

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

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This paper presents novel data from the Anlo dialect of Ewe to show that the pronoun $y\grave{e}$ in the subject position of irrealis clauses has the properties of PRO, 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 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); deriving split control may violate minimality constraints, 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 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 obligatory control (OC) 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 so-called logophoric pronoun. Ewe was first noted by Clements (1975) for having a logophoric pronoun, $y\grave{e}$, with the following distribution where it must refer to the matrix subject.¹ Crucially, in Ewe, $y\grave{e}$ can only appear after the complementizer *be*—which can optionally also mean *say*. In (1a)–(1c), the index *s* refers to the speaker:

- (1) a. Kofi_i be $y\grave{e}_{i/*k/*s}$ -dzo.
Kofi say LOG leave
'Kofi_i said he_i left.'

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¹For reasons unrelated to this paper, *e* cannot refer to the matrix subject. Collins (1994) reports that this is possible in the Kpele dialect of Ewe; however, I have been unable to replicate his findings in Anlo.

- 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_i say I_s leave
 ‘Kofi said I left.’

Clements (1975)

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. However, one important distance between the two is that logophoric pronouns can have long-distance antecedents; OC PRO cannot.

In the data from Ewe that will be shown, a pronoun with the phonetic form *yè* is present in the subject position of an irrealis clause. Almost all control constructions—apart from ones in the jussive mood—contain either the potential or subjunctive mood marker, both pronounced *-a*. It 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 irrealis embedded clauses 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 realis or irrealis clause. The strongest piece of evidence is the grammaticality of (2), due to the fact that inanimate objects cannot have attitudes or thoughts, the embedded clause cannot have a perspectival center.

- (2) Ati_i-a dzegome be yè_i-a ɲe.
 Tree-NOM begin COMP LOG-POT 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 or not 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, (3) 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.

- (3) Kofi dzi be yè-wo/*yè-a kpe ga ade.
 Kofi want COMP LOG-PL/LOG-POT meet time 6
 ‘Kofi_i wanted PRO_{i+}/*PRO_i to meet at 6.’

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 realis and irrealis 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 the additional movement to a θ -position.

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. Accounting for the data that will be presented in section 3 of this paper via the approach presented in this paper is more straightforward than what the MTC would have to assume in order to account for them.

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. I also summarize Landau (2004)'s findings on finite control, given that control is instantiated in embedded finite clauses in Ewe. In section 3, I present the novel data from the Anlo dialect of Ewe, and provide a brief analysis 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 discusses further theoretical problems. Section 7 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. Section 2.3 summarizes Landau (2004) and introduces finite control. 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 overttness 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 possessed a θ -role was the θ -Criterion.² Chomsky (1981)'s definition of the θ -Criterion is given in (4a)-(4b) below:

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

- (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 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.

³There 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.

⁴Lebeaux (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. PRO_{arb} does not refer to the antecedent, *the babies*.

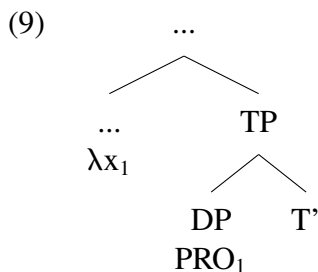
- (8) It is dangerous for babies [PRO_{arb} to smoke around them].

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:



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. $\llbracket \text{claim} \rrbracket^{c:g} = \lambda P_{\langle e, \langle st \rangle \rangle} \lambda x_e \lambda w_s. \forall \langle w', y \rangle \in \mathbf{claim}_{x,w}, P(y)(w')$ where $\mathbf{claim}_{x,w} = \{ \langle w', y \rangle : \text{what } x \text{ claims in } w \text{ is true } w' \text{ and } x \text{ identifies herself as } y \text{ in } w' \}$
- b. $\llbracket \text{CP}_2 \rrbracket^{c:g} = \lambda x \lambda w. x \text{ is clever in } w$
- c. $\llbracket \text{CP}_1 \rrbracket^{c:g} = \lambda w. \forall \langle w', y \rangle \in \mathbf{claim}_{\text{John},w}, y \text{ is clever in } w'$ (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 $\langle w', y \rangle$ 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 λw₁ [w₁ John claimed_[log] [_{CP}₂ λx₂_[log] λw₃ [w₃ PRO₂_{Heig} to be clever]]]]

(14) [_{CP}₁ λw₁ [w₁ John claimed_[log] [_{CP}₂ λx₂_[log] λw₃ [w₃ yè₂_{Heig} was clever]]]]

In non-attitudinal contexts, PRO and logophoric pronouns will not be licensed.

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:⁸

⁵This 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.

⁶We 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.

⁷This 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 structure in section 4.

⁸This is simplified from her definition. See Pearson (2015) for further discussion.

- (15) G is a concept generator in w iff:
- a. G is of type $\langle e, \langle s, e \rangle \rangle$
 - b. For all y, G(y) is a y-concept in w
 - c. For all y, if there is a w' such that $\langle y, w' \rangle \in \text{DoxAlt}(x, w)$, 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. $[\lambda w: \exists_{\langle e, se \rangle}. G \text{ is a concept generator for John in } w \ \& \ \forall w' \in \text{Say}(\text{Kofi}; w), G(y) \text{ is clever in } w']$
 c. $[\lambda w: \exists_{\langle e, se \rangle}. G \text{ is a concept generator for John in } w \ \& \ \forall w' \in \text{Say}(\text{Kofi}; w), G(\text{John}) \text{ is clever in } w']$

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 ϕ -features, but I propose an alternate solution in section 6.1. Unlike Pearson, I will not relate resPs and long-distance readings.

In section 3, I will provide empirical evidence for Heim (2002)'s account for the distribution of logophoric pronouns very similarly to OC PRO.

2.3 Finite control

We will see that control in Ewe is likely a form of finite control. Some may find this objectionable given that control is often assumed to take place only in nonfinite complements. However, finite control is attested and surprisingly common: examples are seen in the Balkan languages, Persian, Hebrew, Spanish, Dogrib and Kannada.⁹

An example of finite control from Landau (2013) is given in (17) 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 this property is not unique to nonfinite clauses. It has a sloppy reading with ellipsis, just like PRO and unlike pro.

- (17) 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.' Hebrew

According to Landau (2004), these complements are obligatorily in the future tense, and these complements can never have a realis mood. Landau notes that it is not an accident that finite control is always interpreted in this way. One might take this to mean that there is a scale of finiteness, and PRO may be inserted into certain finite clauses (with future tense, irrealis mood) which are not as finite as others (past tense). Indeed, Landau shows that subjunctive clauses such as (18) pattern with infinitives in allowing NPI licensing; indicatives do not allow it, as in (19):

- (18) Lo darašti me-Gil ledaber im af-exad
 not demanded.1SG from-Gil to-speak with anybody
 'I didn't demand of Gil to speak to anybody.'

⁹See Landau (2004, 2013) for a more detailed discussion on finite control.

- (19) *Lo he'emanti še-Gil yedaber im af-exad
 not believed.1SG that-Gil will-speak-3SG.M with anybody
 'I didn't believe that Gil would speak to anybody.'

In the Balkan languages, finite control is seen with control complements which have a subjunctive mood marker. In Greek, this marker is *na*, and like Hebrew this passes the aforementioned tests for OC, such as the obligatory de se reading:

- (20) I Maria_i prospathise PRO_{i/*k} na divasi.
 the Mary tried.3SG PRO PRT read.3SG
 'Mary tried to read.' Greek

This is precisely what we will see in Ewe, which can instantiate control with both an irrealis subjunctive marker or a potential marker. We therefore do not have to give up the hypothesis of this paper that overt PRO exists in Ewe.

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 irrealis clause, has the properties of overt PRO rather than the properties of a logophoric pronoun. Section 3.1 contains preliminary data on Ewe, and section 3.2 presents the data. 3.2 is a summary.

For simplicity, for the rest of this paper I refer to *yè* in the subject position of an irrealis clause as irrealis *yè* and *yè* in the subject position of a realis clause as realis *yè*.

