# Control is not raising: evidence from overt split control in Ewe

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# Introduction

Linguists originally drew a distinction between the two sentences below:

(1) Norbert$_i$ tried to PRO$_i$ argue that control is movement. (control)

(2) Norbert$_i$ seems $t_i$ to argue that control is movement. (raising)

Since Hornstein (1999), many have assumed that there is no distinction, apart from control structures involving movement into a θ-position.

# Split control

In this approach, it's difficult to derive split control, found with verbs of proposal and communication (Landau (2013)).

(3) Trump$_i$ told Cohen$_j$ PRO$_{i+j}$ to pay off the porn star together.

Prima facie, there doesn't seem to be a way to move *Trump* and *Cohen*.
One solution for split control in Fujii (2006) does allow for movement without violating the MLC, via pied-piping. Can this, or Boeckx et al. (2010)'s updated solution, derive the facts seen in Ewe?

# Analysis

- I argue that the so-called logophoric pronoun *yé* is actually a non-logophoric overt PRO in nonfinite position (at least in the Anlo dialect of Ewe). Therefore, contra Clements (1975), *yé* in Anlo Ewe is a new kind of pronoun, which I call a *left-periphery bound pronoun*.
- In principle, the control as movement approach could account for the problems presented here. However, the additional assumptions needed to account for them would merely redescribe the facts and would not provide insight to what is going on. They would not be independently motivated.

# Analysis

- Finally, I argue for a synthesis of two separate approaches to logophoric pronouns and OC PRO.
- For Clements (1975), Pearson (2015), the logophoric pronoun is bound by an abstraction operator in the left periphery of the embedded clause.
- For Chierchia (1990), OC PRO is bound by an abstraction operator in the left periphery clause, as well.
- I argue that we have empirical evidence for a synthesis of these approaches given the phonetic identity between OC PRO and the logophoric pronoun: they are both *yé*.

# Logophoric pronouns

The logophoric pronoun refers to the individual whose thought or speech is reported in a given context (Clements (1975)).

(4) a. Kofi$_i$ be yè$_{i/*k/*s}$ dzo.
Kofi say LOG leave
'Kofi$_i$ said he$_i$ left.'

b. Kofi$_i$ be e$_{*i/k/*s}$ dzo.
Kofi say he leave
'Kofi$_i$ said he$_k$ left.'

c. Kofi$_i$ be me$_{*i/*k/s}$ dzo.
Kofi say I leave
'Kofi said I left.'

In Ewe, *yè* can only appear after the complementizer *be*. It has 3rd person features.

# Two similar pronouns

Apart from the logophoric pronoun *yè*, there is also the focus pronoun *yé*:

(5) Mango-nye-wo (yé) Kofi du.
mango-1SG-PL FOC Kofi eat
'Kofi ate [my mangoes]$_F$.'

They have different tones, so we know which one we're dealing with. There is also the strong pronoun *ye*, which has no tone:

(6) ye$_i$/*yè$_i$ wo vidyidyi-a dzo dyi na Ama$_i$.
PRO/LOG GEN child-bearing-D straighten heart to Ama
'Her$_i$ having a child made Ama$_i$ happy.'

This presentation focuses only on the logophoric pronoun.

# Logophoric pronouns need not be read *de se*

Pearson (2015) shows that, contrary to assumptions by Heim (2002) among others, *yè* need not be read *de se*. Below is my own example of the de re reading noted by Pearson.

(7) Scenario: Kofi is taking his dog out for a walk, and his dog constantly poops on the ground, but Kofi doesn't realize it. There are other people walking their dogs down the same path. He starts to walk back to his home, and he sees the trail of poop that he made on the ground. He gets very angry at whoever did this (but doesn't realize that it was him). He thinks whoever this guy is, he is stupid.

a. Kofi bou be yè nyi honvi. (Kofi thinks he is stupid.)

# Yè in Spec,nonfinite TP

- It has not been examined in the specifier of a nonfinite clause.
- It is in the form *yèa* (optionally *ya*). *-a* is the irrealis marker.
- All control infinitives have an irrealis mood (Stowell (1982)).

(8) Agbe$_i$ djagbagba/nlobe/dzina/vovom/wosumu/dzi/susum
Agbe try/forget/want/afraid/decide/like/intend
be yè$_i$-a dzo.
COMP LOG-IRR leave
'Agbe$_i$ tried/forgot/wanted/is afraid/decided/likes/intends PRO$_i$ to leave.'

