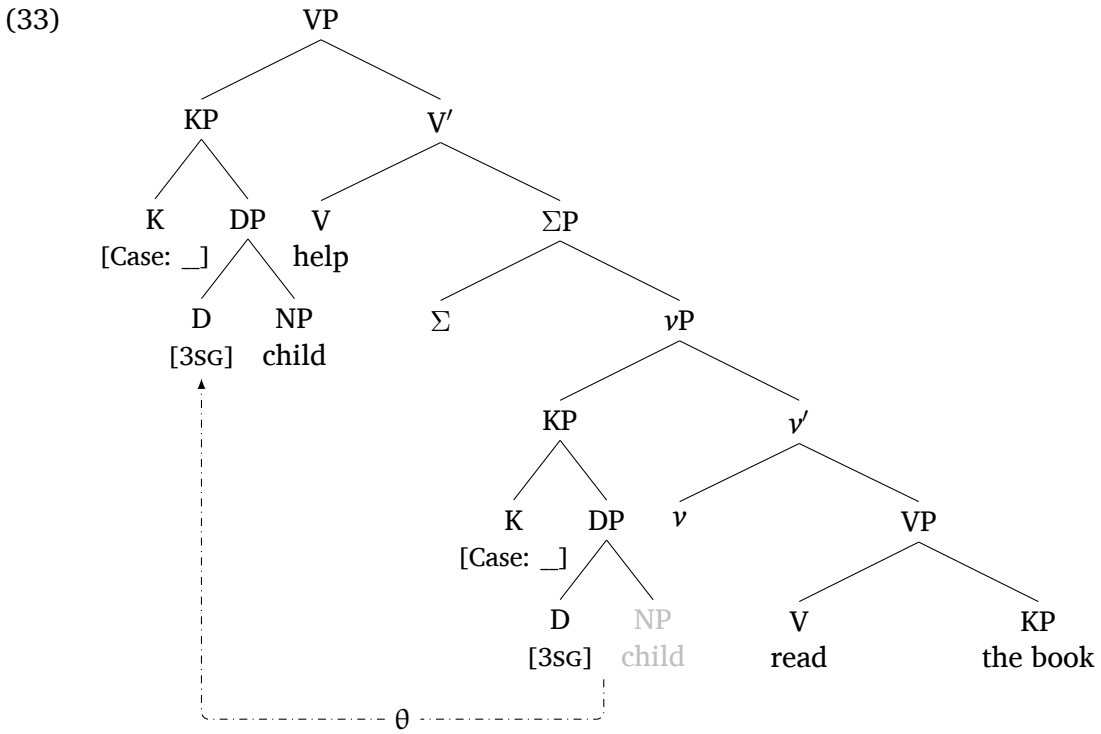
- This interpretive possibility suggests that the embedded clause is a binding domain that excludes the subject. Binding domains, in turn, are usually taken to be bigger structures which contain a subject and which are impervious to syntactic relationships like government.

D. Towards a formalization of pronounced PRO in Wolof

- As just mentioned, I propose that there is an overt pronoun in Wolof object control because ΣP impedes movement.
  - An analysis of the overtness of PRO as a consequence of the difficulty of A-movement (in the Hornstein 1999 sense) has already been proposed for copy control in SLQ Zapotec by Lee (2003).
- But why is exactly a pronoun pronounced in the embedded clause? I propose that the overt pronoun is a partially pronounced copy (Van Urk, 2018).
- More precisely, I assume that nouns have a complex structure where person features are represented at D. In partially pronounced copies, NP is deleted, but D survives. The exponence of D is a pronoun.[10]

[10]Yadav Gowda (p.c.) and Tom Meadows (p.c.) ask what happens if the controller it itself a pronoun. Tentatively, I suggest that either pronouns have a more complex structure, so that the result of deleting some layers is still exponable as a pronoun or that a pronoun is already a reduced structure, so that it is exempt from undergoing further reduction.

(33)



E. Advantages of the analysis proposed

- It relates Ā-resumption and the overtness of the PRO in Wolof object control.
  - Both are resumptive pronouns that emerge as a corrective effect to the movement impediment imposed by ΣP.
  - It seems undesirable to treat the co-occurrence of these properties in the same construction (Wolof object control) as coincidental.
- It allows for Wolof object control to be related to copy control, as it is found in San Lucas Quiaviní Zapotec.
  - In the analysis proposed here and that proposed by Lee (2003) for San Lucas Quiaviní Zapotec, the pronounced PRO (a subject pronoun in Wolof, a full copy in Zapotec) is the residue of "difficult movement".

