Control is not Movement: evidence from overt PRO in Ewe[*]

Deniz Satık, Harvard University

deniz@g.harvard.edu

This paper presents novel data from the Anlo dialect of Ewe to show that logophoric pronouns have the properties of PRO in the subject position of nonfinite clauses, rather than the properties of logophoric pronouns. Given the overt nature of PRO in this dialect, this paper sheds light on control phenomena such as partial and split control that are invisible in other languages. This paper presents four main arguments against Hornstein (1999)'s control as A-movement: partial control exists, contra Boeckx et al. (2010); split control cannot be derived via A-movement, contra Fujii (2006); Ewe has control but not raising, which is unexpected if they are similar processes; and finally, that the phonetic form of PRO in Ewe is the same as the logophoric pronoun's is coincidental under Hornstein (1999). Chierchia (1990)'s approach to control in which PRO is bound by an operator in the left periphery of the embedded clause provides a straightforward account of the facts seen in Ewe.

Keywords: control, movement, PRO, partial, split, logophoric, pronouns

1 Introduction

Since the inception of PRO as a syntactic object, it has been noted that PRO almost always seems to be phonetically null crosslinguistically. As a result, some theories of control have stipulated that PRO is always phonetically null but syntactically present, as in Chomsky (1981), Manzini (1983) and Landau (1999), and its nullness is due to the licensing properties of control predicates. In other theories of control, some authors have argued that it is not represented at all, as in Chierchia (1984), Wurmbrand (1998) and Jackendoff and Culicover (2003).

In this paper, I present novel data from the Anlo dialect of Ewe to show that overt PRO is instantiated in the phonetic form of the logophoric pronoun. Ewe was first noted by Clements (1975) for having a logophoric pronoun, *yè*, with the following distribution where it must refer to the matrix subject.[1] Crucially, in Ewe, *yè* can only appear after the complementizer *be*–which can optionally also mean *say*. The following examples are from Clements (1975). The index *s* refers to the speaker.

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

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[1]For reasons unrelated to this paper, *e* cannot refer to the matrix subject.

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.'

The logophoric pronoun refers to the individual whose thought or speech is reported in a given context. Similarities between obligatorily controlled (OC) PRO and logophoric pronouns have been noted for decades due to both having to refer to an antecedent; Heim (2002), for example, attempted to come up with a unified approach to both, in which they were bound by an abstraction operator in the left-periphery of the embedded clause.

In the data from Ewe that I will present, a pronoun with the phonetic form *yè* is present in the subject position of a nonfinite clause. Almost all control constructions–apart from ones in the jussive mood–contain the irrealis mood marker *-a*, which may optionally coalesce with *yè* to form *ya*, but it is optionally read without coalescence as *yèa*.

And though these pronouns might seem to be logophoric at first glance, I present novel data to show that controlled *yè* in the subject of infinitivals is not logophoric; it is instead overt PRO, showing that it is syntactically represented. Four tests out of eight show that this pronoun has different properties depending on whether it is the subject of a finite or nonfinite clause. The strongest piece of evidence is the grammaticality of (2), due to the fact that inanimate objects cannot have attitudes or thoughts.

(2) Ati$_i$-a   dzegome be   yè$_i$-a   ŋe.
Tree-NOM begin   COMP LOG-IRR break.
'The tree$_i$ began PRO$_i$ to break.'

This raises the question of why two pronouns with different properties should have the same phonetic form. I argue that in the Anlo dialect of Ewe, *yè* is not a logophoric pronoun; it is instead a new kind of pronoun which I call a *left-periphery bound pronoun*; it is just a pronoun that must be bound by the complementizer *be* in embedded C, regardless of whether the predicate with the embedded clause is attitudinal.

I present an analysis, based on a suggestion by Heim (2002), in which she uses the Chierchia (1990) approach to control where it is bound by an abstraction operator in the left-periphery to account for the distribution of logophoric pronouns, influencing works such as Anand (2006). I argue that the data that is presented in this paper was in fact predicted by Heim.

In addition, the overtness of PRO allows us to probe the actual structure of control phenomena such as partial and split control. For example, (3a) might help us conclude that genuine partial control does exist in Ewe, challenging current accounts of it such as in Boeckx et al. (2010), according to which it does not exist. In addition, (3b) gives us the structure of the overt split-controlled pronoun, and it is more complex than what we would expect; this is not something we would know by examining languages such as English where PRO is null:

(3)   a. Kofi dzi be   yè-wo/*yè-a   kpe ga ade.
Kofi want COMP LOG-PL/LOG-IRR meet time 6
'Kofi$_i$ wanted PRO$_{i+}$/*PRO$_i$ to meet at 6.'

b. Agbe$_i$ do eŋugble ne Fafa$_k$ be [yè$_i$-wo meve yè$_k$-wo]$_{i+k}$ fo ŋutsu-a.
   Agbe make promise to Fafa COMP LOG-IRR two+person LOG-IRR beat man-DEF
   'Agbe$_i$ promised Fafa$_k$ PRO$_i$ to beat the man.'

The facts seen in Ewe raise important problems for the movement theory of control in Hornstein (1999). I discuss four such problems.

First, partial control exists in Ewe in the sense of Landau (1999), in which PRO refers to a group that includes the controller. Second, the phonetic equivalence between the finite and non-finite pronoun seem coincidental and not explainable if control is movement. Third, the structure of split control seems difficult to account for via movement given that it would lead to minimality violations. Finally, Ewe does not seem to have any raising predicates, which seems troubling if control and raising are the same, apart from movement to θ-positions.

In principle, most of the problems that I will discuss here can be accounted for by the control as movement theory with further stipulations, but it is unclear whether the stipulations would be independently motivated or lead to true insight. In particular, the sacrifices that the MTC would have to make in light of the existence of partial control seem especially *ad hoc*.

This paper is structured as follows. In section 2 I present the foundations for the two theories of control that I will discuss in this paper; Hornstein (1999)'s control as movement and Chierchia (1990)'s approach to account for de se attitudes in control. In section 3, I present the novel data in Ewe, and provide a brief discussion of this data in section 4. In section 5, I go over the aforementioned four problems to the control as movement account, and section 6 concludes.

2   Background

This section presents background on the two theories of control that will be covered in this paper: the movement theory of control (MTC) of Hornstein (1999) in section 2.1 and the commonly assumed treatment for de se attitudes from Chierchia (1990) which I dub the *abstraction theory of control* (ATC) in section 2.2. Providing this foundation prior to presenting novel data on Ewe control will help us determine which of these theories is better equipped at handling the overtness of PRO in this dialect.

2.1   Movement Theory of Control

Hornstein (1999) argues that control is movement and therefore similar to raising. For better or worse, since the advent of Chomsky (1995)'s minimalist program, it has become perhaps the most commonly assumed theory of control due to its seeming success in eliminating PRO, which has been mysterious since its inception. In this section, I summarize the basics of the MTC as presented in Hornstein (1999) and developed further in Boeckx et al. (2010).

There are two ways in which the minimalist program paved the way for the potential removal of PRO as a theoretical tool. First, the removal of D-structure as a linguistic level allowed movement to target θ-positions. Prior to the program, all θ-positions had to be filled at D-structure, preventing movement into θ-positions at S-structure.

Another principle that blocked movement into a θ-position for arguments that already pos-

sessed a θ-role was the θ-Criterion.[2] Chomsky (1981)'s definition of the θ-Criterion is given in (4a)-(4b) below:

(4) a. Each argument bears one and only one θ-role.

   b. Each θ-role is assigned to one and only one argument.

The θ-Criterion is defined as such in order to avoid (5a) having the same meaning as (5b); in principle it might be possible for *send* to assign both of its object θ-roles to just one object.

(5) a. Mary sent John.

   b. Mary sent John to himself.

With D-structure already removed, the MTC required changing (4a) to *Each argument must receive at least one θ-role*.[3] With this, we could make the structures of control and raising sentences look very similar, apart from the θ-roles assigned, and get rid of PRO. An example of a derivation is given in (6a)-(6b) below.

