

Control is not Movement: overt PRO in Ewe*

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This paper presents novel data from the Anlo dialect of Ewe to show that the pronoun *yè* 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, this paper sheds further light on control phenomena. 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. Assuming Charnavel (2019)'s theory of logophoricity, control and logophoricity are treated alike, rather than control and raising. 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).

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 claimed 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).

I present novel data from the Anlo dialect of Ewe to show that PRO is instantiated in the phonetic form of the so-called logophoric pronoun. Ewe's logophoric pronoun, *yè*, was first noted by Clements (1975). *Yè* can only appear in clauses introduced by the complementizer *be*, which can optionally also mean *say*, and *yè* must refer to the subject of the higher clause. It cannot refer to the speaker (index *s*). This is shown in (1a). In (1b), we see that the generic third person pronoun cannot refer to the matrix subject unlike languages like English; only *yè* may do so:¹

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¹Collins (1994) reports that this is possible in the Kpele dialect of Ewe; I have been unable to replicate them.

- (1) a. Kofi_i be yè_{i/*k/*s}-dzo.
 Kofi say YÈ leave
 ‘Kofi_i said he_i left.’
- b. Kofi_i be e_{*i/k/*s}-dzo.
 Kofi say he-leave
 ‘Kofi_i said he_k left.’

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; Heim (2002), for example, proposed a unified approach to both due to their obligatory de se reading, in which they were both bound by an abstraction operator in the left-periphery of the embedded clause. However, one important difference between the two is that logophoric pronouns can have long-distance antecedents; OC PRO cannot.

As we will shortly see, if yè is in the subject position of an irrealis clause, it obtains the properties of PRO and becomes less like a logophoric pronoun; for example, it cannot have a long-distance antecedents. The central question of this paper, then, is to explain why these two yè with different properties should have the same phonetic form. I provide an analysis of yè, and discuss its theoretical consequences. In doing so, I have three main goals:

- (i) Goal 1: Show that yè behaves as an overt PRO in the subject of an irrealis clause.
- (ii) Goal 2: Propose an analysis of yè which assumes both Chierchia (1990)’s theory of control and Charnavel (2019)’s theory of logophoricity, accounting for Heim (2002)’s intuition that PRO and logophoric pronouns have very similar properties.
- (iii) Goal 3: Present four arguments against Hornstein (1999)’s movement theory of control based on the overtness of PRO in Ewe.

For goal (i), four tests out of eight show that this pronoun has opposite 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 perspectival center cannot be the referent of yè.

- (2) Ati_i-a dzegome be yè_i-a ŋe.
 Tree-NOM begin COMP YÈ-POT break.
 ‘The tree_i began PRO_i to break.’

I argue that in the Anlo dialect of Ewe, yè is not a logophoric pronoun; it is instead just a pronoun that has to be bound at the left-periphery of the embedded clause, regardless of whether or not the predicate that embeds the clause is attitudinal.

That overt pronominal elements appear in controlled positions is not new. Overt anaphors may occur in control complements in Chinese, Korean and Japanese. In Chinese, the anaphor *ziji* normally accepts any c-commanding subject (see Giblin (2016) among others), even a long distance one, as an antecedent, but in (3) *ziji* must refer to the local antecedent.

- (3) Zhangsan_i bi Lisi_j [PRO_{j/*i}/ziji_{j/*i} xie zuoye].
 John force Bill PRO/self write homework
 ‘John_i forced Bill_j to do the homework.’ Madigan (2008)

This paper goes a step further; I do not merely claim that *yè* is a controlled pronoun. The Anlo dialect of Ewe is a language which makes control phonetically overt, in both realis and irrealis contexts. The pronoun *yè* is seen when a control relation is established and nowhere else.

For goal (ii), I present an analysis, based on a suggestion by Heim (2002), in which she uses Chierchia (1990)'s approach to control. Under this approach, both PRO and logophoric pronouns are bound by an abstraction operator in the left-periphery. I argue that the data that is presented in this paper was in fact predicted by Heim.

By assuming Charnavel (2019)'s theory of logophoricity, in which all logophors are bound locally by null perspectival centers, I propose that the data from Ewe shows that control and logophoricity, rather than control and raising, are similar phenomena. This allows us to analyze the logophoric—as Kuno (1975) points out—non-obligatory control (NOC) PRO as just a subspecies of OC PRO. As such, I argue that both control and logophoricity involve binding by an abstraction operator. But the controller of *yè* is either a local antecedent in the cases of control—in the subject of an irrealis embedded clause—and a perspectival center in the subject of a realis embedded clause. In other words, logophoric pronouns are controlled by a null logophor whereas PRO is usually controlled by the most local antecedent.

In defense of goal (iii), I will argue that the similarities are not between control and raising as Hornstein (1999) points out, but rather between control and logophoricity. But more importantly, I propose four empirical arguments against control being movement in Ewe. The overtness of PRO allows us to probe the actual structure of control phenomena such as partial and split control. For example, (4) might help us conclude that 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.

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

Here are the four arguments. 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 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.

Most of the problems for the movement theory of control (MTC) 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 2 of this paper via the approach presented in this paper leads to more insight 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 novel data from the Anlo dialect of Ewe, in addition to discussing why overt PRO in Ewe is the most convincing case thus far. Section 3 presents the background needed for this paper. I present the foundations for the two theories of control that I will discuss in this paper. I also introduce the reader to Charnavel (2019)'s theory of logophoricity, and provide the aforementioned analysis of this data in section 4. In section 5, I go over the aforementioned four problems to the control as movement account. Section 6 concludes.