(9) Kofi$_i$ djagbagba/nlobe/dzina/vovom/wosumu/dzi/susum
Kofi try/forget/want/afraid/decide/like/intend
be yè$_i$-a kpo dzidzor.
COMP LOG-IRR experience happiness
'Kofi$_i$ tried/forgot/wanted/is afraid/decided/likes/intends PRO$_i$ to be happy.'

# Ewe doesn't have covert PRO

You can't leave a gap instead of the logophoric pronoun, in any sentence with *...be yèa...*:

(10) *Agbe$_i$ djagbagba be $\emptyset_i$ a dzo.
Agbe try COMP $\emptyset$ IRR leave
'Agbe$_i$ tried PRO$_i$ to leave.'

This means that it doesn't involve movement with a trace or covert PRO (but it could still involve movement with resumptive pronouns).

# Yèa is read as a bound variable

It's been noted that PRO is interpreted as a bound variable (Landau (2013)):

(11) Ame adeke me be yè-a dzo o.
person no-one NEG1 COMP LOG-IRR leave NEG2
'No one said to leave.'

(12) Ame adeke me djagbagba be yè-a kpo
person no-one NEG1 try COMP LOG-IRR experience
dzidzor o.
happiness NEG2
'No one tried to be happy.'

# Yèa must be read *de se*

Chierchia (1990) first noted that PRO must be read *de se*. This context and sentence is from Hornstein (1999), translated:

(13) Kofi is a war hero who suffers from amnesia and remembers nothing of his wartime experiences. Suppose this person sees a TV program describing his own exploits, and is impressed with the courage exhibited by that person, who he does not know is himself. Kofi comes to believe that the hero will win a medal.

a. Kofi$_i$ emo kpom be yè$_i$-a$_{\text{de se/*de re}}$ ho kplu.
Kofi expect see COMP LOG-IRR COP medal
'Kofi$_i$ expects PRO$_i$ to get a medal.'

# Yèa must be c-commanded

(14) [Agbe$_k$ fe velia-wo]$_i$ djagbagba be yè$_{i/*k}$-wo dzo.
Agbe GEN friend-PL try COMP LOG-PL leave
'Agbe's friends tried to leave.'

(15) [Kofi$_k$ fe dzila-wo]$_i$ wosusu be yè$_{i/*k}$-wo ho ekplu
Kofi GEN parent-PL decide COMP LOG-PL COP medal
'Kofi's parents decided to get a medal.'

# Yèa cannot usually have a long-distance antecedent

It's been well-known that finite yè can have long-distance antecedents (ex. Clements (1975), Pearson (2015)). Yèa cannot.

(16) Agbe$_j$ kadedzi be Kofi djagbagba be yè$_{i/*j}$-a kpo
Agbe believe COMP Kofi try COMP LOG-IRR experience
dzidzor.
happiness
'Agbe believes that Kofi tried to be happy.'

(17) Agbe$_j$ be Kofi dzi-be yè$_{i/*j}$-a yide sukuu.
Agbe COMP Kofi want-COMP LOG-IRR go-to school
'Agbe said that Kofi wants to go to school.'

It can only in the case of *promise*.

# Inanimate control is possible

This is the big one, because *yè* can't have inanimate referents in finite clauses (see Clements (1975), Pearson (2015)). Even in English, there is a sense in which the sentences below don't involve personification and are still grammatical:

(18) Emo$_i$ djagbagba be yè$_i$-a dzegome.
Machine try COMP LOG-IRR start
'The machine tried to reboot.'

(19) Emo$_i$ wosumu be yè$_i$-a dzudzu.
Machine decide COMP LOG-IRR stop
'The machine decided to stop.'

It's difficult to find genuine examples of inanimate control in Ewe due to it having SVCs (I can't use "John forced the car to stop").

# Inanimate control is possible

The sentence below is fine. Usually, a sentence like this would be analyzed as a raising construction due to inanimates, but as we'll see, Ewe doesn't seem to have raising (no pun intended).

(20) Ati-$a_i$ dzegome/dzudzo/yidzi be yè$_i$-a nge.
Tree-NOM begin/stop/resume COMP LOG-IRR break.
'The tree$_i$ began/stopped/resumed PRO$_i$ to break.'