(6) a. [$_{TP}$ Sally [$_{VP}$ ~~Sally~~ v+tried [$_{TP}$ ~~Sally~~ to [$_{VP}$ ~~Sally~~ v+take out the trash]]]].

   b. [$_{TP}$ Sally [$_{VP}$ seemed [$_{TP}$ ~~Sally~~ to [$_{VP}$ ~~Sally~~ v+take out the trash]]]].

θ-role assignment is reduced to feature checking, and it is a local operation given that movement also is. The only difference between (6a) and (6b) is that there is an additional step of movement into the θ-position of the matrix predicate. This eliminates the need to posit PRO.

   This is desirable, given that the existence of PRO is a troubled one. Since Chomsky (1981, 1986) and Manzini (1983)'s treatment of PRO in which its referent is determined by an antecedent, it has been a goal of syntactic analysis to find an antecedent for occurrences of PRO which do not seem to be controlled. Even today, this seems to be an impossible task.[4]

   Another desirable result is that the controller must c-command the controllee, since movement targets c-commanding landing sites. Unfortunately, this precludes the possibility of genuine partial and split control given that the head of an A-chain would not be identical to its trace.

   The MTC has attempted to find solutions to these problems: the usual attempt to deal with partial control, for example in Boeckx et al. (2010) has been to deny its existence and posit a null comitative in the structure, while split control is derived via positing additional structure, such

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[2]This was redundant given that D-structure also blocked movement into θ-positions.

[3]There might be independent reasons to change this, for example, in resultatives such as *Sally hammered the beavers flat* in which it seems *the beavers* receives a θ-role from both *hammer* and *flat*. As a result, the presence of PRO in resultatives has been assumed by Bowers (1993) among others. It seems plausible that the MTC might want to assume A-movement in resultatives as well. However, this is problematic given that the observation in (5a)-(5b) remains unsolved.

[4]Lebeaux (1984), Epstein (1984) and Bhatt and Izvorski (1998) attempt to find an antecedent for such occurrences of PRO. Some examples from Bhatt and Izvorski (1998) are given in (7a)-(7b): the general idea is that the implicit controller is the crossed out argument of the control predicate.

(7) a. PRO$_{arb}$ to write haiku is fun ~~for people~~.
    b. It is difficult ~~for people~~ PRO$_{arb}$ to dance the tango.

However, Kawasaki (1993)'s example in (8) shows that genuine cases of PRO$_{arb}$ do exist, given that there is no possible location for an implicit controller.

(8) It is dangerous for babies [PRO$_{arb}$ to smoke around them].

as a null PP layer, inside split-controlled PRO. These arguments were made possible due to evidence being based on languages in which PRO was null. But as we will see in the next section, when PRO is phonetically overt, we can get an idea of what partial and split control actually look like, and whether the MTC is equipped to handle them.

2.2 Abstraction Theory of Control

In section 3, I will give evidence for thinking that the pronoun *yè* is not a logophoric pronoun in the Anlo dialect of Ewe due to it potentially having an inanimate reading. Even so, we still want a unified analysis of these two pronouns despite them having different properties. I will provide a background in this subsection to a theory which I call the *abstraction theory of control* (ATC) that will be able to account for the facts seen in Ewe straightforwardly.

The similarity between genuine logophoric pronouns and PRO have been noted since Heim (2002), in which she attempted to provide a unified approach to account for the distribution of both, by adapting the Chierchia (1990) approach to obligatory control to logophoric pronouns; Anand (2006) further adapted this to logophors. I will propose that we have strong evidence in favor of Heim's original observation from the novel data in this paper.

In Chierchia (1990)'s theory of obligatory control, in order to account for the necessity of the de se reading, Chierchia proposed that a sentence such as *Mary claimed to be happy* reports Mary's self-ascription of the property of being happy. He implemented this with an individual abstractor in the left-periphery of the embedded clause:

(9)

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            ...
          /     \
       ...        TP
      λx_1       /  \
              DP     T'
             PRO_1
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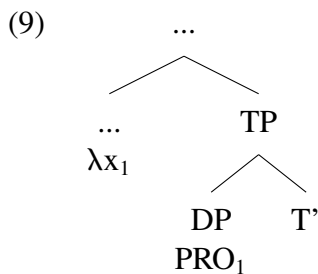
The assumption is that abstraction operators bind coindexed variables just in case they are of the same type, and this process happens in the Logical Form component. Although the left peripheries of matrix clauses have abstractors over worlds, PRO is bound by an individual abstractor. An example of the lexical entry for *claim* is given in (10), where (10b) is the embedded clause built-up from the bottom up and (10c) is the matrix clause:

(10)   a. $[\![\text{claim}]\!]^{c,g} = \lambda P_{<e,<st>>}\lambda x_e \lambda w_s.\forall <w',y> \in \textbf{claim}_{x,w}$, P(y)(w') where $\textbf{claim}_{x,w} = \{<w',y>:$ what x claims in w is true w' and x identifies herself as y in w'$\}$

   b. $[\![\text{CP}_2]\!]^{c,g} = \lambda x \lambda w.$ x is clever in w

   c. $[\![\text{CP}_1]\!]^{c,g} = \lambda w. \forall <w',y> \in \textbf{claim}_{\text{John},w}$, y is clever in w'   (Pearson, 2015, p. 82)

This semantics for attitude predicates is based on Hintikka (1969)'s semantics for attitude reports where the content of an attitude is not a set of worlds. Hintikka's semantics makes it possible for one to bear an attitude de se towards a property just in case that property is self-ascribed. This is because the attitude predicate does not quantify merely over worlds; it quantifies over sets of *claim*-alternatives <w',y> such that it is compatible with the attitude holder saying she is y in w'.

This semantics will ensure that a sentence with a de re scenario–or a sentence in which the attitude holder does not know she is referring to herself–will turn out false. This is because in the definition such as that given in (10), the attitude holder would be willing to refer to the person in the *claim*-alternative worlds as herself, and this is not possible in a de re scenario.

The ATC, like the MTC, is capable of getting the fact that the controller is almost always the most local one, with the exception of *promise*. For example, in (11)-(12), both the ATC and MTC derive the controller of PRO being the attitude holder in both sentences. For the MTC, *Mary* in (11) is embedded in a PP and it cannot move to a non-c-commanding position, and for the ATC the attitude holder is the one who makes the claim, which is *John*.

(11)   John$_i$ claimed to Mary PRO$_i$ to be a genius.

Similarly, *Mary* in (12) is not embedded in a PP so movement is possible, and the object of persuading is also the attitude holder rather than the subject.[5]

(12)   John persuaded Mary$_i$ PRO$_i$ to take out the trash.

However, the existence of subject control across a DP in predicates such as *promise* and *vow* remains problematic for both theories, requiring the stipulation of a null PP containing the object of *promise*, or a different attitude holder due to the semantic role Source, as in Jackendoff and Culicover (2003).

As Pearson (2015) notes, it is an advantage for Chierchia's ATC that it can account for non-attitudinal control predicates such as *force*, which quantify over worlds rather than pairs of worlds and individuals. For example, in Anand and Nevins (2004) control predicates are quantifiers over evaluation indices. Along with the world coordinate, an individual coordinate of this evaluation index is assumed which PRO has as its semantic value.

This is not compatible with the existence of predicates like *force*, and Pearson notes that in the Chierchia approach they would take properties as arguments instead. We will see multiple examples of inanimate control in this paper, which raise problems for an attitudinal theory of control like that of Anand and Nevins (2004).