2 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. 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*.

Table 1 below is a summary of the results of the tests that will be seen in this section. The tests which indicate different properties are in bold: as the reader can verify, overt PRO and irrealis *yè* share more similarities than irrealis and realis *yè* do.²

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.³

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

These tests have been commonly used throughout the literature to distinguish OC PRO from elements such as *pro*, which have the same phonetic form (null). Helpful summaries of these tests are found in Landau (2013) and Potsdam and Haddad (2017), among many other sources.

2.1 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; the speakers are from the Atiavi region of Ghana.

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

²Of course, it is difficult to determine whether PRO has ϕ -features, given that it is invisible. Agreement with PRO is possible in languages such as Spanish, as will be discussed in section 6, indicating that PRO does indeed get ϕ -features from its controller. 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; in the Anlo dialect, irrealis *yè* possesses third person features. A sentence such as **Me be yè-a dzo* 'I said I am likely to leave' is not acceptable due to a ϕ -feature mismatch.

³Some clarifications are to be made: a long distance antecedent is possible with the predicate *promise* with both irrealis *yè* and, as has been noted in the literature, OC PRO. Control shift is not possible in Ewe due to the fact that passivization is not present.

intuitions, which they did. 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.

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 the *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 spoken in the Atiavi region. But Grano and Lotven (2016) notes that the logophoric pronoun *je* in Gengbe—another dialect of Ewe—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.

2.2 Overt PRO tests

The marker *-a* is going to be used to force the irrealis structure, which is necessary for control. Without *-a*, the embedded clause is in the aorist mood (realis). This is expected as control infinitives often have an irrealis mood, as Stowell (1982) points out. In the controlled position it is usually pronounced as *ya* in the Anlo dialect, which has a great deal of vowel coalescence. It may also be pronounced as *yèa*, indicating the presence of the so-called logophoric pronoun.

In (5), I give examples of canonical control constructions: examples of *yèa* with predicates that would involve PRO and control in other languages such as English.⁴

- (5) a. Agbe_i dzagbagba/ɲlobe/dzina/vɔvɔm/wosusu/dzi/susum be yè_i-a dzo.
 Agbe try/forget/want/afraid/decide/like/intend COMP YÈ-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 YÈ-POT experience happiness
 ‘Kofi_i tried/wanted/is afraid/decided/likes PRO_i to be happy.’

⁴For the most part, I will not discuss object control in this paper, leaving it to future research. Examples with object control are difficult to come across given that Ewe is a language with SVCs; Ewe speakers choose to translate object control sentences in English to SVCs. However, it seems possible to have object control in embedded clauses with the jussive mood (*né*), and this is instantiated with control predicates such as *persuade*:

- (i) 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_{*i/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. But as Ameka (2008) points out, 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 (iia), but the pronoun is in (iib):

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

The 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. This is not problematic for the account presented here. See Sisovics (2018) for an analysis of embedded jussives as OC complements in Mongolian and Korean.

Lack of long-distance readings: 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 (6) below. This sentence is ambiguous: each *yè* may refer to Kofi or Marie.

- (6) Marie_i be Kofi_k xuse be *yè*_{i/k} na *yè*_{i/k} cadeau
 Mary say Kofi believe COMP YÈ give YÈ 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—that is, referring to a DP that is not the nearest one. This contrasts with the logophoric pronoun, as PRO also cannot have long-distance antecedents:

- (7) a. Agbe_j kadedzi be Kofi_i dzagbagba be *yè*_{i/*j}-a kpo dzidzo.
 Agbe believe COMP Kofi try COMP YÈ-POT experience happiness
 'Agbe_j believes that Kofi_i tried PRO_{i/*j} to be happy.'
 b. Agbe_j be Kofi_i dzi-be *yè*_{i/*j}-a yide sukuu.
 Agbe COMP Kofi want-COMP YÈ-POT go-to school
 'Agbe_j said that Kofi_i wants PRO_{i/*j} 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 (8). 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.⁵

- (8) Agbe_i do enugble ne Fafa_k be *yè*_{i/*k}-a fo ηutsu-a.
 Agbe make promise to Fafa COMP YÈ-POT beat man-DEF
 'Agbe_i promised Fafa_k PRO_i to beat the man.'

Irrealis yè is obligatorily de se: More recent work on Ewe has shed further light on the properties of realis *yè*. Pearson (2015) shows that, contrary to assumptions by Heim (2002) among others, realis *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. (9a), my own example below, is good with the logophoric pronoun in Ewe; the embedded clause is in the realis:

- (9) 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.)

But irrealis *yè* must be read *de se*. This is reason to believe that 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:

- (10) 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

⁵It 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.

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 YÈ-POT COP medal
 ‘#Kofi_i expects PRO_i to get a medal.’

Lack of sloppy reading: Another test to distinguish between the realis yè and irrealis yè is the availability of the strict and sloppy readings. Irrealis yè can only have a sloppy reading under ellipsis like overt PRO, as has been noted by Landau (2013) among others, as seen in (11a), but realis yè may have a strict or sloppy reading, as in (11b).