If we follow Charnavel & Sportiche (2016) in using inanimacy as a test for logophoricity, this would mean that *yè* is not actually a logophoric pronoun.
This result might lead to controversy. An anonymous reviewer claimed that the Ewe speakers they asked did not like this sentence. But based on an ongoing survey of Anlo Ewe speakers, this sentence is good for speakers in Anlo Ewe.

# Only sloppy reading under ellipsis

(21) Kofi$_i$ djagbagba be yè$_i$-a fle agbale afi Agbe.
Kofi try COMP LOG-IRR buy book before Agbe
'Kofi tried to buy a book before Agbe ~~tried to buy a book~~. (sloppy reading only)'

(22) Kofi$_i$ be yè$_i$ fle agbale afi Agbe.
Kofi COMP LOG buy book before Agbe
'Kofi said he bought a book before Agbe ~~said he bought a book~~. (both sloppy and strict readings available)'

# Summary

| Properties | Finite yè | Nonfinite yè | OC PRO |
|---|---|---|---|
| Phonetically overt | ✓ | ✓ | ✗ |
| Has $\phi$-features | ✓ | ✓ | ✗ |
| Must be c-commanded | ✓ | ✓ | ✓ |
| Must be read *de se* | ✗ | ✓ | ✓ |
| Long-distance antecedent? | ✓ | ✗ | ✗ |
| Bound variable | ✓ | ✓ | ✓ |
| Inanimate reading? | ✗ | ✓ | ✓ |
| Sloppy reading only | ✗ | ✓ | ✓ |

# Finiteness

Nonfinites cannot be progressive; nonfinites license NPIs.

(23) a. Kofi$_i$ be yè$_i$ dzo dzo-m.
Kofi COMP LOG leave RED-PROG
'Kofi said he left (was leaving).'

b. *Kofi$_i$ be yè$_i$-a dzo dzo-m.
Kofi COMP LOG-IRR leave RED-PROG
'(lit. Kofi$_i$ said PRO$_i$ to leave (*leaving).)'

(24) a. *Kofi$_i$ me-be yè$_i$ dzo o.
Kofi NEG1-COMP LOG leave NEG2
'Kofi said he left (was leaving).'

b. Kofi$_i$ me-be yè$_i$-a dzo o.
Kofi NEG1-COMP LOG-IRR leave NEG2
'(lit. Kofi$_i$ said PRO$_i$ to leave (*leaving).)'

# Object control

Since Ewe has SVCs, object control is usually not possible, apart from verbs like *persuade* or *pressure*. We see the form *ne*, the pronoun for jussive mood in Ewe.

(25) $\text{Agbe}_i$ ble $\text{Fafa}_k$ nu be $\text{ne}_k$ fo ntsu-a.
Agbe persuade Fafa nu COMP JUSS beat man-DEF
'$\text{Agbe}_i$ persuaded $\text{Fafa}_k$ $\text{PRO}_k$ to beat the man.'

Jussive mood involves issuing orders.

# *Promise*

We get subject control with *promise*, as expected.

(26) Agbe$_i$ do englugble ne Fafa$_k$ be yè$_i$-a fo ntsu-a.
Agbe make promise to Fafa COMP LOG-IRR beat man-DEF
'Agbe$_i$ promised Fafa$_k$ PRO$_i$ to beat the man.'

Split control is also a possibility.

(27) Agbe$_i$ do englugble ne Fafa$_k$ be [yè$_i$-wo meve
Agbe make promise to Fafa COMP LOG-PL two+person
yè$_k$-wo]$_{i+k}$ fo ntsu-a.
LOG-PL beat man-DEF
'Agbe$_i$ promised Fafa$_k$ PRO$_i$ to beat the man.'

# No partial control

Mysteriously, Ewe doesn't have partial control.

(28) *Agbe$_i$ do englugble ne Fafa$_k$ be yè$_{i+}$-wo fo ntsu-a.
Agbe make promise to Fafa COMP LOG-PL beat man-DEF
'Agbe$_i$ promised Fafa$_k$ PRO$_{i+}$ to beat the man.'

# Problems for the control as movement approach

- There seems to be a raising vs. control contrast in Ewe.
- Can it derive split control in Ewe?
- Can't explain why the resumptive control pronoun and the logophoric pronoun have the same phonetic form.