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 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.¹⁰

In embedded clauses, we see OC with the potential or subjunctive marker, both of which belong to the irrealis category of mood markers, both pronounced *-a*. Given that Ewe does not have agreement markings or tense, it is harder to determine whether it has finite or nonfinite clauses.

¹⁰Grano and Lotven (2016) notes that the logophoric pronoun *je* in Gengbe is controlled in the subject position of an irrealis embedded clause, as well. Therefore, there is independent evidence corroborating the findings of this fieldwork on the Anlo dialect.

But if we take the dictionary definition of finiteness, in which finite clauses can stand alone as matrix clauses, then clauses with *-a* are finite, because they do not need to be embedded, as in (21):

- (21) Kofi a dzo.
 Kofi POT leave
 Potential meaning 1: ‘Kofi is likely to leave.’
 Potential meaning 2: ‘Kofi is likely to have left.’
 Potential meaning 3: ‘Kofi is likely to be leaving.’

Essegbey (2008) studies the potential variant of *-a*, arguing that because sentences like (21) can refer to possible states of affair in the past, present and future, it is merely a modal morpheme which marks potentiality. But it usually has a meaning in the future sense. For the rest of this paper, I will provide control complements with only the potential marker.¹¹

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. (22a), my own example below, is good with the logophoric pronoun in Ewe.

- (22) 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 (23):

- (23) 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 (24). I only focus on the low tone, logophoric pronoun in this paper.

- (24) *ye_i/*yè_i* wo vidyidiy_i-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 is important to determine whether irrealis embedded clauses behave like in Hebrew, as in section 2.3. I use two tests for this purpose.

First, realis clauses may be finite, as aspectual marking can be added to them. Clauses containing *-a* may be nonfinite, as aspectual marking cannot be added. This test was 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 (25a)-(25b). There is therefore conflicting evidence as to whether these are finite or nonfinite.

¹¹For more details, the reader is referred to Ameka (2008) and Essegbey (2008).

- (25) a. Kofi_i be yè_i dzo dzo-m.
 Kofi COMP LOG leave RED-PROG
 ‘Kofi said he was leaving.’
- b. *Kofi_i be yè_i-a dzo dzo-m.
 Kofi COMP LOG-POT leave RED-PROG
 ‘(Intended reading) Kofi said that he is likely to be leaving.’

Like Hebrew subjunctive clauses, NPI licensing can take place with irrealis embedded clauses in Ewe, but not realis ones. This is seen in (26a)-(26b):

- (26) a. *Kofi_i me-be yè_i dzo o.
 Kofi NEG1-COMP LOG leave NEG2
 ‘Kofi didn’t say that he left.’
- b. Kofi_i me-be yè_i-a dzo o.
 Kofi NEG1-COMP LOG-POT leave NEG2
 ‘Kofi didn’t say that he was likely to leave.’

3.2 Overt PRO tests

In the controlled position—which is the subject position of an irrealis embedded clause—it is usually pronounced as *ya* in the Anlo dialect, which has a great deal of vowel coalescence. But it may optionally pronounced as *yèa*.

In (27), 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 irrealis *yè*, unlike realis *yè*, is indeed being controlled here:

- (27) a. Agbe_i dzagbagba/ɲlobe/dzina/vɔvɔm/wosusu/dzi/susum be yè_i-a dzo.
 Agbe try/forget/want/afraid/decide/like/intend COMP LOG-POT leave
 ‘Agbe_i tried/forgot/wanted/is afraid/decided/likes/intends PRO_i to leave.’
- b. Kofi_i dzagbagba/dzina/vɔvɔm/wosusu/dzi be yè_i-a kpo dzidzɔ.
 Kofi try/want/afraid/decide/like COMP LOG-POT experience happiness
 ‘Kofi_i tried/wanted/is afraid/decided/likes PRO_i to be happy.’

Ewe does not seem to have a phonetically null PRO; it is impossible to omit *yè* in all of the examples above. This might be blocked due to a that-trace effect in Ewe, but expanded to include phonetically null elements next to a complementizer in general, and not just traces.

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 (28):

- (28) a. Ame adeke me be yè-a dzo o.
 person no-one NEG1 COMP LOG-POT 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-POT experience happiness NEG2
 ‘No one tried to be happy.’

I previously noted, with my own example in (22), that realis *yè* need not be read *de se*, at least in a realis finite embedded clause. However, I provide one example in (29) which irrealis *yè* 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:

- (29) 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-POT 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 irrealis yè; 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 (30):

- (30) a. [Agbe_k fe velia-wo]_i dzagbagba be yè-wo_{i/*k}-a dzo.
 Agbe GEN friend-PL try COMP LOG-PL-POT leave
 ‘Agbe’s friends tried to leave.’
- b. [Kofi_k fe dzila-wo]_i wosusu be yè-wo_{i/*k}-a ho ekplu
 Kofi GEN parent-PL decide COMP LOG-PL-POT COP medal
 ‘Kofi’s parents decided to get a medal.’

It’s been well-known since Clements (1975) that realis yè can have long-distance antecedents, and Pearson (2015) has independently confirmed this; her example is given in (31) below. This sentence is ambiguous: each yè may refer to Kofi or Marie.

- (31) Marie_i be Kofi_k xuse be yè_{i/k} na yè_{i/k} cadeau
 Mary say Kofi believe COMP LOG give COMP gift
 ‘Mary_i said that Kofi_k believed that he_k/she_i gave him_k/her_i a gift.’

Irrealis yè, 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:¹²

- (32) a. Agbe_j kadedzi be Kofi_i dzagbagba be yè_{i/*j}-a kpo dzidzo.
 Agbe believe COMP Kofi try COMP LOG-POT 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-POT 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 (33).

¹²The logophoric pronoun in this dialect of Ewe behaves similarly to the logophoric pronoun *je* in Gengbe, as previously mentioned in section 2.3.

In the subject position of an irrealis clause, if the matrix predicate is *promise*, *yè* can only refer to the matrix subject across the object of the predicate:¹³

- (33) Agbe_i do enjuble ne Fafa_k be yè_{i/*k}-a fo ηutsu-a.
 Agbe make promise to Fafa COMP LOG-POT 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. Partial control is also common in this dialect, as shown in (34). 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:

- (34) a. Kofi dzi be yè-wo/*yè-a kpe ga ade.
 Kofi want COMP LOG-PL/LOG-POT 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-POT gather
 ‘[The chair]_i decided PRO_{i+}/*PRO_i to gather.’

For split control, irrealis *yè* either has the same phonetic form as that of partial and plural control, *yèwo* as in (35), or an optional pronoun doubling that is more specific as in (36):¹⁴

- (35) Agbe_i gblo ne Fafa_k be yè-wo_{i+k}-a fo ηutsu-a.
 Agbe told to Fafa COMP LOG-PL-POT beat man-DEF
 ‘Agbe_i told Fafa_k PRO_{i+k} to beat the man (together).’
 (36) Agbe_i gblo ne Fafa_k be [yè-wo_{i+k} meve yè-wo_{i+k}]_{i+k} a fo ηutsu-a.
 Agbe told to Fafa COMP LOG-PL two.person LOG-PL POT beat man-DEF
 ‘Agbe_i told Fafa_k PRO_{i+k} to beat the man (together).’

Discussing the nature of pronoun doubling would go beyond the scope of this paper. But the word that the pronoun doubles on is made from the coalescence between two words *two* and *man*, and this coordinate structure cannot be used for lexical NPs:

- (37) a. Wo meve wo fo ηutsua.
 3PL two+men 3PL beat man
 ‘They beat the man.’¹⁵
 b. Agbe kple/*meve Fafa fo ηutsua.
 Agbe and/*two+men Fafa beat man
 ‘Agbe and Fafa beat the man.’

¹³It 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.

¹⁴Anlo Ewe fits in with Landau (2013)’s generalization that split control is most commonly found with verbs of communication and proposal. This is precisely the case in the Anlo dialect of Ewe as well.