- (11) a. Kofi_i dzagbagba be yè_i-a fle agbale afi Agbe.
 Kofi try COMP YÈ-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 YÈ buy book before Agbe
 ‘Kofi said he bought a book before Agbe ~~said he bought a book~~. (strict too)’

Inanimate reading: Finally, and perhaps most importantly, inanimate control with irrealis yè is a possibility.⁶ 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:

- (12) a. Emo_i dzagbagba be yè_i-a dzegome.
 Machine try COMP YÈ-POT start
 ‘The machine_i tried PRO_i to reboot.’
 b. Emo_i wosusu be yè_i-a dzudzuo.
 Machine decide COMP YÈ-POT stop
 ‘The machine_i decided PRO_i to stop.’

Further examples with yè are provided in (13), 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.

- (13) Ati-a_i dzegome/dzudzuo/yidzi be yè_i-a ŋe.
 Tree-NOM begin/stop/resume COMP YÈ-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 non-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. Indeed, with a realis verb, the sentence is unacceptable unless referring to an actually talking and conscious tree:

⁶I have not been able to find any examples in which realis yè is grammatical and there is no metaphorical animacy. In addition, it is 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. I have also not been able to find any cases of adjunct control, which easily admit inanimate control, ex. *PRO_i to count as a house, [an object]_i must have four walls and a roof* (David Pesetsky p.c.). It is possible that control is strictly with control predicates that take an irrealis embedded clause in this language, precluding the possibility of adjunct control.

- (14) # Ati-a_i be yè_i ŋe.
 Tree-NOM COMP YÈ break.
 ‘The tree_i said that it is breaking.’

In section 4, I will discuss a simple way to account for the identical phonetic form between the two *yè* despite them having different properties. In the next subsection, though, I will discuss the other properties of *yè* that both the realis and irrealis instantiations may have in common.

2.3 Other tests

Bound variable reading: 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 (15):

- (15) a. Ame adeke me be yè dzo o.
 person no-one NEG1 COMP YÈ-POT leave NEG2
 ‘No one said that he was leaving.’

Like PRO, irrealis *yè* must be c-commanded; it cannot refer to a non-commanding DP embedded in the matrix subject and must refer to the entire phrase containing the possessor; it is easy to determine that this is correct with the overt plural marking on *yè*, in which case it is *yèwo*:⁷

- (16) a. [Agbe_k fe velia-wo]_i dzagbagba be yè-*(wo)_{i/*k}-a dzo.
 Agbe GEN friend-*(PL) try COMP YÈ-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 YÈ-*(PL)-POT COP medal
 ‘Kofi’s parents decided to get a medal.’

Split and partial readings: Partial control, first noted by Wilkinson (1971) and developed further by Landau (1999), is also common in this dialect, as shown in (17). 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, where it is a group including *Kofi*:

- (17) a. Kofi_i dzi be yè-wo_{i+}-a/*yè_i-a kpe ga ade.
 Kofi want COMP YÈ-PL-POT/YÈ-POT meet time 6
 ‘Kofi_i wanted PRO_{i+}/*PRO_i to meet at 6.’
 b. Zimenola_i wosusu be yè-wo_{i+}-a/*yè_i-a fofu.
 Chair decide COMP YÈ-PL-POT/YÈ-POT gather
 ‘[The chair]_i decided PRO_{i+}/*PRO_i to gather.’

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:

⁷In (16), if the embedded clause were in the realis, *yè* would still have to be apparently c-commanded. But I have marked whether realis *yè* can be c-commanded or not with a question mark on table 1. Since control does not have to involve an attitude holder with certain predicates such as *try*, the c-command test can be used. However, realis *yè* does require an attitude holder, so the c-command test would not work. The attitude holder in (16) must be the entire phrase containing the possessor and realis *yè* must refer to the attitude holder. The possessor itself is not the attitude holder, and therefore, realis *yè* cannot refer to it, so the c-command test would not show anything.

- (18) Kofi kpɔ be yè-wo-do go.
 Kofi see COMP YÈ-PL-gone out
 ‘Kofi saw that they (including Kofi) had gone 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. Notice that this is reminiscent of PRO, in which although a controller may merely "partially" control an antecedent, the opposite is not possible where an antecedent contains the referent of PRO. Hyman and Comrie (1981) and Frajzyngier (1985) have also noted that *yèwo* is allowed with a singular antecedent.

For split control, irrealis *yè* either has the same phonetic form as that of partial and plural control, *yèwo* as in (19a), or an optional pronoun doubling that is more specific as in (19b):⁸

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

The sentence 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. But note that 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:⁹

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

2.4 Overt PRO in other languages

In the section, I argue that overt PRO in Ewe is the most convincing case made in the literature thus far. As Landau (2013) points out, the theory of control was developed based on data from English and other European languages, so the nullness of PRO was rarely questioned until the 2000s. Szabolcsi (2009), for example, has argued that PRO can be realized as an overt nominative pronoun when it is modified by *too*, *only* and other scope-bearing elements in at least Hungarian and Italian. An example from Hungarian is given below:

- (21) Szeretnék [csak én magas lenni].
 would.like.1SG only I tall be.INF
 ‘I want it to be the case that only I am tall.’

⁸Anlo 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. I reject Hornstein (1999) and Potsdam and Haddad (2017)’s claim, among others, that split control is impossible with OC PRO, siding with Landau (2013).