Heim (2002) notes that this approach may also be used to account for the distribution of the logophoric pronoun in Ewe. For Heim, logophors necessarily pick out the attitude holder and only occur in the scope of an attitude predicate.[6] Due to this similarity, Heim proposes that both PRO and logophoric pronouns are bound by an individual abstractor, and this is formalized via an uninterpretable feature [log] on both. This must be checked by the operator which bears the interpretable [log]. The attitudinal predicate passes on [log] to PRO and the logophor:[7]

(13)   [$_{CP_1}$ λw_1 [w_1 John claimed$_{[log]}$ [$_{CP_2}$ $\lambda x_{2[log]}$ λw_3 [w_3 PRO$_{2[log]}$ to be clever]]]]

(14)   [$_{CP_1}$ λw_1 [w_1 John claimed$_{[log]}$ [$_{CP_2}$ $\lambda x_{2[log]}$ λw_3 [w_3 yè$_{2[log]}$ was clever]]]]

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[5]This can be verified by constructing a de re scenario in a sentence such as *John persuaded Pavarotti to take off his pants* in a context in which his pants were on fire, as in the famous scenario in Chierchia (1990). This sentence is intuitively false if Pavarotti is too drunk to be aware that he is being told to take off his pants.

[6]We will see multiple pieces of evidence that this is false for the logophoric pronoun in Ewe, but even PRO in languages like English need not always occur with an attitudinal predicate or even be animate.

[7]This doesn't get the fact that PRO almost never has long-distance antecedents while logophoric pronouns do. Pearson (2015) accounts for this in terms of φ-features; I propose to account it in terms of logophoricity in section 4.

In non-attitudinal contexts, under this approach PRO and logophoric pronouns will not be licensed.[8]

One outstanding problem is Pearson (2015)'s observation that the logophoric pronoun of Ewe need not be read de se. Though this will be discussed at length in the next section, it is important to note that Heim (2002)'s approach predicts otherwise: that logophoric pronouns should only be able to be read de se. For the time being, I present Pearson's solution below which can derive the potential de re reading in the ATC approach and assume that it is correct. We define a concept generator as follows:[9]

(15) G is a concept generator in w iff:

    a. G is of type $<e,<s,e>>$

    b. For all y, G(y) is a y-concept in w

    c. For all y, if there is a w' such that $<y,w'> \in DoxAlt(x,w)$, then $G(y)=G(x)$

The de re LF is as follows.

(16) a. $[\Lambda w_1 [\text{John} [[\text{say } W_1] [\lambda G_2 [1 [\Lambda w_3 [\text{LOG}_1 G_2] [\text{is clever } W_2]]]]]]]$

    b. $[\lambda w: \exists_{<e;<s;e>>}.$ G is a concept generator for John in w & $\forall w' \in Say(Kofi; w)$, G(y) is clever in w']

    c. $[\lambda w: \exists_{<e;<s;e>>}.$ G is a concept generator for John in w & $\forall w' \in Say(Kofi; w)$, G(John) is clever in w']

According to her account, a concept generator wraps the pronoun in a projection called resP, allowing a de re reading. Meanwhile, the de se reading is obtained when there is no resP wrapping the pronoun. We now need to find a way to block PRO from getting embedded in a resP and therefore obtaining de re readings: for Pearson it is PRO's lack of ɸ-features, but I propose an alternate solution in section 4.

In the next section, I will attempt to provide empirical evidence for Heim (2002)'s attempt to account for the distribution of logophoric pronouns very similarly to OC PRO.

3 Ewe

In this section, I present novel data from the Anlo dialect of Ewe in which I conclude that the logophoric pronoun, in the subject of an embedded nonfinite clause, has the properties of overt PRO rather than the properties of a logophoric pronoun. The section is divided as follows: in section 3.1, I present preliminary data from Ewe to ensure that the reader is prepared for novel data in section 3.2, in which I provide eight tests to find differences between logophoric pronouns and overt PRO. Section 3.3 is a summary of the results.

3.1 Preliminaries

Ewe is a Niger-Congo language spoken in southeastern Ghana. It is a tenseless language in which aspect is prominent, making it difficult to determine whether there is a finite-nonfinite distinction

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[8]A simple fix is possible if we suppose that a different feature, rather than [log], is used for PRO.

[9]This is simplified from her definition. See Pearson (2015) for further discussion.

in this language. The dialect of Ewe that data will be presented from in this paper is the Anlo dialect, which Standard Ewe is based on.

This data was obtained from one primary native speaker consultant. Two other consultants, also native speakers of the Anlo dialect, went over the data to determine if they agreed with the intuitions. The data was obtained through a mixture of in-person and Skype sessions and follow-up questions via email. Two other speakers of different Ewe dialects also provided their input on the sentences that were obtained after the elicitation sessions concluded.

Before presenting this data, it is important to note that there is significant variation based on one's dialect. For example, Anne Bimpeh (p.c.), a speaker of the Ewedome dialect, does not get de re reading of *yè*, first noted by Pearson (2015). For this reason, I want to make it clear that the data in this paper applies at the very least to the Anlo dialect of Ewe.

More recent work on Ewe has shed further light on the properties of its logophoric pronoun. For example, Pearson (2015) shows that, contrary to assumptions by Heim (2002) among others, *yè* need not be read de se. This is problematic for the Heim approach, given that the ATC predicts binding by an abstraction operator to lead to a de se reading. (17a), my own example below, is good with the logophoric pronoun in Ewe.

(17) 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.)

In Ewe, *yè* has third person features. Apart from the logophoric pronoun *yè*, there is also the focus pronoun *yé*, in (18):

(18) 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, as in (19). I only focus on the low tone, logophoric pronoun in this paper.

(19) 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.'

Before presenting the control constructions, it might be important to determine whether Ewe has nonfinite clauses, given that control usually takes place with them. Clauses containing *yè* may be finite, as aspectual marking can be added to them. Clauses containing *yèa* may be nonfinite, as aspectual marking cannot be added: *yèa* can only appear in the same environment as PRO. Similar tests are used by Huang (1982) to distinguish between finite and nonfinite clauses in Mandarin Chinese, which is also a language without tense-marking. This is seen in (20a)-(20b).

(20) 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).)'

Another argument for the finite-nonfinite distinction in Ewe comes from n-word licensing; like Italian and Hebrew nonfinite clauses, n-words can be licensed across nonfinite clauses but not finite clauses, as Sulemana (2018) points out.[10] This is seen in (21a)-(21b):

(21) 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).)'

Suppose that this was not enough evidence for the finite-nonfinite distinction in Ewe. Do we have to give up on Ewe having overt PRO? No, given the existence of finite control in Balkan languages, Persian, Hebrew, Spanish, Dogrib and Kannada.[11] I suggest that if it can be established that Ewe does not have nonfinite clauses, we can analyze all control complements as instances of finite control.

An example of finite control from Landau (2013) is given in (22) below. PRO is actually the subject of a finite embedded clause, and the embedded verb has tense and agreement inflection. The reason why PRO is present and not pro is because even in finite control, the subject of the subjunctive clause must be read de se, showing that it is not unique to nonfinite clauses. It has a sloppy reading with ellipsis, just like PRO and unlike pro.

(22) Rina bikša me-Gil_i [še-PRO_i yivdok   šuv et ha-toca'ot].
      Rina asked from-Gil that   would.check.3SG again ACC the-results
      'Rina asked Gil to double-check the results.'

According to Landau (2004), subjunctive complements in the aforementioned languages with finite control have the OC signature; these complements are obligatorily in the future tense, and these complements always have an irrealis mood. Landau notes that it is not an accident that finite control is always interpreted in this way, and one might take this to mean that there is a scale of finiteness, and PRO may be inserted into nonfinite clauses and certain finite clauses (with future tense, irrealis mood) which are not as finite as others (past tense, etc.).

This is precisely what we see in Ewe. When there is no object control or syntactic plurality influencing the phonetic form of the overt PRO, the irrealis mood suffix /-a/ is attached to *yè*, the subject which is in the same position as PRO. Control complements are always understood in Ewe with an irrealis mood, exactly the same as all finite control complements crosslinguistically. We therefore do not have to give up the hypothesis of this paper that overt PRO exists in Ewe.

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[10]These tests were based on Sulemana (2018)'s own attempt to draw the finite-nonfinite distinction in Buli. He also argues that Buli contains an overt PRO, though unlike the logophoric pronoun in Ewe, it is instantiated by the generic third person pronoun.

[11]See Landau (2004) for further citations on finite control.