¹⁵Pronoun doubling in general seems to be unique to the Anlo dialect of Ewe studied in this paper. Anne Bimpeh (p.c.), a speaker of the Ewedome dialect of Ewe, did not think that this sentence was acceptable.

A final test to distinguish between the realis *yè* and irrealis *yè* is the availability of the strict and sloppy readings. Irrealis *yè* only has a sloppy reading like overt PRO, as seen in (38a), but realis *yè* may have a strict or sloppy reading, as in (38b).

- (38) a. Kofi_i dzagbagba be yè_i-a fle agbale afi Agbe.
 Kofi try COMP LOG-POT 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~~. (strict too)’

Finally, and perhaps most importantly, inanimate control with irrealis *yè* is a possibility.¹⁶ 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:

- (39) a. Emo_i dzagbagba be yè_i-a dzegome.
 Machine try COMP LOG-POT start
 ‘The machine tried to reboot.’
- b. Emo_i wosusu be yè_i-a dzudzuɔ.
 Machine decide COMP LOG-POT 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 (SVCs); 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 (40), 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.

- (40) Ati-a_i dzegome/dzudzɔ/yidzi be yè_i-a ŋe.
 Tree-NOM begin/stop/resume COMP LOG-POT break.
 ‘The tree_i began/stopped/resumed PRO_i to break.’

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. It would be unlikely for trees and other inanimate objects to be logophoric as they cannot possess attitudes, thoughts or report speech, unless we are dealing with a metaphorical context.

However, one difference between PRO and both *yè* is the presence of ϕ -features in the latter. 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. Irrealis *yè*, though it has the properties of PRO, does have ϕ -features. *Me* is the weak first person pronoun in the pair below:

- (41) a. Me be me dzo.
 b. * Me be yè dzo.

¹⁶I have not been able to find any examples in which realis *yè* is grammatical and there is no metaphorical animacy.

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.

So far, I have only provided examples of subject control in this section. For the most part, I will not discuss object control in this paper. Examples with object control¹⁷ are difficult to come across given that Ewe is a language with SVCs, which precludes the possibility of object control in most cases. However, it is possible to have object control in embedded clauses with the jussive mood¹⁸ (*né*), and this is instantiated with control predicates such as *persuade*:

- (42) Agbe_i ble Fafa_k nu be né_{*i/k} fo ntsu-a.
 Agbe persuade Fafa thing COMP JUSS beat man-DEF
 ‘Agbe_i persuaded Fafa_k PRO_k to beat the man.’

This is the only context that I have seen in which the subject of the embedded clause can be null; this language does not otherwise have a phonetically null PRO as mentioned prior. But we have independent reason for thinking that the jussive mood marker erases third person singular subject pronouns. The lexical subject of a sentence in the jussive mood is not erased in (43), but the pronoun is in (44):

- (43) gli né-va
 folktale JUSS-come
 ‘Let the folktale come.’
- (44) né-ga-tu mi
 JUSS-REP-meet 1PL
 ‘Let it come to meet us again (in response to New Year’s wish).’ Ameka (2008)

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 irrealis *yè* share more similarities than irrealis and realis *yè* do.

Table 1: A comparison of the noted properties of *yè* in the subject position of realis embedded clauses, *yè* in the subject position of irrealis embedded clauses and OC PRO.

Properties	Realis <i>yè</i>	Irrealis <i>yè</i>	OC PRO
Has ϕ -features	✓	✓	✗
Must be c-commanded	✓	✓	✓
Must be read de se	✗	✓	✓
Long-distance antecedent	✓	✗ ¹⁹	✗ ²⁰
Bound variable	✓	✓	✓
Inanimate possible	✗	✓	✓
Sloppy reading only	✗	✓	✓
Partial possible	✓	✓	✓
Split possible	✓	✓	✓

¹⁷For example, in *John persuaded Mary_i PRO_i to take out the trash*, the object of *persuade* controls PRO.

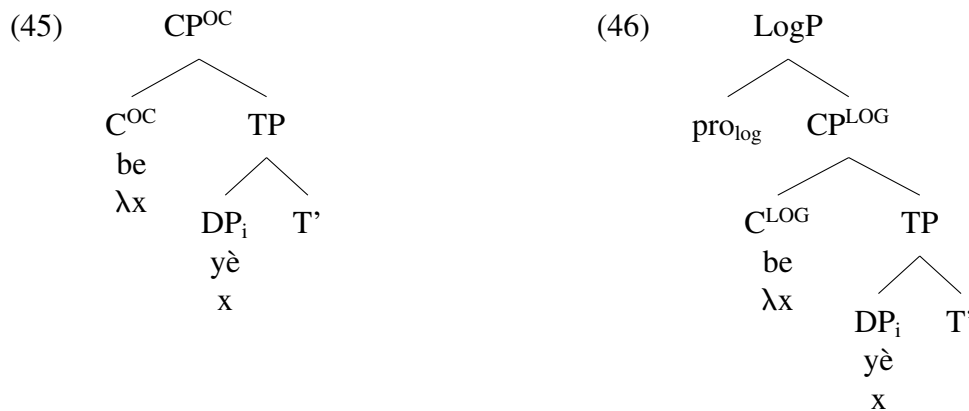
¹⁸The jussive mood has an irrealis nature and the desire of the speaker for a state of affairs to occur, as Ameka (2008) points out. Given that it is closely related to the subjunctive, it is not surprising for it to also be able to instantiate control in embedded clauses with control predicates.

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 Analysis

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? Second, why does *yè* have different properties depending on whether it is the subject of a realis or irrealis embedded clause? Despite this, I will propose that they are actually the same pronoun.

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.²¹ I will propose two structures: (45) for irrealis *yè* and (46) for realis *yè*. In both structures, *yè* is a free variable. In (46), I assume Charnavel (2019)'s structure for exempt anaphors in which they are bound locally by pro_{log} .



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 irrealis clause.²² 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 realis and irrealis versions of this pronoun.

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.

²¹However, 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.

²²This makes Ewe's so-called logophoric pronoun stand out when compared to Yoruba. According to Nike S. Lawal (p.c.), the logophoric pronoun of Yoruba can never have an inanimate referent, and it cannot be controlled. I have, however, not been able to do rigorous fieldwork on Yoruba and as such I leave it an open question as to whether all logophoric pronouns are just LPBPs or whether it is only Ewe's *yè* that is special.

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 ϕ -features unification must be local, so it cannot take a long-distance antecedent.

But given that $yè$ has a third person feature, no feature unification is needed and long-distance binding should in theory be possible. However, we have seen clear evidence that irrealis $yè$, despite having ϕ -features, cannot have a long-distance antecedent and has other properties associated with control, so this account cannot be right. We need to find an alternate solution: might the necessity of irrealis $yè$ being read locally arise simply from the fact that it has to be controlled?

Some evidence for this might be the following: $yè$ can also appear in the object position of a control complement with *-a*, as in (47), but in this case it may always be read long-distance and therefore does not instantiate overt PRO. It is unsurprising that control is instantiated only in the subject position of the control complements in this dialect:

- (47) Agbe_j kadedzi be Kofi_i dzagbagba be $yè_{i/*j}$ -a fo $yè_{j/?i}$.
 Agbe believe COMP Kofi try COMP LOG-IRR hit LOG
 'Agbe_j believes that Kofi_i tried to hit him_j.'

Let us therefore posit that there are (at least) three different kinds of the complementizer *be*. There is the usual *be* that is used in every embedded clause apart from the ones involving control: for example, in an embedded clause such as *be Agbe a dzo* 'that Agbe will likely leave' it might merely have the semantics of the identity function.

A second complementizer *be* is obligatorily Merged onto any control complement. I borrow this tool from Landau (2015)'s two-tier theory of control, to be further discussed in section 6.2.²³ I define the necessary conditions for the complementizer to be Merged as follows.