⁹Pronoun 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.

She rules out the possibility that this pronoun is an emphatic pronominal double, claiming that it really is the embedded subject. But by contrast with Hungarian and Italian, the advantage of the overtness of PRO in Ewe is not dependent on restrictive interpretive conditions.

Moving onto the East Asian languages, as noted in (3) above, overt anaphors may occur in the subject position of a control complement in Chinese, Korean and Japanese (Yang (1985), Borer (1989), Madigan (2008), Lee (2009)). An example from Chinese is seen in (22):

- (22) Zhangsan_i bi Lisi_j [PRO_{j/*i}/ziji_{j/*i} xie zuoye].
 John force Bill PRO/self write homework
 ‘John_i forced Bill_j PRO_{j/*i} to do the homework.’ Madigan (2008)

But as Landau (2013) points out, these are likely to be intensifiers, or emphatic doubles. Anaphors such as *ziji* are commonly used as intensifiers in Chinese, or even in English (ex. *he himself came*). These anaphors cannot be used in the same range of syntactic contexts as PRO. Indeed, I have found that partial (in (23a)) and split control (in (23b)) cannot be lexicalized with *ziji* in Chinese below. Only PRO may be used for these cases:¹⁰

- (23) a. Lisi_i xiang [PRO_{i+}/*ziji_{i+} liudian jianmian].
 Bill want PRO/*self 6 meet
 ‘Bill_i wanted PRO_{i+} to meet at 6.’
 b. Zhangsan_i daying Lisi_j [PRO_{i+j}/*ziji_{i+j} huxiang cabe].
 John promise Bill PRO/*self perform-on-each-other backrub
 ‘John_i promised Bill_j PRO_{i+j} to bathe each other.’

Like Szabolcsi, I must rule out the possibility of *yè* being an emphatic pronoun, or an intensifier. First, partial and split control can be lexicalized with *yè*, unlike these East Asian languages. Second, Ewe does not have a covert PRO, unlike Chinese and these other languages.

- (24) * Agbe_i dzagbagba be Ø_i a dzo.
 Agbe try COMP Ø POT leave
 ‘Agbe_i tried PRO_i to leave.’

If *ziji* really is an emphatic double, then the nominal that it is emphasizing in constructions such as (22) is PRO. But given that there is no covert PRO in Ewe and the fact that Ewe does not seem to have subject pro-dropping of any kind, unlike Chinese, makes the possibility of *yè* being an emphatic double unlikely.¹¹

The second fact which helps us rule out *yè* being an emphatic double is the fact that Ewe already has the focus particle *yé*, which Badan and Buell (2012) discusses. Notice that the logophoric pronoun has a low tone while the particle has a high tone. An example is given below in (25a). Likewise, the high tone *yé* cannot be used in place of *yè* ((25b)):

- (25) a. Mango-nye-wo (yé/*yè) Kofi du. b. * Agbe_i dzagbagba be yé_i a dzo.
 mango-1SG-PL (FOC/*YÈ) Kofi eat Agbe try COMP FOC POT leave
 ‘Kofi ate [my mangoes]_F.’ ‘Agbe_i tried PRO_i to leave.’

¹⁰See Lee (2009) for the same arguments in Korean.

¹¹See Collins (1993) for more details on the lack of subject pro-drop in Ewe.

The very different syntactic distribution between *yé* and *yè* seems to indicate that the latter is not an emphatic double in PRO constructions, unlike *ziji* and other examples that have been reported in the literature. As such, it is likely that we are dealing with a genuine overt PRO.

2.5 The realis-irrealis distinction and finite control

The goal of this subsection is to get into more detail on the syntax and semantics of the irrealis embedded clauses in Ewe. I will claim that Ewe's control constructions are not particularly surprising, apart from the overtness of PRO.

In embedded clauses, we have seen 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. Clauses with *-a* may stand alone, because they do not need to be embedded, as in (26).

- (26) Kofi a dzo.
 Kofi POT leave
 Potential meaning 1: 'Kofi can leave.'
 Potential meaning 2: 'Kofi could have left.'
 Potential meaning 3: 'Kofi could be leaving.'

Essegbey (2008) studies the potential variant of *-a*, arguing that because sentences like (26) 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.¹²

An obvious question to ask is why the control happens only with irrealis embedded clauses and not realis ones. Could it be possible that irrealis clauses in Ewe are nonfinite, while realis clauses in Ewe are finite? Or is it possible that both kinds of embedded clauses are finite? I am unsure what the correct answer here is, and I will leave it mostly unanswered. As Nikolaeva (2007) has pointed out, it seems difficult, if not impossible, to come up with a single definition of finiteness crosslinguistically. Tense and agreement do not seem relevant for languages like Ewe, and mood may be relevant instead.

Indeed, I am not placing much importance to the finiteness of the embedded clause. Some may find this objectionable given that control is often understood 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.¹³

An example of finite control from Landau (2013) is given in (27) below. PRO is actually the subject of a finite embedded clause, and the embedded verb has tense and agreement inflection. Landau argues that 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 must have a sloppy reading with ellipsis, just like PRO and unlike *pro*.

- (27) Rina bikša me-Gil; [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

¹²For more details, the reader is referred to Ameka (2008) and Essegbey (2008).