3.2 Overt PRO tests

In this position, it is pronounced as *ya* (optionally pronounced as *yèa*). /-a/ is the irrealis marker as Ameka and Dakubu (2008) notes; this is not surprising as Stowell (1982) has shown that all control infinitives are in an irrealis mood. To be more specific, it is treated as a potential mood marker, but given that it is not relevant for the purposes of this paper I will continue to gloss it as IRR, as potential mood is a kind of irrealis mood.

In (23), I give multiple examples of *yèa* with predicates that would involve PRO and control in other languages such as English. More tests will be provided in order to determine that we are indeed dealing with the control module here:

(23) a. Agbe$_i$ dzagbagba/ŋlobe/dzina/vɔvɔm/wosusu/dzi/susum be yè$_i$-a dzo.
Agbe try/forget/want/afraid/decide/like/intend COMP LOG-IRR leave
'Agbe$_i$ tried/forgot/wanted/is afraid/decided/likes/intends PRO$_i$ to leave.'

b. Kofi$_i$ dzagbagba/ŋlobe/dzina/vɔvɔm/wosusu/dzi/susum be yè$_i$-a kpo
Kofi try/forget/want/afraid/decide/like/intend COMP LOG-IRR experience
dzidzɔ.
happiness
'Kofi$_i$ tried/forgot/wanted/is afraid/decided/likes/intends PRO$_i$ to be happy.'

As Landau (2013) among others have noted, PRO is interpreted as a bound variable. *Yè* is also interpreted as a bound variable, and this is easy to verify in (24):

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

b. Ame adeke me dzagbagba be yè-a kpo dzidzɔ o.
person no-one NEG1 try COMP LOG-IRR experience happiness NEG2
'No one tried to be happy.'

I previously noted, with my own example in (17), that Ewe's logophoric pronoun need not be read de se, at least in a realis finite embedded clause. However, I provide one example in (25) which *yèa* must be read de se. This is especially strong evidence we are dealing with control here given that, as Chierchia (1990) first noted, PRO must be read de se. This sentence is from Hornstein (1999) (p. 73) while the context is from Landau (1999) (p. 36), translated to Ewe:

(25) 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 ho kplu.
Kofi expect see COMP LOG-IRR COP medal
'*Kofi$_i$ expects PRO$_i$ to get a medal.'

Hornstein (1999) among others have noted that PRO must be c-commanded. This is also the case with *yèa*; it cannot refer to the embedded DP and must refer to the entire possessive phrase; it is easy to determine that this is correct with the overt plural marking on *yè*, in which case it is *yèwo*, as in (26):

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

   b. [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.'

It's been well-known since Clements (1975) that finite yè can have long-distance antecedents, and Pearson (2015) has independently confirmed this; her example is given below. This sentence is ambiguous: each *yè* may refer to Kofi or Marie.

(27) Marie be Kofi xɯse   be   yè na yè   cadeau
      Mary say Kofi believe COMP LOG give COMP gift
      'Mary said that Kofi believed that he/she gave him/her a gift.'

Yèa, on the other hand, cannot usually have a long-distance antecedent. This contrasts with the logophoric pronoun, as PRO also cannot have long-distance antecedents:

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

   b. Agbe$_j$ be   Kofi$_i$ 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.'

The one case that it *can* have a long-distance antecedent is the same as OC PRO: it can only have a long-distance antecedent in the case of *promise*; and as expected, we get subject control in (29). In the subject position of a nonfinite clause, if the matrix predicate is *promise*, *yèa* can refer to the matrix subject across the object of the predicate:[12]

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

Split and partial readings have long been known as properties of PRO. Two examples of split control are given in (30). A pronoun with a complex structure is present, and each simpler pronoun refers to one of the controllers and the entire pronoun refers to both. Each of the pronouns are semantically singular but syntactically plural:

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

   b. Agbe$_i$ bia Fafa$_k$ be   [yè$_i$-wo meve   yè$_k$-wo]$_{i+k}$ dzo.
         Agbe ask Fafa COMP LOG-PL two.person LOG-PL   beat man-DEF
         'Agbe$_i$ asked Fafa$_k$ PRO$_{i+k}$ to leave (together).'

---

[12]It is important to note that the object is itself embedded in a PP, allowing for the avoidance of minimality violations. This is unlike English, but one might treat the object of promise as containing a null preposition in English as well.

Partial control is also common in this dialect, as shown in (31). Further discussion of this will be provided in section 5.2. In these examples, we see that the pronoun is at the very least syntactically plural despite having a singular controller; this is particularly strong evidence in favor of the existence of partial control. The speaker intuition is that it is also semantically plural:

(31) a. Kofi dzi be   yè-wo/*yè-a   kpe ga ade.
          Kofi want COMP LOG-PL/LOG-IRR meet time 6
          'Kofi$_i$ wanted PRO$_{i+}$/*PRO$_i$ to meet at 6.'

      b. Zimenɔla wɔsusu be   yè-wo/*yè-a   fofu.
          Chair   decide COMP LOG-PL/LOG-IRR gather
          '[The chair]$_i$ decided PRO$_{i+}$/*PRO$_i$ to gather.'

A final test to distinguish between the logophoric pronoun and overt PRO is the availability of the strict and sloppy readings. Nonfinite *yè* only has a sloppy reading like overt PRO, as seen in (32a), but finite *yè* may have a strict or sloppy reading, as in (32b).

(32) a. Kofi$_i$ dzagbagba 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 only)'

      b. 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~~. (sloppy and strict)'

Finally, and perhaps most importantly, inanimate control with nonfinite *yè* is a possibility.[13] Even in English, there is a sense in which the sentences below don't involve personification and are still grammatical, and they are similarly good in Anlo:

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

      b. Emo$_i$ wɔsusu be   yè$_i$-a   dzudzuɔ.
          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 serial verb constructions; something like *John forced the car to stop*, which has the predicate *force*, a classic example of inanimate control, does not work.

    But we do see *yè* in (34), in which the predicates are all non-attitudinal control predicates. Usually, these predicates would be analyzed as raising constructions due to inanimate matrix subjects, but I will provide a discussion of control vs. raising in Ewe in section 5.4.

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

---

[13]I have not been able to find any examples in which finite *yè* is grammatical and there is no metaphorical animacy.

If we follow Charnavel and Sportiche (2016) in using inanimacy as a test for logophoricity, this would mean that *yè* is not actually a logophoric pronoun. Charnavel and Sportiche (2016) is intuitive: it wouldn't make any sense for trees and other inanimate objects to be logophoric anyway as they cannot possess attitudes, thoughts or report speech, unless we are dealing with a metaphorical context.

3.3 Summary

Table 1 below is a summary of the results of the tests seen in the section prior. As the reader can verify, overt PRO and nonfinite *yè* share more similarities than nonfinite and finite *yè*.

(35)

Properties	Finite yè	Nonfinite yè	OC PRO
Has φ-features	✓	✓	✗
Must be c-commanded	✓	✓	✓
Must be read de se	✗	✓	✓
Long-distance antecedent	✓	✗[14]	✗[15]
Bound variable	✓	✓	✓
Inanimate possible	✗	✓	✓
Sloppy reading only	✗	✓	✓
Partial possible	✓	✓	✓
Split possible	✓	✓	✓

One difference, however between PRO and both *yè* is the presence of φ-features in the latter. One final observation that I will make is that Pearson (2015)'s prediction (footnote 36), in which she predicts that there might be a dialect of Ewe in which *yè* would have the properties of PRO and no φ-features, is incorrect for this dialect. Nonfinite *yè*, though it has the properties of PRO, does have φ-features. *Me* is the weak first person pronoun in the pair below:

(36) a. Me be me dzo.
      b. *Me be yè dzo.

I am not able to answer why this is the case at this time. However, it is not surprising that a phonetically overt pronoun would have φ-features. In the next section, I discuss a simple way to account for the identical phonetic form between the two *yè* despite them having very different properties.