5 Discussion and future work

A. Answers provided to questions this project was motivated by:

(34)
i. Why is there a difference between subject and object control in Wolof?
ii. Why is the controlled subject in object control a pronounced pronoun?
iii. Can object control in Wolof help tease apart control theories with respect to the phonological properties of PRO (see typology in (3))?

- There is a difference between subject and object control because they have different sizes.
- The controlled subject in object control is pronounced because it is a residue of movement that has been impeded.

B. Control theory typology and they fare *wrt* Wolof

- Recall the different theories of control regarding the phonological matrix of PRO:

  (35) *Control theory typology*
  i. Inherent theories: the phonological nullness of PRO is an inherent property.
  ii. Derivational theories: the phonological nullness of PRO is acquired during the derivation.
  iii. Arbitrary theories: PRO can be phonologically null, though this is not a definitional property.

- Derivational theories: this is exactly what I adopted here, specifically, the MTC (Hornstein 1999 et seq.).
  - This type of theory can account not only for the pronunciation of PRO in Wolof object control, but crucially, for why it correlates with Ā-resumption.
  - As we are going to see below, the present analysis rounds out the typology of control as movement and relates it to the typology of Ā-movement.
- Inherent theories: it cannot be the case that PRO is always inherently null, given object control in Wolof.
  - A related control theory could posit that the overt pronoun in Wolof is a lexicalized PRO that is inherently overt.
- Arbitrary theories: these theories offer some flexibility in the pronunciation of PRO.
  - But again they *may* fail to capture the correlation between a pronounced PRO and Ā-resumption.
  - A general question that can be asked about is why, to the best of knowledge, PRO is silent in the majority of languages. This is not expected if phonological nullness is an arbitrary property.

C. Loose end: in what sense does ΣP **impede** movement?

- Maybe ΣP is a horizon (Keine, 2019)?
- Everything inside a horizon (including its edge) is opaque to higher probes. The resumptive pronoun is the "price" paid for crossing a horizon.

D. The typology of movement, considering the copy theory of movement.

- Ā-movement: four linearization possibilities

  (36) *Only higher copy is pronounced (English)*
  What did Yuwei eat < what > for breakfast?

  (37) *Lower copy is pronounced (covert* Wh*-movement; Mongolian)*
  < yu > Bat **yu** id-sen be?
  Bat what eat-PST Q
  'What did Bat eat?'

(38) *Multiple copy pronunciation (German)*

Wem glaubst du **wem** deine Eltern vertrauen?
who.DAT believe you who.DAT your parents trust
'Who do you think your parents trust?'

(39) *Lower copy is partially pronounced (pronoun copying; Dinka)*

Yè **kɔ̂ɔc-kò** cɻ̈i Bôl **ké** tɻ̈iŋ?
be.3SG people-which PRF.OV Bol.GEN 3PL see.NF
'Which people has Bol seen?'

(Van Urk, 2018, (12c))

- Control as A-movement: the same four possibilities.

(40) *Only higher copy is pronounced (English)*

Lasha convinced **Sindhu** [< Sindhu > to run a marathon].

(41) *Lower copy is pronounced (backwards control; Tsez)*

< kidbā > [**kidbā** ziya bišra] yoqsi.
[girl.ERG cow.ABS feed.INF] began
'The girl began to feed the cow.'

(Polinsky & Potsdam, 2002, (2))

(42) *Multiple copy pronunciation (copy control; SLQ Zapotec)*

R-cààa'z **Lia Paamm** [g-ahcnèe **Lia Paamm** Gye'eihlly].
HAB-want FEM Pam [IRR-help FEM Pam Mike]
'Pam wants to help Mike.'

(Lee, 2003, (62), adapted)

(43) *Lower copy is partially pronounced (object control; Wolof)*

Dimbali-na-a **a-b** **xale mu** jàng téere b-i.
help-NA-1SG INDEF-CM.SG child 3SG.SUBJ read book CM.SG-DEF
'I helped a child read the book.'

  - Wolof object control is exactly as expected if we assume the copy theory of movement and couple it with MTC.

E. Future work

- Compare Wolof pronounced PRO with its counterpart in other languages.
- Work with more consultants to strengthen empirical generalizations.

A Morphosyntactic properties of the embedded subject in object control

A. Properties of the pronoun in Wolof object control

- It is obligatory.