¹³See Landau (2004, 2013) for a more detailed discussion on finite control.

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. Indeed, Landau shows that subjunctive clauses such as (28a) pattern with infinitives in allowing NPI licensing; indicatives do not allow it, as in (28b):

- (28) a. 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.'
- b. *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.'

Like Hebrew subjunctive clauses, NPI licensing can take place with irrealis embedded clauses in Ewe, but not realis ones. This is seen in (29a)-(29b), in which the meaning of the verb shifts depending on the embedded clause; in (29a) *be* is a realis verb, but in (29b) it is an irrealis verb, meaning something more like *intend*:

- (29) a. *Kofi_i me-be yè_i dzo o.
Kofi NEG1-COMP YÈ leave NEG2
'Kofi_i didn't say that he_i left.'
- b. Kofi_i me-be yè_i-a dzo o.
Kofi NEG1-COMP YÈ-POT leave NEG2
'Kofi_i didn't say that he_i could leave.'

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 in attitude contexts:

- (30) 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 have seen in Ewe, which can instantiate control with both an irrealis subjunctive marker or a potential marker. To conclude, control in Ewe is not particularly surprising, apart from the overtiness of PRO.

3 Background

This section presents background on the two theories of control that will be compared in this paper: the movement theory of control (MTC) of Hornstein (1999) in section 3.1 and the commonly assumed treatment for de se attitudes from Chierchia (1990) which I dub the *abstraction theory of control* (ATC) in section 3.2. Providing this foundation after presenting novel data on Ewe control will help us determine which of these theories is better equipped at handling the overtiness of PRO in this dialect.

3.1 Movement Theory of Control

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 relaxed restrictions on movement, making it more plausible for them to target θ -positions. Prior to the program, all θ -positions had to be filled at D-structure, making the possibility of movement into θ -positions at S-structure less likely.

Another principle that blocked movement into a θ -position for arguments that already possessed a θ -role was the θ -Criterion. Chomsky (1981)'s definition of the θ -Criterion is given in (31a)-(31b) below:

- (31) 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 (32a) having the same meaning as (32b); in principle it might be possible for *send* to assign both of its object θ -roles to just one object.

- (32) a. Mary sent John.
 b. Mary sent John to himself.

With D-structure already removed, the MTC required changing (31a) to *Each argument must receive at least one θ -role*.¹⁴ 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 (33a)-(33b) below.

- (33) 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 (33a) and (33b) is that there is an additional step of movement into the θ -position of the matrix predicate. This eliminates the need to posit PRO.

Since Chomsky (1981, 1986) and Manzini (1983), given that the existence of PRO is a troubled one, this is desirable. PRO seems to have both the properties of a pronoun and an anaphor, which seems contradictory. It has been a goal of syntactic analysis to find an antecedent for occurrences of PRO which do not seem to be controlled. This seems to be difficult.¹⁵

¹⁴There 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 issue raised by (32a)-(32b) remains unsolved.

¹⁵Lebeaux (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 (ia)-(ib): the general idea is that the implicit controller is the crossed out argument of the control predicate.

- (i) 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 (ii) shows that genuine cases of PRO_{arb} do exist, given that there seems to be no possible location for an implicit controller. PRO_{arb} does not refer to the antecedent, *the babies*.

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

Using movement to eliminate the "control module" of the grammar has the following consequences. The controller must c-command the controllee, since movement targets c-commanding landing sites. The controlled position is unpronounced, perhaps due to the specifier of nonfinite TP being a Caseless position as Nunes (2004) suggests. But unfortunately, movement precludes the possibility of genuine partial control, given that the head of an A-chain would not be identical to its trace. In the case of split control, two discontinuous NPs cannot move from the same position—there can be no split antecedents.

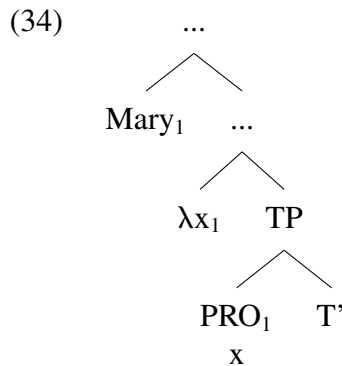
The MTC has attempted to find solutions to these problems: the usual attempt to deal with partial control, for example in Boeckx et al. (2010) has been to deny its existence and posit a null comitative in the structure, while split control is derived via positing additional structure, such as a null PP layer, inside split-controlled PRO. These arguments were made possible due to evidence being based on languages in which PRO was null. But we have already seen in the section prior, 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.

3.2 Abstraction Theory of Control

In section 2, I gave 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 the two uses of this pronoun despite its 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 in section 4.

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. PRO itself is just a bound variable:



But I will suggest in section 4 that one possible antecedent for cases of NOC PRO such as this is a null perspectival center, which reduces NOC PRO to OC PRO.

Verbs such as *claim* are attitude verbs, like most control predicates. Such verbs often take a nominal (ex. *Mary*) and a clausal (ex. *PRO to be happy*) argument. The nominal argument which is the bearer of the attitude is the *attitude holder*, and if a main verb of a sentence is attitudinal, the sentence is called an *attitude report*.¹⁶ Most control sentences are therefore attitude reports.