- (48) The control complementizer, C^{OC} , pronounced *be* in Ewe, may be Merged if and only if:
- a. The embedded clause possesses PRO or a LPBP ($yè$ in Ewe) attached to the subject position of a clause. This is Spec,MoodP in Ewe and TP in English.
 - b. The embedded clause possesses the right structure (irrealis, or lacks semantic tense and agreement) for control to take place.

For (48a), I follow Essegbey (2008) in assuming that Ewe is a tenseless language and therefore may lack TP layers. For (48b), as discussed in section 2.3, subjunctive clauses that are finite in the Balkan languages and Hebrew, among others, seem to share the properties of the infinitival clauses in those languages. It is possible that this is because they have lesser syntactic structure when compared to realis embedded clauses. Further investigation of this would go beyond the scope of this paper, but it is an issue that I leave open for future research.

A third, and final, complementizer C^{LOG} , also pronounced *be*, is also merged onto any with $yè$, apart from the ones which involve control. This also requires another projection, LogP, on top of the CP^{LOG} layer. I assume Charnavel (2019)'s structure of exempt anaphora and extend it to logophoric pronouns. Charnavel (2019) argues that exempt anaphors are bound by perspective centers, which is a local pro_{log} at the left-periphery of the embedded clause. The fact that the perspectival center can differ allows long-distance antecedents.

²³I do not, however, need to assume that C^{OC} has the two properties which makes it special according to Landau: that it introduces a special *de re* presupposition to get *de se* readings and that it projects one of its individual coordinates as a specifier.

Then the only difference between control (irrealis *yè*) and logophoricity (realis *yè*, Yoruba’s *òun*, etc.) is that logophoricity involves binding by the local perspectival center pro_{log} , whereas control involves binding a local antecedent. This is done in order to account for the fact that control is almost always local while logophoric pronouns, and realis *yè*, can be read long-distance.

If we assumed pro_{log} in the structure of attitudinal control complements, this could lead to the undesirable result that control should allow for long-distance antecedents as well. But it might be possible to defend an approach to control which always must have local perspectival centers. To recap, this account maintains the similarity between control and logophoricity.

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 the 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. In section 5.1, I discuss the phonetic identity between the realis and irrealis *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). In sections 5.3 and 5.4, I discuss the overtness of split control and whether it can be derived by movement without violating minimality constraints, and the seeming lack of raising in this dialect of Ewe respectively.

5.1 Phonetic identity between realis and irrealis *yé*

A crucial argument against the MTC is the fact that, despite the numerous differences between realis and irrealis *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 Ewe, 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. But 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*.

However, 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 required in long-distance extraction of a subject.

- (49) (ká) wānā_i *(ā̀tì) fì pá:-chīm *(wà_i) à̀lì 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 *wà* 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).

- (50) *abrantie n(o)-a: ɔ-bɔ: 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).

- (51) *Neke gbeke ne: e tue wa*
 PD child PDD 3SG ear hard
 ‘This child is stubborn.’ Ga

To recap, there doesn't seem to be an insightful answer from the MTC as to why the resumptive pronoun should be the logophoric pronoun. It misses a greater generalization that the meaning of both controlled and logophoric elements is derived via binding by an abstraction operator.

To solve this problem, a defender of the MTC might attempt to argue that all logophoric pronouns are just resumptive pronouns derived by movement to a perspectival center in the left-periphery of the embedded clause, and then to its surface position. This could also be extended to account for the distribution of realis *yè*. But one crucial difference between the distribution of PRO and logophoric pronouns in general is that logophoric pronouns may have long-distance antecedents.²⁴ I repeat (31) in (52) below.

- (52) *Marie_i be Kofi_k xuse be yè_{i/k} na yè_{i/k} cadeau*
 Mary say Kofi believe COMP LOG give COMP gift
 ‘Mary_i said that Kofi_k believed that he_k/she_i gave him_k/her_i a gift.’

Hornstein (1999) attempted to derive the fact that control requires local c-commanding antecedents (apart from the notable exception of *promise*) via movement. But the fact that logophoric pronouns can freely have long-distance antecedents shows that its distribution is unlikely to be accounted for via movement.

In the previous section, I have attempted to argue that the distribution of the LPBP *yè* provides us evidence for thinking that the distribution of OC PRO and logophoric pronouns should be treated very similarly. 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 reinforced in this paper.

5.2 Partial control

Another important problem for the MTC comes from the existence of partial control (PC) in Ewe. The overall problem is that the MTC attempts to deny the existence of PC given that the head of

²⁴When I speak of logophoric pronouns, I refer to the logophoric pronouns in Yoruba, Tangale and realis *yè*. Strictly speaking, *yè* is not a logophoric pronoun, it is instead an LPBP.

an A-chain must be identical to its trace, and not merely "partially" identical in some sense. But Ewe makes it difficult to deny that genuine PC exists, especially considering the null comitative analysis is difficult to defend here, for reasons that I will illustrate. (34) is repeated in (53) below, in which the embedded predicate *kpe* 'meet' precludes the possibility of exhaustive control:

- (53) Kofi_i dzi be yè-wo_{i+}/*yè_i-a kpe ga ade.
 Kofi want COMP LOG-PL/LOG-POT meet time 6
 'Kofi_i wanted PRO_{i+}/*PRO_i to meet at 6.'

The observation that *yè* does not need an equivalent antecedent is not new; it may also have a partial referent in realis contexts. Sells (1987) (p. 449) was the first to make this observation:²⁵

- (54) Kofi kpɔ be yè-wo-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.²⁶ Hyman and Comrie (1981) and Frajzyngier (1985) have also noted that *yèwo* is 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 PC reading is obtained from a null comitative phrase inside the complement.²⁷ The examples below are reproduced (Boeckx et al., 2010, p. 185):²⁸

- (56) 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 (53), but exhaustive control is not. The embedded predicate in (53) is *meet*, which requires that its subject be semantically plural in Ewe and in other languages like English.²⁹ This also shows that we are not dealing with mere syntactic plurality but semantic plurality as well. The head of the A-chain must therefore differ in reference from its trace, but this is impossible via movement.

One might 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. But there are reasons to think that a null comitative isn't present in Ewe. Let us first consider English: Landau (2016) points out that we would expect PC PRO to be able to saturate a secondary predicate which has a domain that is restricted to non-plural individuals.

²⁵Anne Bimpeh (p.c.) suggests that this is better translated as *go out*.

²⁶Notice 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:

- (55) The group_{i+} wanted PRO_i to take out the trash.

²⁷I suspect that this account would assume a null comitative in the complement of realis clauses as well (see (54)); it would be problematic to assume that it can appear in irrealis clauses but not elsewhere.

²⁸There are problems outside of Ewe with assuming the existence of a null comitative. The reader is referred to Landau (2016) for further discussion on assuming null comitatives in partial control constructions. Further, the arguments in this section also apply Rodrigues (2004)'s account where the null comitative is attached to PRO.

²⁹Note that *We met in Amherst* is acceptable but not **I met in Amherst*.

But this is not possible in English. If we take the expression *as an adult*, we see that PC PRO in (57c) rejects *as an adult* like (57b) and unlike (57a). Imagine a context in which Kofi's 18th birthday will happen the next day, and Kofi and Marie will meet then:

- (57) a. Kofi will meet Marie as an adult tomorrow.
 b. * Kofi and Marie will meet as an adult tomorrow.
 c. * Kofi told Marie to meet as an adult tomorrow.

This contrast is in Ewe as well. (58a)-(58c) translate similarly to their respective counterparts in (57a)-(57c):

- (58) a. Kofi a kpe Marie abe ame tsitsi ene etsor.
 Kofi POT meet Marie as person adult ? tomorrow
 'Kofi will likely meet Marie as an adult tomorrow.'
 b. * Kofi kple Marie a kpe abe ame tsitsi ene etsor.
 Kofi CONJ Marie POT meet as person adult ? tomorrow
 'Kofi and Marie will likely meet as an adult tomorrow.'
 c. * Kofi dzi be yè-wo-a kpe abe ame tsitsi ene etsor.
 Kofi want COMP LOG-PL-POT meet as person adult ? tomorrow
 'Kofi wants to meet as an adult tomorrow.'