4 Solution

I attempt to answer the two most central questions that arose in our investigation of *yè* in different contexts in the section prior. First, is there a way we can maintain the same analysis for this pronoun which has the same phonetic form despite having different properties in different contexts? That is, can we say they are the same in some sense? Second, why does *yè* have different properties depending on whether it is the subject of a finite or nonfinite embedded clause? It would be optimal to come up with an analysis in which they are the same pronoun, and come up with a good reason for why their properties differ.

With a synthesis of Chierchia (1990) and Heim (2002)'s approach to control and logophoric pronouns respectively, we can provide a unified analysis of this pronoun in Ewe. It has the same phonetic form in different contexts because it is the phonetic form that arises when it is bound by an operator in the left-periphery of the embedded clause. I noted that *yè* can only appear after *be*; I propose that it is bound by it.[16] This is essentially Anand (2006)'s structure of logophoric binding, in which the logophor is bound by an operator in the left-periphery:

(37)
```
              CP
             /  \
           C      TP
          be_i   /  \
             DP_i    T'
              yè
```
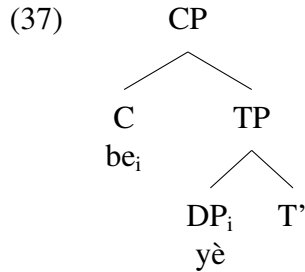
There seems to be strong empirical evidence in Ewe that these two phenomena should be treated in the same way. However, we have seen strong evidence that this pronoun is not logophoric in the subject position of a nonfinite clause.[17] I propose that it is a new kind of pronoun, called a *left-periphery bound pronoun* (LPBP). This accounts for *yè*'s distribution always being after the complementizer *be*, and the identical phonetic form between the finite and nonfinite versions of this pronoun. I posit that an LPBP need not be logophoric.

The other question we have to ask is why this pronoun has different properties in different contexts. One answer is provided by Pearson (2015) in terms of ϕ-features. For Pearson, PRO is a minimal pronoun in the sense of Kratzer (2009), which inherits ϕ-features from its controller. It inherits these ϕ-features by binding with the abstraction operator; this means that it must be inside PRO's local domain. For Kratzer, such phi-feature unification must be local, so it can't take a long-distance antecedent.

But given that *yè* has a third person feature, no feature unification is needed and long-distance binding is possible. In this account, the ability of *yè* to take a long-distance antecedent triggers the possibility of embedding *yè* in a resP as a last resort option.

However, we have seen clear evidence that nonfinite *yè*, despite having the properties of overt PRO, must be read de se and has ϕ-features, so this account cannot be right. We need to find an alternate solution: might logophoricity be the feature licensing these different properties across these two contexts instead?

This is precisely how I propose to handle their different properties. That is, I suggest that in a control construction, *yè* need not be logophoric, given the existence of inanimate control. Finite *yè*, however, seems to always behave as a logophoric pronoun. In other words, nonfinite *yè* is underspecified for logophoricity in Anlo, and we can stipulate that long-distance readings are allowed only with finite *yè* because it is always specified for logophoricity. Instead of Heim's [log], I posit another feature, at this moment [C], for control predicates. [log] licenses long-distance readings and embedding in a resP. A comparison is given below:

---

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

[17]Based on preliminary fieldwork in Yoruba which I am not ready to comment on at this time, Ewe's logophoric pronoun is unique in behaving differently in nonfinite contexts and having a de re reading even in finite contexts.

(38) $[_{CP_1} \lambda w_1 [w_1 \text{ John claimed}_{[C]} [_{CP_2} \lambda x_{2[C]} \lambda w_3 [w_3 \text{ PRO}_{2[C]} \text{ to be clever}]]]]$

(39) $[_{CP_1} \lambda w_1 [w_1 \text{ John claimed}_{[log]} [_{CP_2} \lambda x_{2[log]} \lambda w_3 [w_3 \text{ yè}_{2[log]} \text{ was clever}]]]]$

This is in line with Charnavel and Sportiche (2016)'s observation that exempt anaphors are always logophoric and always allow long-distance readings, while plain anaphors may be inanimate, and if they are inanimate they never allow long-distance readings. And following Pearson (2015), we might claim that if long-distance readings are allowed, so are de re readings (or being embedded in a resP).

5 Problems for the MTC

My goal here is to discuss some issues for the MTC which, in principle, can be accounted for with further stipulations. However, we then have to ask if these additional stipulations would be independently motivated and not merely redescribe facts. It doesn't seem clear that the MTC would be able to provide any insight on the problems that I present here. That is, the ATC presented in section 2.2 is better equipped at accounting for the data provided here.

This section is structured as follows. I cover the two most important arguments against the MTC in sections 5.1 and 5.2. In section 5.1, I discuss the phonetic identity between the finite and nonfinite *yè* despite them having different properties, which is coincidental under the MTC. In section 5.2 I present the problem of partial control and argue for its existence and the lack of any null comitative as proposed by Boeckx et al. (2010). The arguments presented in the next two sections are less certain, though still significant. In sections 5.3 and 5.4, I discuss the overtness of split control and the seeming lack of raising in this dialect of Ewe respectively.

5.1 Phonetic identity between finite and nonfinite *yé*

One of the two most important arguments against the MTC is the fact that, despite the numerous differences between finite and nonfinite yè, they have the same phonetic form and even the same tone. Under the analysis of control and logophoricity that I have given in Anlo, this is easily explained because they are both bound by the complementizer *be* in the left-periphery of the embedded clause.

However, this is coincidental in the MTC. Why should two pronouns with very different properties have the same phonetic form? Why should the logophoric pronoun of Ewe be the resumptive pronoun used for control? The MTC doesn't seem to have the tools to derive this similarity. One could then argue that as resumptive pronouns being used to relativize subjects is an unusual occurrence crosslinguistically, as McCracken (2013) points out, so the phonetic form of the resumptive pronoun might be *yè*.

But what one might expect based on comparison with other Niger-Congo languages is that the resumptive pronoun should not be *yè*; instead it could be the weak third person pronoun *e*. Sulemana (2018) points out that the third person pronoun *wa* is also a resumptive pronoun in Buli; it is employed in long-distance extraction of a subject.

(40) (ká) wānā$_i$ *(ātì) fì pá:-chīm *(wà$_i$) àlì dīg lāmmù:
    Q who ?   2SG think 3SG ? cook meat.DEF
    'Who do you think cooked the meat?'   Buli

Fortuitously, Sulemana (2018) argues in favor of the MTC, claiming that *wa* is a resumptive pronoun that is overt PRO derived by A-movement. We might have expected Ewe to behave similarly in this regard by also using the weak third person subject pronoun, but it doesn't.

In Asante Twi, which like Buli and Ewe is a Niger-Congo language spoken in Ghana, the third person subject pronoun ɔ is a resumptive pronoun used to relativize subjects, according to McCracken (2013).

(41)　abrantie n(o)-a:　ɔ-bɔː　wo　no
　　　boy　　DEF-REL 3SG-hit 2SG DET
　　　'the boy who hit you'　　　　　　　　　　　　　　　　　　　Asante Twi

Ga, another Niger-Congo language spoken in Ghana, shares the same third person pronoun as Ewe, *e*, and is treated as a resumptive pronoun in Amfo and Norgbe (2009).

(42)　Neke gbeke ne:　e　　tue wa
　　　PD　　child　PDD 3SG ear hard
　　　'This child is stubborn.'　　　　　　　　　　　　　　　　　　Ga

To recap, it would be interesting to see an insightful answer from the MTC as to why the resumptive pronoun should be the logophoric pronoun.

Finally, in the previous section, I have attempted to argue that Anlo provides us evidence for thinking that the distribution of OC PRO and logophoric pronouns should be treated very similarly. The distribution of logophoric pronouns likely cannot be derived via movement given the frequency of long-distance readings; prima facie, it seems that many minimality violations would be made.

And if the treatment of the logophoric pronoun is not similar to the treatment of obligatory control, the MTC misses a strong parallel between control and logophoric pronouns that have been pointed out since Heim (2002), which I have further attempted to reinforce in this paper.