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 (35), where (35b) is the embedded clause built-up from the bottom up and (35c) is the matrix clause:

- (35) a. $[[\text{claim}]]^{c,g} = \lambda P_{\langle e, \langle st \rangle \rangle} \lambda x_e \lambda w_s. \forall \langle w', y \rangle \in \mathbf{claim}_{x,w}, P(y)(w')$ where $\mathbf{claim}_{x,w} = \{ \langle w', y \rangle : \text{what } x \text{ claims in } w \text{ is true in } w' \text{ and } x \text{ identifies herself as } y \text{ in } w' \}$
- b. $[[\text{CP}_2]]^{c,g} = \lambda x \lambda w. x \text{ is clever in } w$
- c. $[[\text{CP}_1]]^{c,g} = \lambda w. \forall \langle w', y \rangle \in \mathbf{claim}_{\text{John},w}, y \text{ is clever in } w'$ (Pearson, 2015, p. 82)

This semantics is based on Hintikka (1969)'s semantics for attitude reports where the content of an attitude is not a set of worlds. Chierchia and Pearson'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 non *de se* 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 (35), 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 non *de se* scenario.

The ATC is capable of getting the fact that the controller is almost always the most local one, with the exception of *promise*, *vow* and so forth. For example, in (36)-(37), both the ATC and MTC derive the controller of PRO being the attitude holder in both sentences. For the MTC, *Mary* in (36) 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*.

- (36) John_i claimed to Mary PRO_i to be a genius.

Similarly, *Mary* in (37) is not embedded in a PP so movement is possible, and the object of persuading is also the attitude holder rather than the subject.¹⁷

- (37) John persuaded Mary_i PRO_i to take out the trash.

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

¹⁶Multiple tests exist to determine the attitude holder in a given sentence; for example, epithets such as *the idiot* are anti-attitudinal, and sentences such as *John_i claimed that Mary kissed the idiot_i* are ruled out because *John* is the attitude holder in this sentence. Furthermore, epithets are subject to condition B. The reader is referred to Charnavel (2019) for more on the epithet test, and other tests for attitudinality.

¹⁷This can be verified that *persuade* is an attitude predicate with Pearson (2016)'s double vision test. *John persuaded Lois to kiss Superman* and *John persuaded Lois to kiss Clark Kent* do not seem to be contradictory at all, to my mind. In fact, this has the consequence of admitting *persuade* as a partial control predicate. My personal intuition is that this is possible: *John persuaded Mary to meet at 6* seems to be fine. But I leave further discussion of this open to future research.

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. 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:¹⁸

- (38) a. $[\text{CP}_1 \lambda w_1 [w_1 \text{ John claimed}_{[\text{log}]} [\text{CP}_2 \lambda x_{2[\text{log}]} \lambda w_3 [w_3 \text{ PRO}_{2\text{Hogt}} \text{ to be clever}]]]]]$
 b. $[\text{CP}_1 \lambda w_1 [w_1 \text{ John claimed}_{[\text{log}]} [\text{CP}_2 \lambda x_{2[\text{log}]} \lambda w_3 [w_3 y_{2\text{Hogt}} \text{ was clever}]]]]]$

In non-attitudinal contexts, logophoric 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:¹⁹

- (39) 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.

- (40) 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. $[\lambda w: \exists \langle e, se \rangle. G \text{ is a concept generator for John in } w \ \& \ \forall w' \in \text{Say}(\text{Kofi}; w), G(\text{John}) \text{ is clever in } w']]$

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 as we have seen in section 2, overt PRO in Ewe does have ϕ -features, contradicting this assumption. I propose two possible explanations of why irrealis *yè* does not allow *de se* readings in the next section.

¹⁸This 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 binding principles that relate to the presence of ϕ -features; I propose to account it in terms of structure in section 4.

¹⁹This is simplified from her definition. See Pearson (2015) for further discussion.

4 Analysis

I attempt to answer the most central question that arose in our investigation of $y\grave{e}$ in different contexts in section 2. Is there a way we can maintain the same analysis for this pronoun which has the same phonetic form despite having different properties depending on the mood of the embedded clause? I will propose that the phonetic form $y\grave{e}$ arises via the control operation—that is, local binding via an abstraction operator in the embedded clause—in both realis and irrealis embedded clauses. The only difference is that, following Charnavel (2019), realis embedded clauses contain a logophoric projection LogP and a null logophor to bind $y\grave{e}$.

4.1 Charnavel (2019)

It has long been noted that, in some contexts, anaphors are subject to Chomsky (1986)'s Condition A, which states that anaphors must be bound inside their local domain.²⁰ I illustrate this with examples from Charnavel and Sportiche (2016), who refers to anaphors which obey Condition A as plain anaphors, as in (41a):

- (41) a. [The moon]_i spins on itself_i.
b. * [The moon]_i influences [people sensitive to itself_i].

However, it has been observed that there are contexts in which anaphors do not seem to be subject to Condition A. For example, *himself* can be bound by *Noah*, despite *Noah* being the farthest possible antecedent for the anaphor in (42) according to any definition of locality:

- (42) Noah_i said to Mary that nobody would believe linguists like himself_i were necessary.