# Does Ewe have raising?

I haven't been able to find a single instance of raising in Ewe. If control the same thing as raising, then this is not expected. If a language has control but no raising, then they're not the same.

(29) Ati-$a_i$ dzegome/dzudzo/yidzi be yè$_i$-a nge.
Tree-NOM begin/stop/resume COMP LOG-IRR break.
'The tree$_i$ began/stopped/resumed PRO$_i$ to break.'

(30) *E dzegome/dzudzo/yidzi be ati-$a_i$ nge.
It begin/stop/resume COMP tree-NOM break.
'It began/stopped/resumed (for) the tree to break.'

# Does Ewe have raising?

There's a clear contrast with *seem*. The expletive construction is fine, but the one involving raising or the controlled pronoun is not. *Seem* in Ewe only takes finite embedded clauses, however.

(31) a. E wo be ati-a nge.
It seem COMP tree-NOM break
'It seems the tree broke'

b. *Ati-$a_i$ wo be $t_i$ nge.
Tree-NOM seem COMP break
'The tree seems to be breaking.'

c. *Ati-$a_i$ wo be yè$_i$ nge.
Tree-NOM seem COMP LOG break
'The tree seems to be breaking.'

# Does Ewe have raising?

In his work on Buli on overt control, Abdul-Razak Sulemana points out that one such predicate is *right* or *appropriate*. But this doesn't work in Ewe either.

(32) *Agbe nyo be yè$_i$-a na yi sukuu.
Agbe right COMP LOG-IRR ? go school
'Agbe is right to go to school.'

(33) E nyo be Agbe na yi sukuu.
It right COMP Agbe ? go school
'It is right for Agbe to go to school.'

# Raising 1

There are two ways out of this sort of problem. We can either make the assumption that Ewe allows control via movement if there are θ-roles involved. Raising, movement with one θ-role, is just banned.
There are two problems with this. First, it's an *ad hoc* assumption. Second, it seems to be empirically false. Ewe has unaccusatives, as Collins & Branigan (1997) points out, which involve movement from a θ-role position to the subject:

(34) Kofi dzo.
Kofi leave
'Kofi left.'

Why shouldn't raising be blocked? We would need another *ad hoc* assumption to rule this out.

# Raising 2

We might "bite the bullet" and say that control is not movement... only in Anlo Ewe (Hornstein, p.c.). This might be because Anlo Ewe is a language without A-movement, and it has to resort to some operation to establish the same thing.
There are two problems with this. First, this is *ad hoc*; we want our theory of control to be the same in every language. Second, Ewe does seem to have A-movement because it has unaccusatives.

# Nonfinite *yè* is obviously not resumptive

- Why should the finite and nonfinite have the exact same phonetic form, down to the tone?
- According to the control as raising account, this is a complete coincidence, but we know it's not. We already have the tools to derive this similarity.
- The control as raising account is fundamentally unable to account for the similarities between the finite and nonfinite *yè*.
- In my approach, the answer is simple: in PF, *yè* is obtained when it's bound by an operator in the left periphery.
- Instead of looking for similarities between control and raising, why not look for similarities between control and logophoric pronouns in other African languages?

# Split control

(35) Agbe$_i$ do englugble ne Fafa$_k$ be [yè$_i$-wo meve
Agbe make promise to Fafa COMP LOG-PL two+person
yè$_k$-wo]$_{i+k}$ fo ntsu-a.
LOG-PL beat man-DEF
'Agbe$_i$ promised Fafa$_k$ PRO$_i$ to beat the man.'

In this case, OC PRO has the following structure:

(36) yè$_i$-wo meve yè$_k$-wo
LOG-PL two+person LOG-PL

*Meve* originates from coalescence between two words, *wome* and *eve* which mean *two* and *person*, respectively, Also, the complex pronoun is an external argument of the embedded verb.

# Split control

- Each of the pronouns refer to one of the controllers. Together, the entire complex pronoun refers to both of the controllers.
- The structure *Agbe meve Fafa* is ungrammatical.
- *Meve* is some kind of word that can only be used with pronouns.

(37) Wo meve wo fo ntsua.
3PL two+men 3PL beat man
'They beat the man.'

(38) Agbe kple/*meve Fafa fo ntsua.
Agbe and/two+men Fafa beat man
'Agbe and Fafa beat the man.'