5.2　Partial control

Another important problem for the MTC comes from the existence of partial control in Ewe. The overall problem is that the MTC attempts to deny the existence of partial control given that the head of an A-chain must be identical to its trace, and not merely "partially" identical in some sense. But Ewe prima facie makes it difficult to deny that genuine partial control exists, especially considering the null comitative analysis is difficult to defend here. (31) is repeated in (43) below; the embedded predicate *kpe* 'meet' precludes the possibility of exhaustive control:

(43)　Kofi dzi　be　　yè-wo/*yè-a　　kpe ga　ade.
　　　Kofi want COMP LOG-PL/LOG-IRR meet time 6
　　　'Kofi$_i$ wanted PRO$_{i+}$/*PRO$_i$ to meet at 6.'

The observation that the logophoric pronoun does not need an equivalent antecedent is not new; it may also have a partial referent in finite contexts. Sells (1987) (p. 449) was the first to make this observation in (44) below.[18]

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[18]Anne Bimpeh (p.c.) suggests that this is better translated as *go out*.

(44) Kofi kpɔ be   yèwo-do   go.
     Kofi see COMP LOG-PL-come out

     'Kofi saw that they (including Kofi) had come out.'

He also notes that the opposite situation is impossible, where there is a plural antecedent and a singular logophoric pronoun that refers to part of the antecedent.[19] Hyman and Comrie (1981) and Frajzyngier (1985) have also noted that plural logophoric pronouns are allowed with a singular antecedent.

To see why this poses a problem for the MTC, let us see how partial control is handled in that framework. For Boeckx et al. (2010), PRO cannot be partially controlled: control must always be exhaustive, or in other words, a controller must always have an identical referent to its controllee. The examples below are reproduced (Boeckx et al., 2010, p. 185):

(46) a. [[The chair]$_i$ hoped [t$_i$ to meet pro$_{comitative}$ at 6]]
      b. [[The chair]$_i$ hoped [t$_i$ to apply together pro$_{comitative}$ for the grant]]

The problem for the MTC is simple. It is easy to verify that partial control is allowed in (43), but exhaustive control is not. The embedded predicate in (43) is *meet*, which requires that its subject be semantically plural in Ewe and in other languages like English.[20] This also shows that we are not dealing with mere syntactic plurality but semantic plurality as well, unlike with split control where each overt PRO is syntactically plural but semantically singular. The head of the A-chain must therefore differ in reference from its trace, but this is impossible via movement.

The only way around this might be to make the following assumption: *yèwo* in the context of partial control is actually semantically singular, but it is spelled out as syntactically plural due to the presence of the null comitative. The problem is that this solution has no motivation apart from attempting to come up with an answer to this issue; indeed, the intuition of the Ewe speakers I have consulted is that the pronoun itself refers to a group of individuals and therefore semantically plural.

There are independent problems with assuming the existence of a null comitative.[21] There is no reason for null comitatives to not be allowed in sentences with finite clauses:

(47) *Kofi be   yè kpe ga ade.
     Kofi COMP LOG meet at 6
     '(Intended meaning) Kofi said he (and others) met at 6.'

In Ewe, proper names and other nominal phrases can be put into the subject position of a nonfinite clause. This leads us to another concern: if we assume the null comitative account, we would have to say comitatives can appear only if *yè* is present, even if the embedded clause is in the irrealis, or nonfinite. It is especially unmotivated to claim that null comitatives may only appear with overt PRO in this language to account for partial control.

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[19]Notice that this is reminiscent of PRO, in which although a controller may merely "partially" control an antecedent, the opposite is not possible where an antecedent contains the referent of PRO:

(45)   The group$_{i+}$ wanted PRO$_i$ to take out the trash.

[20]Note that *We met in Amherst* is acceptable but not **I met in Amherst*.

[21]The reader is referred to Landau (2016) for further discussion on assuming null comitatives in partial control constructions.

An example is given in (48) below where a proper name is present as the subject of the embedded nonfinite clause and its closest possible English translation is given. If the null comitative account was correct, we would expect this sentence to be grammatical:

(48)   *Kofi dzi be   Agbe a kpe ga ade
       Kofi   want COMP Agbe IRR meet at 6
       '(Intended meaning) Kofi wanted for them (including Agbe) to meet at 6.'

At the very least, my goal in this subsection has been to give evidence for the existence of genuine partial control; assuming the null comitative analysis leads to more complications and *ad hoc* solutions than the straightforward solution of the PRO-based analysis of partial control.

5.3   Split control

It has been noted by Fujii (2006), Boeckx et al. (2010) and Landau (2013), among others, that split control remains one of the most difficult aspects of control to account for, especially for the MTC. Due to this, in some papers such as Hornstein (1999), the entire existence of split control was questioned, however the consensus today, even among the proponents of the MTC, is that split control does exist. The overtness of split control in Ewe, repeated in (49), allows us to probe its structure.[22]

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

In this sentence, the overt PRO is a complex pronoun in which each *yè* refers to one of the controllers, and the entire complex pronoun refers to both. It can be verified that the complex pronoun is indeed an external argument of the embedded verb and refers to both controllers; one way of doing so is to make the object of the embedded verb into *themselves*, as in (50):

(50)   Agbe$_i$ do   eŋugble ne Fafa$_k$ be   [yè$_i$-wo meve   yè$_k$-wo]$_{i+k}$ fo   wo-dokui.
       Agbe make promise to Fafa COMP LOG-PL two.person LOG-PL   beat 3PL-self
       'Agbe$_i$ promised Fafa$_k$ PRO$_{i+k}$ to beat themselves.'

Prima facie, it's clear why this would be a problem for the MTC, given that there would be minimality violations in order to derive movement from inside the complex pronoun to the object of the control predicate and to its subject.[23]

    If the complex pronoun is itself a DP, which seems plausible given that it is the external argument of the embedded verb and refers to two controllers, then we should expect movement to take place as in (51) to avoid minimality violations:

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[22]Anne Bimpeh (p.c.), a speaker of the Ewedome dialect of Ewe, did not think that this sentence was acceptable. This seems to be an innovation of the Anlo dialect of Ewe.

[23]The usual problem with split control, as Landau (2013) puts it, is simply that the head of an A-chain must be identical to its trace and cannot be split. The problems I discuss here are unique to Anlo.

(51)

```
                    vP
                ┌────┴────┐
              DP          v'
        Agbe meve Fafa  ┌──┴──┐
              ↑         v    VP
              │          ┌───┴────┐
              │         DP        V'
              └──[Agbe meve Fafa] ┌──┴──┐
                       ↑          V    CP
                       │             ┌──┴──┐
                       │            DP    C'
                       └──[Agbe meve Fafa]
```
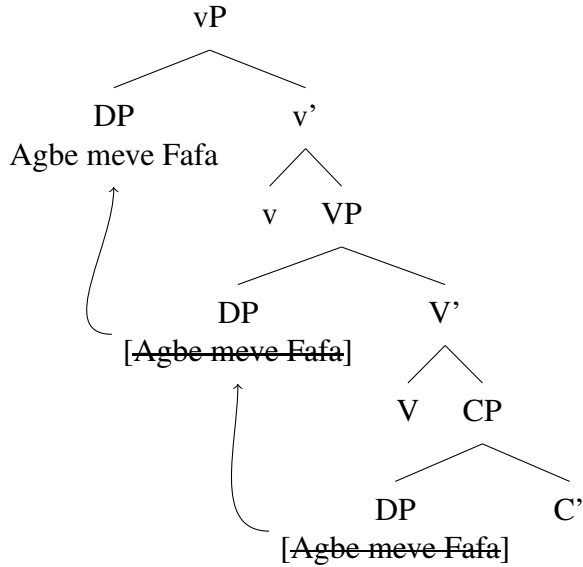
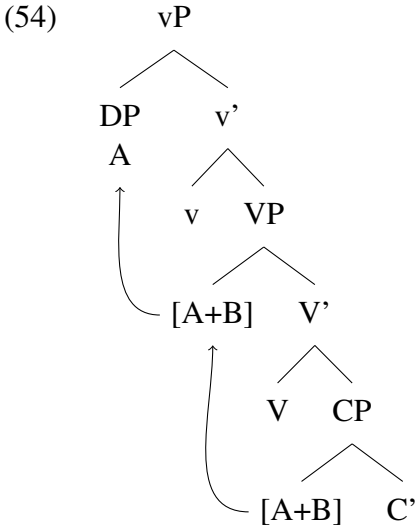This word order is completely wrong not only because the subject of the matrix clause is just *Agbe* and not both *Agbe* and *Fafa*, but it's also wrong because *meve*, which seems to, at first glance, act like a coordinator between two DPs, only works with two pronouns, as in (52a) and (52b):

(52) a. Wo meve   wo fo   ŋutsua.
          3PL two+men 3PL beat man
          'They beat the man.'

      b. Agbe kple/*meve   Fafa fo   ŋutsua.
          Agbe and/*two+men Fafa beat man
          'Agbe and Fafa beat the man.'