Exempt anaphors are ones like *himself* in (42), which seem to be exceptional. The goal of Charnavel (2019) is to account for why, in so many languages, plain and exempt anaphors are phonetically identical despite apparent differences in their licensing conditions. Contrary to appearances, she argues that plain and exempt anaphors are the same: exempt anaphors are locally bound by a phonetically null logophoric pronoun, pro_{log} , that is identified with the individual whose perspective is adopted by the speaker, even though exempt anaphors lack an overt local antecedent. In this way, even seemingly exceptional anaphors satisfy Condition A.

Charnavel and Sportiche (2016) makes the important observation that exempt reflexives are necessarily animate. For example, notice that (41b) seems to improve if *the moon* is replaced with an animate subject in (43a). But a stronger contrast is observed in (43b) and (43c), where we see that *the newspaper* cannot antecede a reflexive in the embedded clause despite being a source of information:

- (43) a. Trump_i influences [people sensitive to himself_i].
b. Caitlin learned from John_i that there was a story about himself_i on TV.
c. * Caitlin learned from [the newspaper]_i that there was a story about itself_i on TV.

²⁰I follow Charnavel and Sportiche (2016) in assuming that it is the Spell-Out domain of a phase head, although different authors define different local domains; for example, Chomsky (1986) defined it as the domain containing the anaphor and a subject distinct from that anaphor.

Charnavel’s hypothesis predicts the importance of animacy: only animate individuals can serve as perspectival centers, so only animate reflexives can be bound by pro_{log} . As such, Charnavel (2019) makes two empirical generalizations:

- (44) a. An exempt anaphor must be anteceded by an attitude holder or an empathy locus. This is its logophoric antecedent.
 b. The constituent containing an exempt anaphor has to express the first-personal perspective of its antecedent. This is its logophoric domain.

Charnavel adopts a phase-based formulation of Condition A, given in (45).

- (45) **Phase-based formulation of Condition A:**
 An anaphor must be bound within its smallest Spell-Out domain.

We can now get into the more theoretical aspects of this proposal. According to Charnavel, every Spell-Out domain optionally contains a logophoric projection, LogP, headed by a perspectival operator OP_{LOG} . This operator licenses a covert logophoric pronoun, pro_{log} , as its specifier and requires that its complement, schematized as P in (46a), is compatible with the first-personal perspective of the referent of pro_{log} , as captured in the denotation in (46a). Each phase can be specified as being presented from the perspective of a certain individual:

- (46) a. $[_{LogP} pro_{log-i} OP_{LOG} [P \dots logophor_i \dots]]$
 b. $[[OP_{LOG}]] = \lambda P. \lambda x: P \text{ from } x\text{'s first-personal perspective}$

The difference between plain and exempt anaphors is schematized below. Ph_0 refers to a phase head, and XP is the Spell-Out domain of Ph^0 in (47b), and LogP is the domain in (47a). This is to illustrate the very similar syntactic structure between the two, where the only difference between an exempt and plain anaphor is the binder: the former is covertly locally bound by a perspectival center while the latter is still locally bound, but not by pro_{log} . It should be noted that, like other forms of covert pro, pro_{log} does not require a local binder.²¹

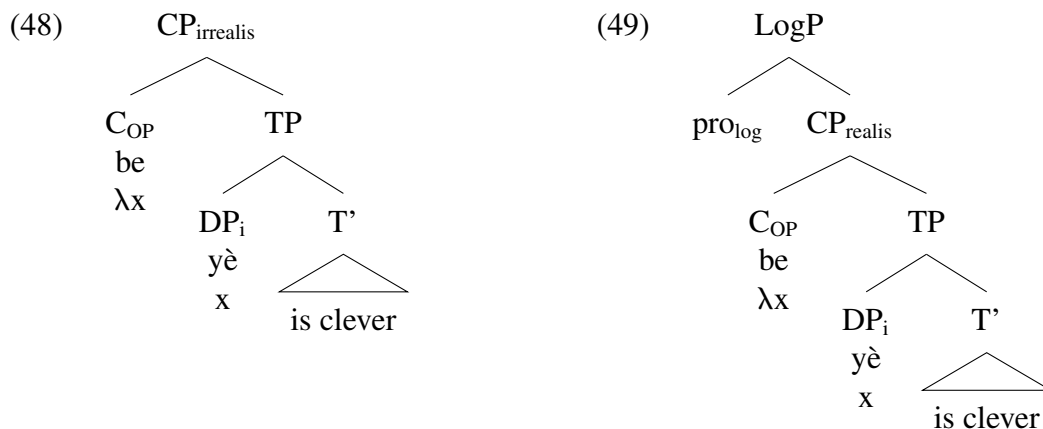
- (47) a. **Exempt anaphor:** $[_{PhP} Ph^0 [_{LogP} pro_{log-i} OP_{LOG} [_{XP} \dots exempt\ anaphor_i \dots]]]$
 b. **Plain anaphor:** $[_{PhP} Ph^0 [_{XP} \dots DP_i \dots plain\ anaphor_i \dots]]$

We will now apply Charnavel’s account to the data from Ewe seen in section 2. The novel observation in this paper that I will make is as follows: PRO, in other languages including Ewe, is effectively a plain anaphor—it must be bound by the most local antecedent—whereas the logophoric pronoun must be bound by an attitude holder, so it is effectively an exempt anaphor.