Another problem is that in Ewe, as noted prior, proper names and other nominal phrases can be put into the subject position of an irrealis 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, a stipulation which seems unjustified.

An example is given in (59) below where a proper name is present as the subject of the embedded irrealis clause and its closest possible English translation is given. If the null comitative account was correct, we would expect this sentence to be grammatical:

- (59) * Kofi dzi be Agbe a kpe ga ade
 Kofi want COMP Agbe POT 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 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.³⁰

³⁰The reader is referred to Fujii (2006) and Boeckx et al. (2010) for accounts of split control in the MTC framework.

The overtness of split control in Ewe, repeated in (60) with the communicative predicate ‘gblo’ *ask*, allows us to probe its structure. The same pronoun for plural and partial control, the plural form of *yè*, is used:

- (60) Agbe_i gblo ne Fafa_k be yè-wo_{i+k}-a fo ɲutsu-a.
 Agbe told to Fafa COMP LOG-PL-POT beat man-DEF
 ‘Agbe_i told Fafa_k PRO_{i+k} to beat the man (together).’

However, sentence (61) below with pronoun doubling is preferred over the plural *yè* option as it is more specific. For simplicity I will stick to *yèwo* throughout the rest of this section, treating the pronoun doubling as an immaterial PF-level phenomenon.

- (61) Agbe_i gblo ne Fafa_k be [yè-wo_{i+k} meve yè-wo_{i+k}]_{i+k} a fo ɲutsu-a.
 Agbe told to Fafa COMP LOG-PL two.person LOG-PL POT beat man-DEF
 ‘Agbe_i told Fafa_k PRO_{i+k} to beat the man (together).’

At least at first glance, it’s clear why this would be a problem for the MTC. 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. Yet if the MTC is correct, the resumptive pronoun is formed from the trace of a split A-chain.

In addition, there would be minimality violations in order to derive movement from the subject position of the embedded clause to the object of the control predicate and to its subject. The matrix subject would have to “skip over” the object of the control predicate.

To find a solution, we could turn to Fujii (2006), who provides the most 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:

- (62) 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 (64). This could provide a straightforward solution, with the stipulation that the phonetic form of [A + B] as a resumptive pronoun is *yèwo* because it is plural.³¹

This solution is problematic for a few reasons. First, there isn’t a second resumptive pronoun even though *Agbe* is deleted in the object position of the control predicate. We would expect not only *Fafa* to be spelled out in this position, but also potentially another *yè* instead of *Agbe*. The MTC would have to stipulate that *yè* must be spelled-out after the complementizer *be*, but null anywhere else.

Another problem is that it is not clear in Fujii (2006)’s solution whether [A + B] is a DP or something else entirely, or perhaps a PP. If it is a DP, movement of a DP from inside another DP would violate minimality conditions. If it is not a DP, then there is no minimality violation, but the data in Ewe makes it likely that the subject of the embedded clause in a split-controlled construction is a DP, simply because the spelled-out form is a pronoun.

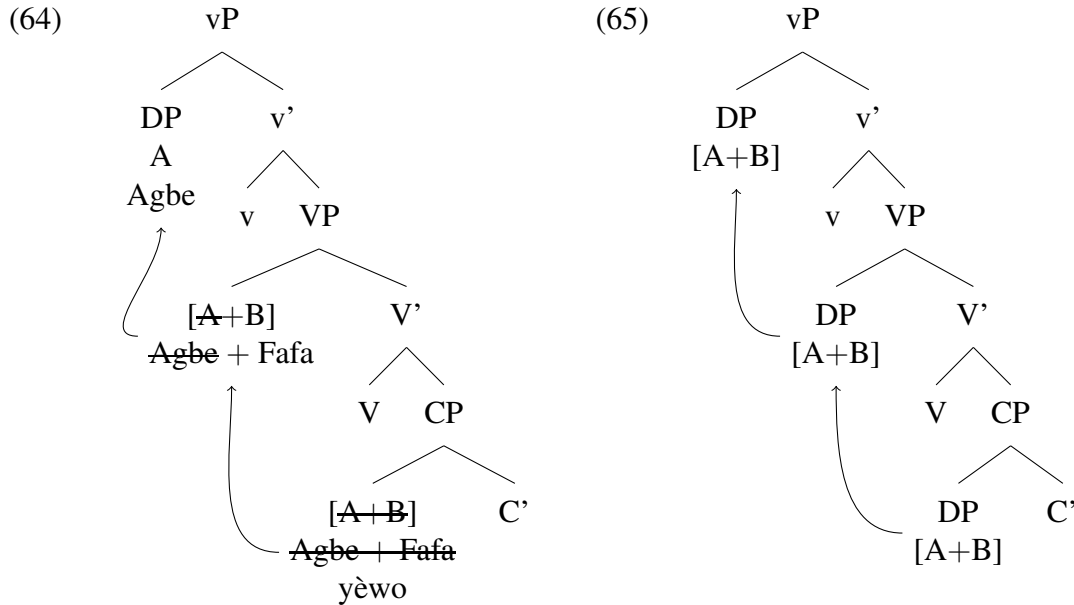
Another way to verify that the complex pronoun is indeed a DP is to verify that it is the external argument of the embedded verb and refers to both controllers. One way of doing so is to

³¹The + is assumed to be a phonetically null coordinator of some sort.

make the object of the embedded verb into a reflexive, as in (63), given that the external argument must c-command the internal argument reflexive:

- (63) Agbe_i gblo ne Fafa_k be [yè-wo_{i+k} meve yè-wo_{i+k}]_{i+k} a fo wo-dokui.
 Agbe told to Fafa COMP LOG-PL two.person LOG-PL POT beat 3PL-self
 ‘Agbe_i told Fafa_k PRO_{i+k} to beat themselves (together).’

As [A + B] is a DP, to avoid minimality violations, the movement that we would expect is given in (65), where we would expect there to be two resumptive pronouns, both spelled out as *yèwo*.



This is clearly not the desired outcome, and more assumptions would be required to allow movement the DP A from inside the DP [A + B].³²

Another approach to split control in the MTC framework is briefly suggested in Boeckx et al. (2010). It is similar to Fujii’s, but the only difference is that there is movement of only [+ B] to the matrix object position and A to the matrix subject position.³³ An illustrative tree of this account is provided in (68) with the desired result.

[+ B] is a PP, given that the + is treated as a null commitative preposition. This does have the advantage of fixing the aforementioned problem of why the trace of Agbe is not spelled out as *yè* is not spelled-out in the object position, since there is no trace of Agbe. But this brings about two

³²This is not completely 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. But the crucial question is whether these assumptions would be motivated.

³³This is motivated by the need to fix an incorrect prediction in (66a)-(66b); *John washed Bill* cannot mean that John washed Bill and himself, yet this is derived if the entire complex structure [A + B] is capable of moving up.