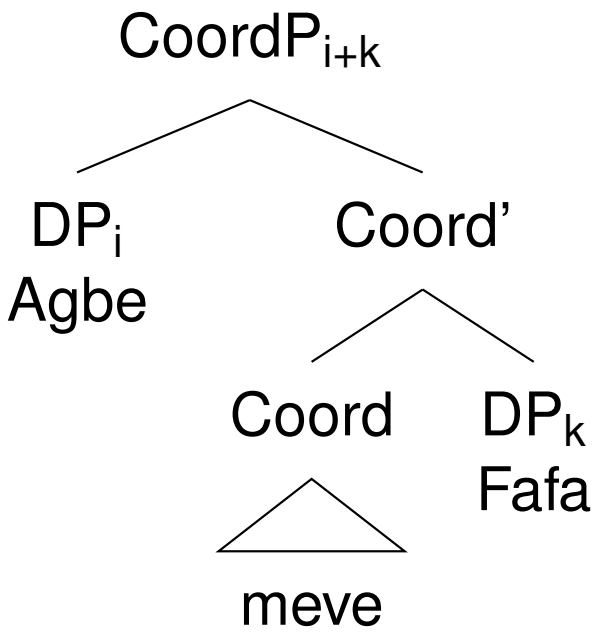
# Split control

In the control as movement approach, *yè* would be analyzed as a resumptive pronoun, and the names would be base-generated. But this is just ungrammatical in Ewe.

(39) *[Agbe$_i$ meve Fafa$_k$]$_{i+k}$

Here is one attempt at a structure (though this is not crucial to my analysis).