- It is a subject or nominative pronoun.
- It cannot be accusative.
- It cannot be replaced with a full DP.

B. The pronoun that appears in object control comes from the subject or nominative paradigm.

(44)

	Object clitics	**Oblique pronouns**	**Subject markers**
1SG	ma	man	(m)a
2SG	la	yaw	nga/ya
3SG	ko	moom	Ø/(m)u
1PL	ñu	ñoom	ñu
2PL	leen	yeen	ngeen/yeen
3PL	leen	ñoom	ñu

(adapted from Zribi-Hertz & Diagne 2002, (29))

C. As we have already seen, this pronoun is obligatory.

(45) a. * Dimbali-na-a a-b xale jàng téere b-i.
help-NA-1SG INDEF-CM.SG child read book CM.SG-DEF
Int.: 'I helped some child read the book.'

b. * Dimbali-na-a a-y xale jàng téere b-i.
help-NA-1SG INDEF-CM.PL child read book CM.SG-DEF
Int.: 'I helped some children read the book.

D. It cannot be replaced with an accusative pronoun.

(46) a. * Dimbali-na-a a-b xale=**ko** jàng téere b-i.
help-NA-1SG INDEF-CM.SG child=3SG.ACC read book CM.SG-DEF
Int.: 'I helped some child read the book.'

b. * Dimbali-na-a a-y xale=**leen** jàng téere b-i.
help-NA-1SG INDEF-CM.PL child=3PL.ACC read book CM.SG-DEF
Int.: 'I helped some children read the book.

- The ill-formedness of the sentences in (46) also rule out the possibility that the constructions under investigation are instances of ECM.

E. It cannot be replaced with a lexical DP.

(47) a. * Dimbali-na-a a-b xale **yaay**=**am** jàng téere b-i.
help-NA-1SG INDEF-CM.SG child mother=POSS.3SG read book CM.SG-DEF
Int.: 'I helped some child for his mother to read the book.'

b. * Dimbali-na-a a-b xale **Roxaya** jàng téere b-i.
help-NA-1SG INDEF-CM.SG child Roxaya read book CM.SG-DEF
Int.: 'I helped some child for Roxaya to read the book.

- Besides the questions in (11), we may also wonder why a nominative pronoun may be licensed in object control, but a full nominal cannot.

B Obligatory correference

A. Obligatory control PRO should be obligatorily coreferent with a local and c-commanding antecedent, which acts as its controller.

- The pronoun that occurs in object control cannot have its interpretation established in the discourse.

  (48) # Bu dee **Mareem** moom, *pro* dimbali-na-a Mbaye **mu** bind
  BU DEE Mareem 3SG.OBL 1SG help-NA-1SG Mbaye 3SG.SUBJ write
  a-b taalif.
  INDEF-CM.SG poem
  Lit.: 'As for Mareem, I helped Mbaye write a poem.'

- The antecedent of the embedded pronoun in object control sentences must be the matrix object (i.e. it cannot be the matrix subject).

  (49) a. * ***pro***$_k$ Dimbali-na-a Sàmba **ma**$_k$ togg ginaar g-i.
  1SG help-NA-1SG Sàmba 1SG cook chicken CM.SG-DEF
  Lit.: 'I helped Sàmba for me to cook the chicken.'

  b. *pro* Dimbali-na-a **Sàmba**$_k$ **mu**$_k$ togg ginaar g-i
  1SG help-NA-1SG Sàmba 3SG.SUBJ cook chicken CM.SG-DEF
  'I helped Sàmba cook the chicken.'

- Finally, the antecedent must c-command the pronounced pronoun:

  (50) a. Dimbali-na-a [$_{DP}$ rakk-u Roxaya ak Faatu]$_k$ **mu**$_k$ jàng téere
  help-NA-1SG [sister-LNK Roxaya with Faatu] 3SG.SUBJ read book
  b-i.
  CM.SG-DEF
  'I helped [Roxaya and Faatu]'s sister read the book.'

  b. * Dimbali-na-a [$_{DP}$ rakk-u Roxaya ak Faatu$_k$] **ñu**$_k$ jàng téere
  help-NA-1SG [sister-LNK Roxaya with Faatu] 3PL.SUBJ read book
  b-i.
  CM.SG-DEF
  Int.: 'I helped [Roxaya and Faatu]'s sister, so that Roxaya and Faatu would read the book.'

  - These data also show that the number of the antecedent and that of the pronoun must match.

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