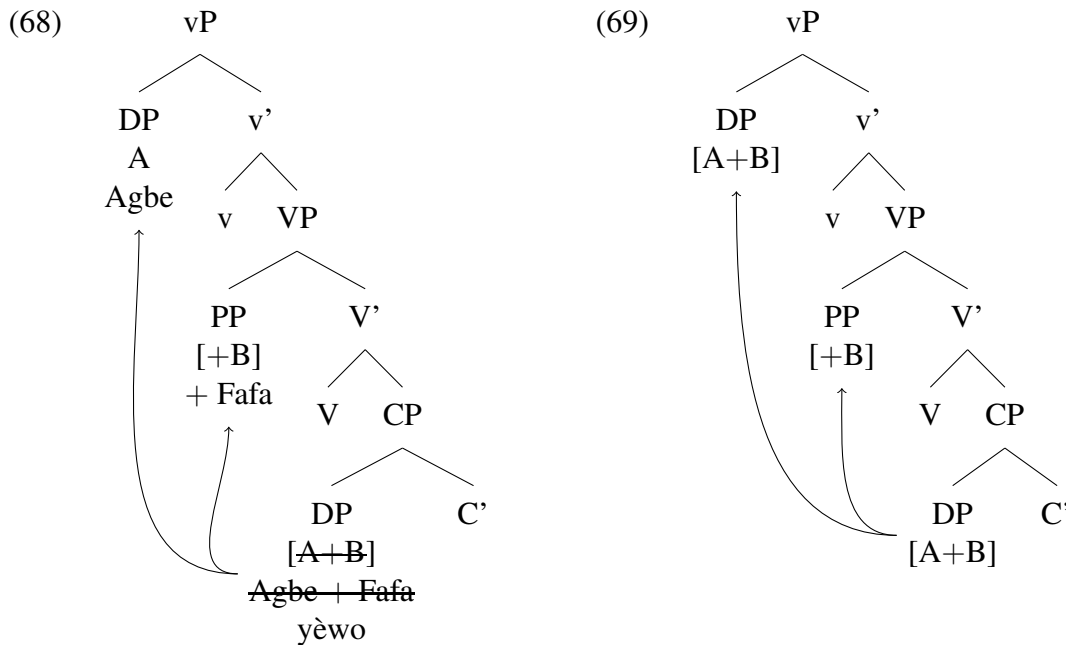
- (66) a. * John washed Bill. (meaning John washed Bill and himself)
 b. John washed [~~John~~ + Bill]

further problems. First, notice that in (60), the object of the control predicate is a PP, and not a DP unlike in English and Japanese. The structure of this would look as follows:

(67) [PP ne [PP + Fafa]]

This would mean that the preposition *ne* ‘to’ can c-select other PPs and not just DPs, which is an incorrect prediction; *ne* in Ewe can only take DP arguments and is never seen with overt prepositions. The MTC would have to make the stipulation that null comitative PPs may be Merged with, but not any other PP.

In addition, the same problem involving violation of minimality constraints remains. Once again, I have argued that [A + B] is a DP; it’s not clear how you can still get another DP, A, out of it given minimality constraints, and the same problem remains in (69):



To recap, I have presented the split controlled construction in Ewe and tried to derive it in the MTC. With additional assumptions, it might 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 (hyper)raising?

What seems unusual about Ewe is that, based on the results of my fieldwork, I have not been able to find any instances of (hyper)raising. 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.

It is important to note that if Ewe had raising, it would instantiate *hyperraising*, which involves raising out of a finite clause. This is because as mentioned in section 3, Ewe does not seem to have infinitival clauses; all instances of control involve finite irrealis embedded clauses. Some examples of hyperraising from Brazilian Portuguese are given below:

- (70) a. Parece [que os alunos vão fazer pão].
seems that the students will make bread
'It seems that the students will make bread.'
- b. Os alunos parecem [que vão fazer pão].
the students seem that will make bread
'Lit. the students seem that will make bread.'
- Fong (2019)

On the whole, it is difficult to find predicates which do not assign a θ -role to their subject and take irrealis clause arguments in Niger-Congo languages, because almost all predicates we would consider raising predicates in English, such as *seem* and *likely*, only take realis clause complements in Ewe, as in (71a)-(71b):³⁴

- (71) 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-POT 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 nonfinite complement and allows optional raising, which is given in (72a)-(72b) below. However, this contrasts with Ewe in which hyperraising is not possible with the same predicate, as in (72c)-(72d). This could be due to the additional structure of the embedded clause in Ewe, constituting a CP phase with a complementizer, and Ewe may therefore not allow hyperraising:

- (72) a. Kù m̀ags̀i Asouk ch̀ej s̀uk̀u
it right Asouk go school
'It is right (for) Asouk to go to school.'
- b. Asouk_i m̀ags̀i ẁa_i/*_j ch̀ej s̀uk̀u
Asouk right 3SG go school
'It is right (for) Asouk to go to school.'
- Buli
- 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 ỳe_i-a na yi sukuu.
Agbe right COMP LOG-POT 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 irrealis 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 (40), which is repeated in (73a) below. Notice that the expletive-constructions in (73b) are impossible in this

³⁴For reasons of space I omit the examples in which attempts to raise out of the irrealis embedded clause fail. That raising is not possible in this case is not surprising given that realis embedded clauses constitute phases and movement out of them is not possible. As I will discuss later in the section, hyperraising does not seem to be possible either.

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.

- (73) a. Ati- a_i dzegome/dzudzo/yidzi be $y\grave{e}_i$ -a ηe .
 Tree-NOM begin/stop/resume COMP LOG-POT break.
 ‘The tree $_i$ began/stopped/resumed to break.’
- b. *E dzegome/dzudzo/yidzi be ati- a_i ηe .
 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 hyperraising 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 constructions.

One possible idiom to do an idiom test 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 (74), in which case it is completely unacceptable, but the sentence is fine without the idiomatic meaning (in which case there would be a lizard that climbed the tree at 6):

- (74) *Adoglo- a_i dzegome/dzudzo/yidzi be $y\grave{e}_i$ -a lia ati (ga ade).
 Lizard-NOM begin/stop/resume COMP LOG-POT climb tree at 6.
 ‘(Intended meaning) One began/stopped/resumed to be hungry/being hungry (at 6).’

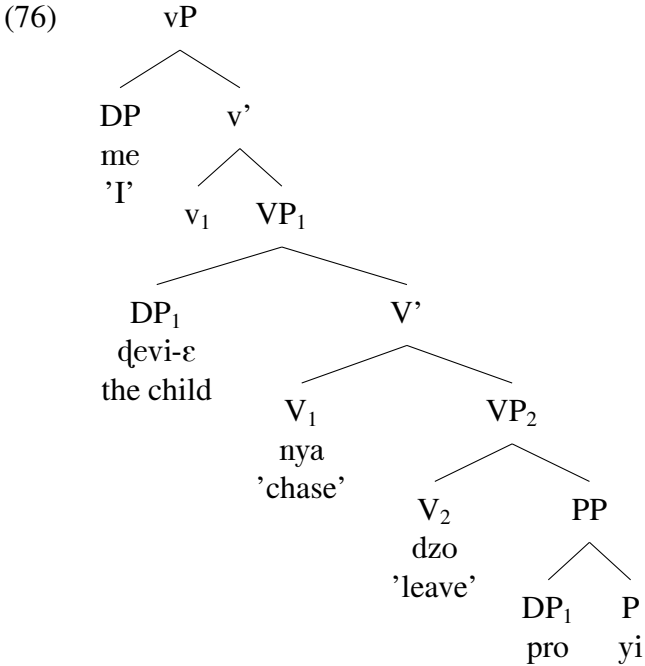
Another reason we might think that A-movement is not obligatory is based on serial verb constructions (SVCs) in Ewe, covered in detail by Collins (1997). First, he notes that Ewe has unaccusatives; we can see this in a simple sentence such as ‘Kofi dzo’ *Kofi left* where *dzo* is an unaccusative verb 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 (75).

- (75) Me nya ηe vi-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 (75) is given in (76).³⁵

³⁵I omit a few details here, for example the movement of V_1 .



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.³⁶

Let us assume that Ewe has no hyperraising. 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 does not. 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, and a sentence such as *Kofi dzo* 'Kofi left' involves movement to a subject position without a θ -role.

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, it is preferable to come up with a theory of control that works for every language, and it is a great disadvantage for the MTC to not be able to account for the facts seen in Ewe.

The problem with the arguments I have given in this subsection is that they are not positive arguments against hyperraising in Ewe. There could potentially be an untested predicate in which hyperraising is possible. However, it is reasonable to suppose that raising is not possible in Ewe because the embedded clauses are finite with complementizers, and therefore have too much structure for movement to take place, and Ewe is just a language without hyperraising. In addition, if hyperraising were possible, then expletive and idiom tests should not have failed for the usual raising predicates *begin*, *stop* and *resume*. If control is just A-movement, why should control out of a finite irrealis embedded clause be possible but not hyperraising?