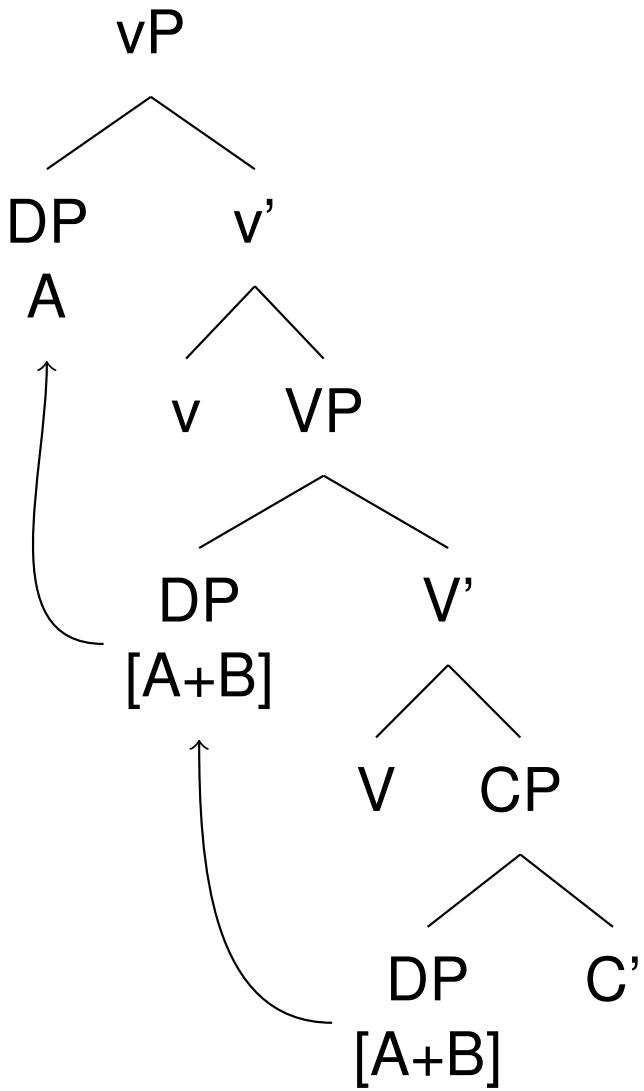
(40) *



# Split control

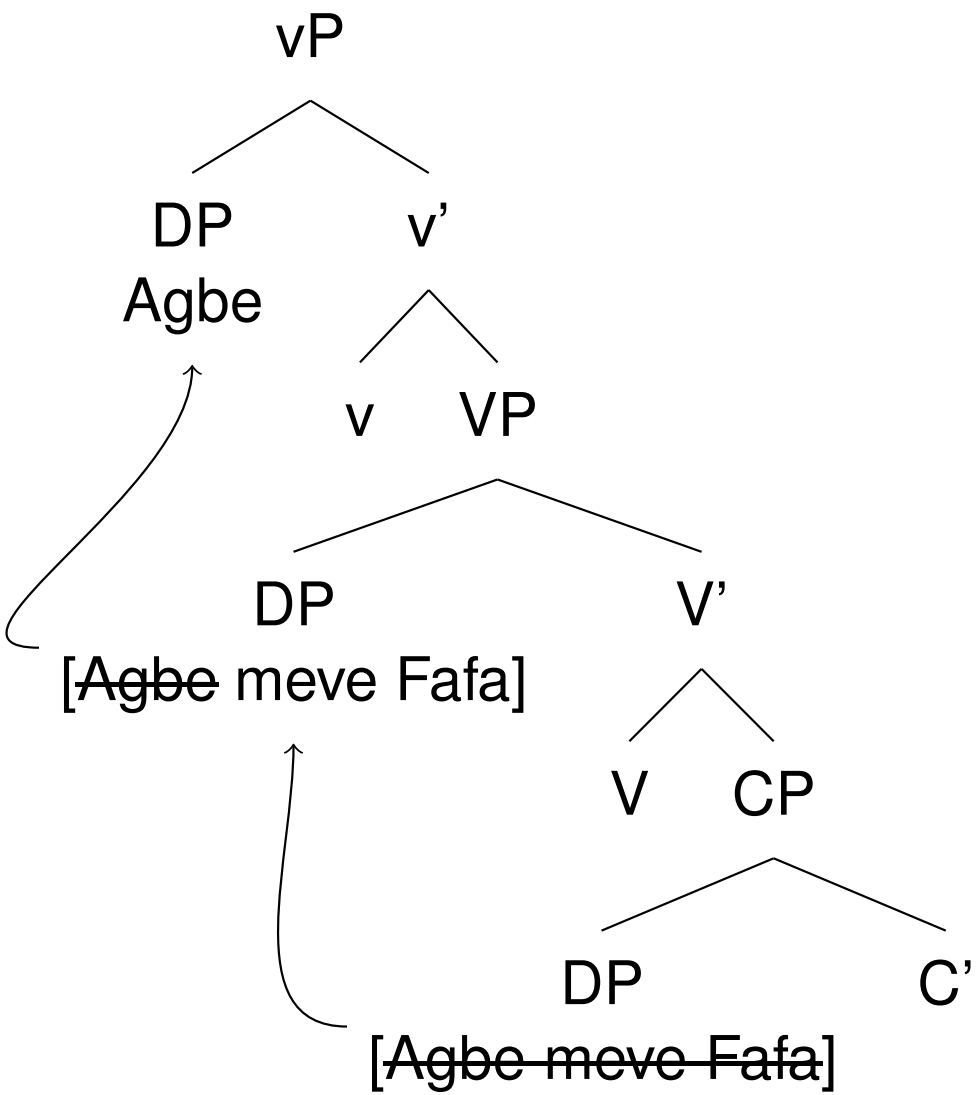
The solution to split control in Fujii (2006) involves pied-piping as follows.

(41)



# Split control

(42)



# Split control

- What happens to *meve*? It's not a resumptive pronoun. So why doesn't it move up together with *Fafa*, as well?
- Why don't we see three resumptive pronouns instead of two? Why are there no resumptive pronouns in the middle of the tree? And why don't we see raising?
- We'd have to try and account for this tree with some additional assumptions about how the pronouns are spelled out. Why is this phonetic form not preferred:

(43) *Agbe$_i$ do englugble yè meve Fafa$_k$ be fo ntsu-a.

# Split control

- A lot of additional assumptions would be needed to get the right PF form. Is it possible? Yes, but that would merely be an *ad hoc* solution.
- Admittedly, I'm having a lot of trouble untangling the structure of *yo meve yo*. It's not like *and*.
- *meve* is the combination of two words, *wome* and *eve*. *wome* is man, *eve* is two.
- *meve* is used when there are two people involved. As far as I know, other words cannot be combined like this (three man is not one word like *meve*).
- It might have a structure like *these two of us* in English (Jonathan Bobaljik, p.c.). I have no idea where to even start. Does this look like anything else that has been studied?

# Solution

The logophoric pronoun and the control pronoun have the same phonetic form is because they're both bound by the very same operator (potentially *be*).