To find a solution, we might turn to Fujii (2006), who provides (as far as I am aware) the only fleshed out treatment of split control in the MTC. Fujii (2006) proposes that the split control PRO might be treated as a complex coordinate structure, which contains both of the controllers. In the case of Japanese, the complex pronoun is a specifier of a MoodP:
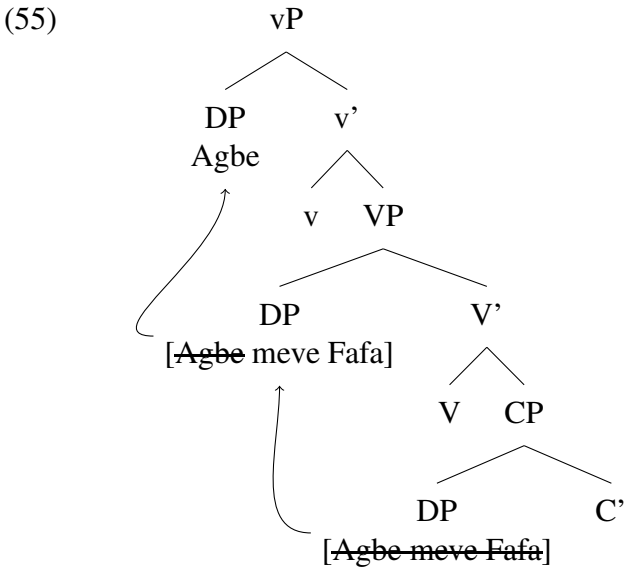
(53) [$_{MoodP}$ [A + B] [$_{Mood}$ TP]]

There is pied-piping of the matrix subject: after [A + B] moves to the object of the control predicate, A moves to the specifier position of the matrix clause. This is seen in (54).

(54)

```
                    vP
                   /  \
                 DP    v'
                 A    /  \
                     v    VP
                 ┌──[A+B]  V'
                 │        /  \
                 │       V    CP
                 │      /    /  \
                 └──[A+B]  [A+B]  C'
```

What is not clear in Fujii (2006)'s solution is whether [A + B] is a DP or something else entirely, or perhaps a PP. Perhaps this is purposefully left unanswered. If it is a DP, movement of a DP from inside another DP would violate minimality conditions.[24] If it is not a DP, then there is no minimality violation, but this could contradict the observation we have made previously in Ewe: the complex split-controlled pronoun seems to be a DP, as observed in (50).

Furthermore, at first glance, we get the incorrect word order with Fujii's approach, as seen in (55). For example, *meve* is not a resumptive pronoun and it still appears in its base-generated position, and there aren't three resumptive pronouns even though three DPs are deleted:

(55)

```
                        vP
                       /  \
                     DP    v'
                   Agbe   /  \
                         v    VP
                        /    /  \
                      DP    DP   V'
               [Agbe meve Fafa] /  \
                          │    V    CP
                          │        /  \
                          │      DP    C'
                          └──[Agbe meve Fafa]
```

A way around this is to assume a rule in the PF which says "pronounce meve in the only position in which it can be pronounced with two pronouns." This is the lowest, base-generated position,

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[24]This is not impossible to get around; see Collins (2005a,b) for an account of "smuggling" in which such minimality violations can be avoided. The solution I have in mind is that some kind of complex smuggling structure might be assumed, in which the complex syntactic object [A+B] and A inside it would have different features driving movement to each of their landing sites.

and it seems to provide the correct result given that in a sentence like (52a), both pronouns must be present at the same time.[25]

One question that is left open is the structure of the complex split-controlled pronoun. It does not seem to be a coordinate structure in the spirit of Fujii (2006) given that *meve* is made between coalescence between two words, *wome* 'man' and *eve* 'two'.

To recap, I have presented the split controlled construction in Ewe and tried to derive it in the MTC. With additional assumptions, it would be possible to do so, but it's not clear whether the solutions would provide insight; it might be simpler to account for with the Chierchia (1990) approach, which I have attempted to do so in section 4.

5.4   Does Ewe have raising?

What seems unusual about Ewe is that, based on the results of my fieldwork, I have not been able to find any raising predicates. This is important, given that if control is A-movement and it is possible, raising should also be expected. The only difference is that control involves A-movement into a θ-position in the MTC, and it's unclear as to why a language should allow A-movement into a θ-position but not other kinds of A-movement. Admittedly, the discussion in this section is much less certain, though still worth mentioning.

On the whole, it is difficult to find predicates which do not assign a θ-role to their subject and take nonfinite clause arguments in Niger-Congo languages, because almost all predicates we would consider raising predicates in English, such as *seem* and *likely*, only take finite clauses in Ewe, as in (56a)-(56b):[26]

(56)   a.   E wo be   e   hodzo
             It feel COMP 3SG hot
             'It seems that it is hot.'

       b.   *E wo be   e-a   hodzo
             It   feel COMP 3SG-IRR hot
             '(Intended meaning) It seems to be hot.'

As Sulemana (2018) notes, the situation is the same in Buli, another Niger-Congo language. He does note that one predicate in Buli, *magsi* which means 'right/appropriate' takes a non-finite complement and allows optional raising, which is given in (57a)-(57b) below. However, this contrasts with Ewe in which raising is not possible with the same predicate, as in (57c)-(57d):

(57)   a.   Kù màgsì Asouk chēŋ sūkū
             it   right Asouk go   school
             'It is right (for) Asouk to go to school.'

       b.   Asouk$_i$ màgsi wà$_{i/*j}$ chēŋ sūkū
             Asouk right 3SG go   school
             'It is right (for) Asouk to go to school.'   Buli

---

[25]However, both pronouns *can* be missing and it is felicitous to say *Meve fo ŋutsua* meaning "two men beat the man."

[26]For reasons of space I omit the examples in which attempts to raise out of the finite embedded clause fail. That raising is not possible in this case is not surprising given that finite embedded clauses constitute phases and movement out of them is not possible.

    c. E nyo be   Agbe na yi sukuu.
       It right COMP Agbe NA go school
       'It is right for Agbe to go to school.'

    d. *Agbe nyo be   yè$_i$-a   na yi sukuu.
       Agbe   right COMP LOG-IRR NA go school
       'Agbe is right to go to school.'   Ewe

There are a few predicates in Ewe that we would call raising predicates in English, in that they do not take nonfinite embedded clause arguments and do not assign a θ-role to the subject: these are *dzegome* 'begin', *dzudzo* 'stop' and *yidzi* 'resume', which we have already seen in (34), which is repeated in (58a) below. Notice that the expletive-constructions in (58b) are impossible in this case; expletive-insertion is one of the classical tests to distinguish between raising and control predicates because a raising predicate does not assign a θ-role to its matrix subject.

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

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

This alone isn't enough to conclude that there is no raising in Ewe. We might assume simply that A-movement, when possible, is obligatory in this dialect, and leave it at that. However, there might be further evidence that A-movement just does not take place in these constuctions.