³⁶Of 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. But this would be another stipulation.

6 Theoretical Discussion

In some sense, this paper raises more questions than it answers. Some examples are given in (77a)-(77d) below.

- (77) 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. Why do irrealis embedded clauses have some of the properties of nonfinite clauses?

At this point, I leave most of these questions open for future research. For (77a), it is reasonable to suppose that split control might have a similar semantics to that of partial control, given that they share the same phonetic form (apart from the optional pronoun doubling) for which a semantics has been proposed by Pearson (2016).

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 can derive the *de se* reading. For example, in the Spanish sentence below, the gender features on the matrix subject are represented on the embedded predicate:

- (78) La víctima intentó ser transferida/??transferido
the victim.FEM tried.3SG be.INF transferred.FEM/transferred.MASC
'The victim tried to be transferred.' Davies and Dubinsky (2008)

Nothing in the ATC gives us syntactic agreement, as there is no syntactic relation between the controller and PRO.³⁷ 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 that the *de se* reading of PRO is required. 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, though Landau (2015) objects that this is stipulatory.³⁸

6.1 How is *de se* obtained in Ewe?

One question that I might be able to start providing an answer to is Pearson (2015)'s problem that Ewe's *yè* is different when compared to the logophoric pronouns of Yoruba and other Niger-Congo languages. She points out that *yè* may be read *de re* but logophoric pronouns in other languages must be read *de se*. The novel data presented in this paper might help us solve this problem, given that I have presented evidence to categorize *yè* in this dialect as a LPBP and not a logophoric pronoun.

First, suppose that Anand (2006) is correct in arguing that there are at least two ways in which *de se* readings are ascribed. On one hand, pronouns which are optionally read *de re* receive *de*

³⁷Perhaps this might be accounted for by Kratzer (2009)'s notion of feature transmission. But if semantic agreement takes place in LF, and then we wouldn't expect gender agreement to be present on the embedded predicate.

³⁸See (Pearson, 2013, p. 147) for more details.

se ascription as a special case of de re. As Pearson and I have shown, Ewe's *yè* may indeed be read de re, but she assumes that de se ascription is not a special case of de re. On the other hand, Anand argues that pronouns that must be read de se involve binding by an operator in the left-periphery. Anand points out that Yoruba's logophoric pronoun, *òun*, must be read de se.

I confirmed that this is the case in Yoruba; the sentence below is not possible in a context in which Taiwo does not know that he is referring to himself as fat.

- (79) # Taiwo_i ro pè òun_i sanra
 Taiwo thinks COMP LOG fat
 '#Taiwo_i thinks that he_i is fat.' (attempted de re reading, but fine if read de se)

Anand proposes that one way of diagnosing whether we're dealing with one structure or the other is via the *de re blocking effect*:

- (80) De re blocking effect
 No obligatory de se anaphor can be c-commanded by a de re counterpart.

The pronouns that are directly bound by the operator are alleged to give rise to the blocking effect, because there is an intervening pronoun between the operator and an anaphor, and this results in a binding configuration that is local and prevents an anaphor from being licensed by its operator. One example of a de re blocking effect is found with dream report pronouns in English as Percus and Sauerland (2003) points out. For example, in the sentence below, the bodily counterpart kissing the mental counterpart is unacceptable:

- (81) I dreamt I was Brigitte Bardot and I kissed me.
 a. Attested reading: In the dream, Brigitte kisses George.
 b. Unattested reading: In the dream, George kisses Brigitte.

Anand notes that this bears resemblance to an interaction between logophoric and non-logophoric pronouns in Yoruba. Ordinary pronouns, the *o*-forms, cannot c-command the logophoric pronoun *òun*, which is an obligatory de se logophor. This is despite the fact that ordinary pronouns and logophoric pronouns may both co-occur in the same logophoric environment (which is the subject of an attitudinal embedded clause).

- (82) Olu_i so pe o_{*i/j} ri baba òun_i
 Olu say that o see father LOG
 'Olu said that he_{*i/j} had seen his father.'

On the other hand, Ewe's *yè* does not behave like Yoruba's *òun* in this regard. Pearson (2013) provides evidence that the so-called logophoric pronoun *yè* in Ewe is not subject to the de re blocking effect in a dream report, unlike Yoruba:

- (83) John koudrin be yè nyi Obama koudo yè na yè dokui cadeau
 John dream COMP LOG COP Obama CONJ LOG give LOG REFL gift
 'John dreamed he was Obama and Obama gave John a gift.' (third *yè* is de re)

Indeed, most pronouns (such as ordinary pronouns in non-dream reports) are not subject to the blocking effect. Why would the blocking effect arise at all with dream reports in particular in English? To solve this, Anand suggests that ordinary pronouns in this case get the de se reading

in the same way that they get the de re reading, and the de se acquaintance relation (self-identity) is just optional.

One can argue that $yè$ may be read de re simply because de se ascription for $yè$ differs from that of $\dot{u}n$; de se ascription for $yè$ is a special kind of de re, but de se ascription for $\dot{u}n$ is binding by an abstraction operator.³⁹ This provides a straightforward solution of why LPBPs $yè$ can be read de re but logophoric pronouns cannot. LPBPs must be inside a resP, when possible, but a logophoric pronoun can never be embedded in a resP.

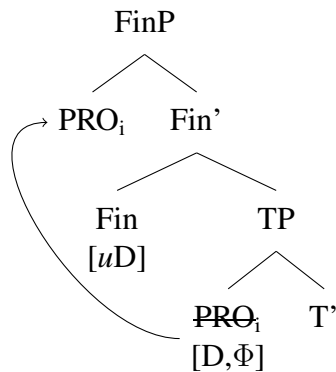
6.2 Landau (2015)'s two-tier theory of control

Landau (2015) attempts to build a theory of control that places equal importance in both syntax and semantics. The approach intends to solve two problems: why PRO must be read de se and why there is syntactic agreement between PRO and the controller. The "two-tier" theory of control is named as such because control complements, according to Landau, divide into two types: in non-attitudinal context OC is a kind of prediction which is made possible via movement of PRO. PRO abstracts over the complement. The predicative head is designated as *Fin*, and an example derivation is given in (84).

The second tier of control is established by logophoric anchoring, which builds on the predicative tier. The attitude complement is a function from concept generators to propositions. A de re variable, *pro*, is embedded inside a concept generator, and the de se reading is obtained via a presupposition. I give a simplified derivation of a sentence with logophoric control in (85).⁴⁰

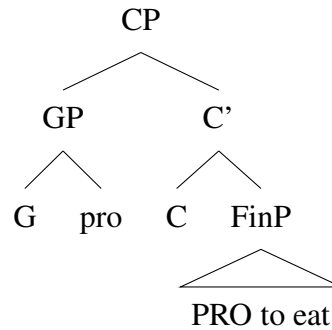
(84) *Predicative control*

John forced the car_i PRO_i to stop.



(85) *Logophoric control*

John_i tried PRO_i to eat.



As mentioned in section 6.1 prior, I concur with Landau that it is possible for the de se reading of PRO to be a special kind of de re. However, I am unsure if it is necessary to posit a second tier for logophoric control. In Ewe, the two tiers of control look identical: (86), for example, has two meanings. It could be the same as in English, where it just means that a specific tree began to break. Or it could have the logophoric meaning, where the tree is trying to communicate to you that it is beginning to break. The addition of a second tier does not change the sentence at all:

³⁹To maintain the approach in this paper that $yè$ can still be bound by an abstraction operator, we can assume a hybrid de se-de re LF in the sense of Pearson (2015) where both $yè$ and its concept generator are abstracted over.

⁴⁰This is greatly simplified, but I have kept the essence of the approach.

- (86) Ati_i-a dzegome be yè_i-a ɲe.
 Tree-NOM begin COMP LOG-POT break.
 Possible reading 1: 'The tree_i began PRO_i to break.'
 Possible reading 2: 'The animate tree_i began PRO_i to break.'