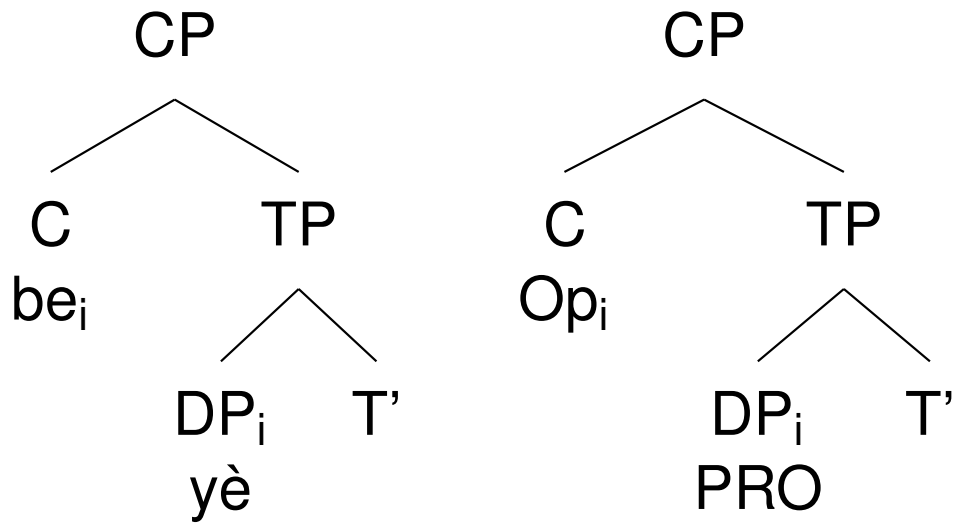
- The usual approach to logophoric pronouns (ex. Anand (2006)): they're bound by an operator in the left periphery of the embedded clause.
- Chierchia (1990)'s approach to OC PRO: bound by an operator in the left periphery of the embedded clause.

Heim (2002), among others, have already made this suggestion. All I've done is find empirical evidence for a synthesis of these two approaches.

# Solution

Since they only occur after *be*, it could be that they're both bound by *be*. I assume a similar syntactic structure to Anand (2006)'s.

(44)




However, unlike Anand (2006) and Heim (2002), given the existence of inanimate control I argue that this operator need not be in the left periphery of an attitudinal embedded clause.

# Animacy

- Why is nonfinite *yè* not logophoric? Why is finite *yè* logophoric?
- In the Heim (2002) approach, a [log] feature is transferred from the attitude predicate to the logophoric pronoun or OC PRO and this requires it to be bound by the abstraction operator.
- Given that inanimate control exists, this can't be the entire story. I leave this open for future research.
- One conclusion from this data that I would like to argue for, however, is that *yè* is not a logophoric pronoun in Anlo Ewe. It is a new kind of pronoun that merely has to be bound in the left periphery of the embedded clause. I call this a *left-periphery bound pronoun*. This accounts for its phonetic form.

# Why no long-distance reading?

- Another problem that remains is why nonfinite *yè* does not allow long-distance antecedents, unlike finite *yè*.
- Pearson (2015) argues that this has something to do with PRO not having $\phi$-features.
- This is clearly not correct, because nonfinite *yè* has $\phi$-features.
- This might simply be because long-distance antecedents are licensed by the [+log] feature. Because nonfinite *yè* is underspecified for animacy, it cannot have *de re* readings or long-distance antecedents. Concept generators require animacy.

# More work needs to be done

I've just shown one level of control. I still haven't accounted for syntactic agreement between the controller and PRO. Landau is right to point out this problem in his criticism of the Chierchia approach:

(45) [Agbe$_k$ fe velia-wo]$_i$ djagbagba be yè$_{i/*k}$-wo dzo.
Agbe GEN friend-PL try COMP LOG-PL leave
'Agbe's friends tried to leave.'

But the approach to control in this presentation isn't meant to be a complete theory of control. I think control has to involve the operation Agree in the narrow syntax at some point.

# Conclusion

- I've argued that the logophoric pronoun in the Anlo dialect of Ewe is actually an overt PRO in nonfinite subject position; it's not a logophoric pronoun, as previously thought.
- Both control and logophoricity involve binding by an abstraction operator in the left periphery of the embedded clause.
- It might be worthwhile to investigating what control and logophoric pronouns have in common.
- Many other problems remain untouched (lack of partial control, etc.)
- Thank you!

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