    Ewe has very few suitable idioms with which to test this, but one possible idiom is *Adoglo lia ati* 'the lizard climbed the tree' (meaning 'one is hungry'). In Ewe, the idiomatic meaning cannot be obtained in a sentence such as (59), in which case it is completely unacceptable,; but the sentence is fine without the idiomatic meaning:

(59)   *Adoglo-a$_i$ dzegome/dzudzo/yidzi be   yè$_i$-a   lia   ati.
        Lizard-NOM begin/stop/resume   COMP LOG-IRR climb tree.
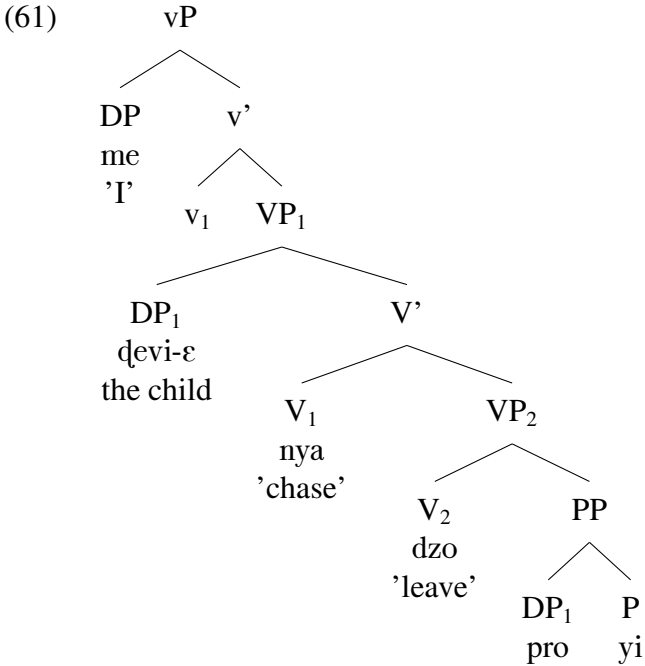   '(Intended meaning) One began/stopped/resumed to be hungry/being hungry.'

Another reason we might think that A-movement is not obligatory is based on serial verb constructions in Ewe, covered in detail by Collins (1997). First, he notes that Ewe has unaccusatives; we can see this in a simple sentence such as *Kofi dzo* 'Kofi left' where *dzo* is an unaccusative verb like the English *leave*. Here I assume the usual analysis of unaccusatives in which they involve A-movement.

    One kind of serial verb constructions is one in which the second verb is an unaccusative, and the first is a transitive verb. These are called resultative SVCs. An example is given in (60).

(60)   Me nya devi-e   dzo yi.
       I   chase child-DEF leave P
       'I chased the child away.'   (Collins, 1997, p. 461)

In Collins (1997)'s analysis, internal argument sharing is mediated by a little pro as the argument of the unaccusative, and the object of the unaccusative remains in its base-generated position. The little pro is coindexed with the object of the first verb. The structure of (60) is given in (61).[27]

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[27]I omit a few details here, for example the movement of V_1.

(61)

```
                    vP
                   /  \
                 DP    v'
                 me   /  \
                 'I' v₁   VP₁
                        /   \
                      DP₁    V'
                    ɖevi-ɛ  /  \
                  the child V₁   VP₂
                           nya  /   \
                          'chase' V₂   PP
                                 dzo  /  \
                                'leave' DP₁  P
                                        pro  yi
```

If this is right, then A-movement is not obligatory in Ewe, because something remains in the object position of the unaccusative without moving. If A-movement were obligatory in Ewe, then resultative SVCs would be blocked.[28]

Let us assume that my claim that Anlo has no raising despite having control is correct. The proponent of the MTC can attempt to defend the approach in two ways. First, they can argue that control and raising were never meant to be identical, because the former involves movement into a θ-position and the latter doesn't. They could stipulate that A-movement must involve movement into a θ-position in Ewe. However, this is false given that unaccusatives exist in Ewe.

Next, as Norbert Hornstein (p.c.) has suggested, we might say that Ewe is a language in which control is not A-movement, and this might be necessary because Ewe has no A-movement, and so it has to resort to something else to establish the same structural dependency.

However, Ewe does have unaccusatives (though it does not have passives), which we might take to involve A-movement. Furthermore, by Occam's razor it is preferable to come up with a theory of control that works for every language, and it is a disadvantage for the MTC to not be able to account for the facts seen in Ewe, which do not involve movement into a θ-position. The ATC in particular does not run into this problem.

The problem with the arguments I have given in this subsection is that they are not positive arguments against raising in Ewe. There could potentially be an untested predicate in which raising is possible. However, given that the expletive and idiom tests fail for the usual raising predicates *begin*, *stop* and *resume*, there might be reason to believe that Ewe just lacks raising, and therefore A-movement out of an embedded nonfinite clause. And if this is true, then it's not clear why control should be allowed if it is also A-movement.

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[28]Of course, the defender of the MTC could then say that A-movement is obligatory with DPs and not PPs, given that we see a PP as the object of the unaccusative in an SVC.

6 Conclusion

The central concern of this paper has been to determine how the MTC handles the things that we can see from the overtness of PRO in Ewe. We have learned that partial control does seem to exist, and this is at odds with what defenders of the MTC such as Boeckx et al. (2010), Bowers (2008) allege. We have also learned that split control not only exists, but the structure of split-controlled PRO is more complicated than anticipated, in which it is made up of two PROs where each PRO refers to one of the controllers.

It turns out that it might be possible for a language to have control but not raising, which does not seem to be predicted by the MTC. Though it would not be theoretically impossible, it seems unlikely that in a given language, only A-movement into a θ-position should be possible. Most importantly, the fact that Ewe's overt PRO has the same phonetic form as the logophoric pronoun was predicted by Heim (2002): rather than control and raising being similar processes, it might be more reasonable to suppose that the distribution of OC PRO and logophoric pronouns are mediated by the same theoretical tool.

I presented these four arguments against the MTC, and concluded that it is difficult for them to be accounted for without making several *ad hoc* assumptions. The ATC presented here is capable of accounting for the main problem presented in this paper; that is, why overt PRO and the logophoric pronoun have the same phonetic form despite having different properties. There seems to be ample empirical evidence for this conclusion. However, it is true that this paper raises more questions than it answers. Some examples are given in (62a)-(62c) below.

(62) a. The Chierchia (1990) theory of control is purely semantic and doesn't get the syntactic agreement facts noted by Landau (2015).
      b. Why are genuine logophoric pronouns in other languages always read de se?
      c. What is the semantics for split control?
      d. What is the structure of the complex split controlled pronoun?

At this point, I leave most of these questions open for future research; (62c) is especially pressing given that, as far as I am aware, no one has proposed a semantics for split control to date. It is reasonable to suppose that it might have a similar semantics to that of partial control (Gennaro Chierchia, p.c.), for which a semantics has been proposed by Pearson (2016), though there are clear syntactic differences as the evidence from Ewe has shown.

But the most pressing concern is the problem noted by Landau (2015); the ATC, which provides a semantics for control, does not get the syntactic agreement facts although it gets the de se reading. It's easy to see how this is a problem just by repeating (26) below in (63), in which we see agreement between the controller and overt PRO as they are both plural:

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

Nothing in the ATC gives us syntactic agreement, as there is no syntactic relation between the controller and PRO. By contrast, an approach to control mediated by the operation Agree such as Landau (1999)'s is able to get the syntactic agreement facts but not the de se reading. This shows us the need for a theory of control which can account for control being both a syntactic

and semantic phenomenon. For the time being, I leave this question open to future research, but there have been attempts to derive syntactic agreement in the ATC framework.[29]

To recap, in this paper, I have attempted to provide empirical evidence for Heim (2002)'s observation that OC PRO and logophoric pronouns should be treated in the same way. That the two have the same form–or that left-periphery bound pronouns exist–in this dialect of Ewe does not seem to be a coincidence. It is an advantage for the Chierchia (1990) theory of control that it can explain why these two should have the same phonetic form. By contrast, the MTC seems to struggle to do so, and in doing so it might run into other problems. This leaves a great deal of exciting avenues for future research.

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[29]See (Pearson, 2013, p. 147) for more details.

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