It could of course still be possible that there is an invisible second tier for logophoric anchoring. I do not intend for this to be a solid argument against the two-tier theory of control, but I do want to propose a simplification that might have empirical basis. There might not be any need to posit a second tier for control; we need only posit that there is an abstraction operator present in the left-periphery of any control complement.

7 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) and Rodrigues (2004) allege. There are reasons to think that partial control does not just involve a null comitative, regardless of whether it is attached to PRO or the embedded predicate. In addition, additional assumptions would be required to derive split control without violating minimality constraints.

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. Furthermore, the fact that Ewe's overt PRO has the same phonetic form as the so-called 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, LPBPs and logophoric pronouns, not just in Ewe but also in Yoruba and other languages, are mediated by the same theoretical tool. According to the analysis presented in this paper, they are both mediated by operators in the left-periphery of the embedded clause.

I presented these four arguments against the MTC, and concluded that it is difficult for them to be accounted for without making several stipulations. The ATC presented here is capable of accounting for the main problem presented in this paper; that is, why overt PRO and the so-called logophoric pronoun have the same phonetic form despite having different properties. There seems to be ample empirical evidence for this conclusion.

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.

References

- Ameka, Felix K. 2008. Aspect and modality in ewe: A survey. In *Studies in language companion series*, 135–194. John Benjamins Publishing Company.
- Amfo, Nana Aba Appiah, and Stella Boateng Norgbe. 2009. Comparing demonstratives in Kwa. *Legon Journal of the Humanities* 20.
- Anand, Pranav. 2006. De de se. Doctoral Dissertation, Massachusetts Institute of Technology.
- Anand, Pranav, and Andrew Nevins. 2004. Shifty operators in changing contexts. In *Proceedings of SALT XIV*, ed. Robert B. Young, 20–37. Cornell University, Ithaca, NY: CLC Publications.
- Bhatt, Rajesh, and Roumyana Izvorski. 1998. Genericity, implicit arguments and control. In *Proceedings of SCIL 7*. Cambridge, MA: MITWPL.
- Boeckx, C., N. Hornstein, and J. Nunes. 2010. *Control as Movement*. Cambridge University Press.
- Bowers, John. 1993. The syntax of predication. *Linguistic Inquiry* 24:591–656.
- Bowers, John. 2008. On reducing control to movement. *Syntax* 11:125–143.
- Charnavel, I. 2019. *Locality and logophoricity: A theory of exempt anaphora*. Oxford Studies in Comparative Syntax. Oxford University Press, Incorporated.
- Charnavel, I., and D. Sportiche. 2016. Anaphor binding – what French inanimate anaphors show. *LI* 47:35–87.
- Chierchia, Gennaro. 1984. Topics in the syntax and semantics of infinitives and gerunds. Doctoral Dissertation, University of Massachusetts, Amherst.
- Chierchia, Gennaro. 1990. Anaphora and attitudes de se. In *Semantics and contextual expression*, 1–32. Dordrecht: Foris.
- Chomsky, Noam. 1981. *Lectures on government and binding*. Dordrecht, The Netherlands: Foris Publications.
- Chomsky, Noam. 1986. *Knowledge of language*. New York, New York: Praeger Publishers.
- Chomsky, Noam. 1995. *The minimalist program*. Cambridge, Massachusetts: MIT Press.
- Clements, G. 1975. The logophoric pronoun in Ewe: its role in discourse. *Journal of West African Linguistics* 10.
- Collins, Chris. 1994. Economy of derivation and the generalized proper binding condition. *Linguistic Inquiry* 25:45–62.
- Collins, Chris. 1997. Argument sharing in serial verb constructions. *Linguistic Inquiry* 28:461–497.
- Collins, Chris. 2005a. A smuggling approach to raising in English. *Linguistic Inquiry* 36:289–298.
- Collins, Chris. 2005b. A smuggling approach to the passive in English. *Syntax* 8:81–120.
- Davies, W.D., and S. Dubinsky. 2008. New horizons in the analysis of control and raising. URL <https://books.google.com/books?id=gbPuaeZ1PNUC>.
- Epstein, Samuel David. 1984. Quantifier-PRO and the LF representation of PROarb. *Linguistic Inquiry* 15:499–504.
- Essegbey, James. 2008. The potential in ewe. In *Aspect and modality in kwa languages*, ed. Felix K. Ameka and Mary Esther Dakubu, 195–214. John Benjamins Publishing Company.
- Frajzyngier, Zygmunt. 1985. Truth and the indicative sentence. *Studies in Language* 9.
- Fujii, Tomohiro. 2006. Some theoretical issues in Japanese control. Doctoral Dissertation, University of Maryland.

- Grano, Thomas, and Samson Lotven. 2016. Control, logophoricity, and harmonic modality in Gengbe desire reports. In *Proceedings of SuB 21*, 481–498. University of Edinburgh.
- Heim, Irene. 2002. Features of pronouns in semantics and morphology.
- Hintikka, Jaako. 1969. Semantics for propositional attitudes. In *Philosophical logic*, ed. J. W. Davis, Hockney, and Wilson, 21–45. Reidel.
- Hornstein, Norbert. 1999. Movement and Control. *Linguistic Inquiry* 30:69–96.
- Huang, C.-T. James. 1982. Logical relations in Chinese and the theory of grammar. Doctoral Dissertation, Massachusetts Institute of Technology.
- Hyman, Larry, and Bernard Comrie. 1981. Coreference and logophoricity in gokana. *Studies in African Linguistics* Suppl.:69–73.
- Jackendoff, Ray, and Peter W. Culicover. 2003. The semantic basis of Control in English. *Language* 79:517–556.
- Kawasaki, Noriko. 1993. Control and arbitrary interpretation in English. Doctoral Dissertation, University of Massachusetts at Amherst.
- Kratzer, Angelika. 2009. Making a pronoun: Fake indexicals as windows into the properties of pronouns. *Linguistic Inquiry* 40:187–237.
- Landau, Idan. 1999. Elements of control. Doctoral Dissertation, Massachusetts Institute of Technology.
- Landau, Idan. 2004. The scale of finiteness and the calculus of control. *Natural Language and Linguistic Theory* 22:811–877.
- Landau, Idan. 2013. *Control in generative grammar: A research companion*. Cambridge, England: Cambridge University Press.
- Landau, Idan. 2015. *A two-tiered theory of control*. MIT Press.
- Landau, Idan. 2016. Against the null comitative analysis of partial control. *Linguistic Inquiry* 47:572–580. URL https://doi.org/10.1162/LING_a_00222.
- Lebeaux, David. 1984. Anaphoric binding and the definition of PRO. In *Proceedings of the 14th Meeting of the North East Linguistic Society (NELS 14)*, 253–274.
- Manzini, Maria Rita. 1983. On control and control theory. *Linguistic Inquiry* 14:421–446.
- McCracken, Chelsea. 2013. Relative clauses in Asante Twi. In *Rice Working Papers in Linguistics*.
- Pearson, Hazel. 2013. The sense of self: topics in the semantics of de se expressions. Doctoral Dissertation, Harvard University.
- Pearson, Hazel. 2015. The interpretation of the logophoric pronoun in Ewe. *Natural Language Semantics* 23:77–118.
- Pearson, Hazel. 2016. The semantics of partial control. *Natural Language & Linguistic Theory* 34:691–738.
- Percus, Orin, and Uli Sauerland. 2003. On the LFs of Attitude Reports. In *Proceedings of Sinn und Bedeutung 7*, ed. Matthias Weisberger, 228–242. Universitat Konstanz.
- Rodrigues, Cilene. 2004. Impoverished Morphology and A-movement out of case domains. Doctoral Dissertation, University of Maryland.
- Sells, Peter. 1987. Aspects of logophoricity. *Linguistic Inquiry* 18:445–480.
- Sulemana, Abdul-Razak. 2018. Obligatorily controlled subjects in Buli. Talk at ACAL49.
- Wurmbrand, Susanne. 1998. Infinitives. Doctoral Dissertation, Massachusetts Institute of Technology, Cambridge.