²¹One more potential issue is as follows. Notice that in a sentence such as *John kicked himself*, under the little v hypothesis *John* would be Merged to Spec,vP, which itself is the phase edge, and not inside the Spell-Out domain. This would have the unfortunate consequence, under Charnavel’s approach, that anaphors can never be bound in such simple sentences, incorrectly predicting the ungrammaticality of *John_i kicked himself_i*. Charnavel and Sportiche (2016) propose several arguments for a rethinking of the "vP edge"; they propose that the agent of vP is first Merged inside the Spell-Out domain, then attracted to Spec,vP as v^0 probes for the nearest DP, which is the agent. This applies to any XP with a subject, and not just vP. The reader is referred to Charnavel and Sportiche (2016) for further discussion on this matter.

4.2 A unified account of the two *yè*

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.²² I noted that *yè* can only appear after *be*; I propose that it is bound by it.²³ I will propose two structures: (48) for irrealis *yè* and (49) for realis *yè*. In both structures, *yè*, or overt PRO is a variable bound by *be*. This is precisely what we saw in (47a)-(47b). In essence, I am proposing that PRO is semantically interpreted as a plain anaphor, as in (48), while the logophoric pronoun is interpreted as an exempt anaphor, as in (49):



Both structures involve control. This might seem at odds with Clements (1975)'s claim that the logophoric pronoun is not an anaphor, as the pronoun has a different syntactic distribution. This is not problematic to my account; although they are both interpreted semantically as plain anaphors, but they may have different syntactic and pragmatic properties that lead to differences in distribution between the two.

Why does *yè* have different properties in realis vs. irrealis clauses? One answer is provided by Pearson (2015) in terms of ϕ -features. For Pearson, PRO is a minimal pronoun in the sense of Kratzer (2009), which inherits ϕ -features from its controller. It inherits these ϕ -features by binding with the abstraction operator; this means that it must be inside PRO's local domain. For Kratzer, such 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*, de-

²²An anonymous reviewer asks why binding by the same complementizer, *be*, necessitates that they have the same phonetic form *yè*, because binders do not typically require that their bindees have a particular phonetic form. This is a reasonable concern. Take a sentence like *every girl likes herself*: *herself* has the same form whether it is bound by a quantifier phrase or a feminine proper name. Why, then, should binding by an abstraction operator guarantee the form *yè*? But the binder *does* require that it is of the form *herself*, given syntactic agreement between the binder and the bindee. This phonetic relationship might then be conditioned by syntactic features. We would have to stipulate the presence of a syntactic feature like Heim (2002)'s [log] discussed in example (38) prior. Although the catch is that, given my own observation on the possibility of inanimate control, the feature would have to be something else, perhaps [Op] for operator binding. I will leave open the precise details of such an analysis for future research.

²³However, 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.

spite having ϕ -features, cannot have a long-distance antecedent and has other properties associated with control, so this account cannot be right. The account proposed in this paper provides a straightforward solution: $yè$ in all its instantiations must be locally bound, but realis $yè$ gives the illusion of not being locally bound—via the presence of a perspectival center—as it allows long-distance readings. In irrealis embedded clauses, which lack this perspectival center, subject $yè$ must be bound by a local antecedent.

I will now ensure that this analysis captures the following basic characteristics of control:

- (50) a. Why $yè$ must be locally bound?
 b. Why the antecedent must c-command irrealis $yè$?
 c. Why is the strict reading ruled out with irrealis $yè$?
 d. Why are de se readings obligatory?

Before answering these questions, I would like to point out that the crucial proposal is that control structures and predicates in Ewe do not fundamentally differ syntactically or semantically, respectively, from that of English or other similar languages, apart from certain elements being overt, such as PRO and the irrealis marker—which we discussed in 2.5. Under my account, what makes Ewe different is nothing more than the overtiness of PRO.

As such, answering the questions from (50a)-(50d) is straightforward. $Yè$ must be locally bound because its semantic denotation is that of a variable. It is immediately bound indirectly by the abstraction operator. Chierchia's account of control also ensures that the antecedent must c-command $yè$: the semantics ensures that, say, *John* in *John's mother tried to open a can* cannot be the controller. Furthermore, the structure given in (48) immediately rules out strict readings.

Finally, although Landau (2013) discusses de se as a "bogus" criterion for OC given the existence of inanimate control, among other reasons, it is still important to explain why it is so common. I propose that the semantics of control predicates like *try* in Ewe is no different from that of *try* in English; requiring Chierchia (1990)'s semantics for de se binding. An example semantics of *claim* can be seen in (35). The real challenge, then, is to explain why realis $yè$ may be read de re. This will be discussed further in 4.4.

I have noted in section 2 that cases of inanimate control exist. Of course, PRO in these contexts cannot be read de se, since de se readings require animacy. This is not problematic for the ATC presented in 3.2, however. Whether or not a de se reading is possible depends entirely on the semantics of the control predicate; an abstraction operator can still be present in the embedded clause and not lead to a de se reading.

Moving on, the recent Wurmbrand and Lohninger (2019) (W&L) will help us to better understand the difference between the two constructions. W&L argue that certain embedded clauses—such as those in the irrealis—contain less structure, and as a result are more integrated and less complex than those which are in, for example, the realis. I am suggesting that this is precisely what is going on between (48) and (49): (49) is more complex, and therefore has at least a perspectival center, and perhaps additional structure that is not shown.

Irrealis clauses are what we call *truncated*.²⁴ The only difference that matters for our purposes between the two $yè$ is that in irrealis embedded clauses—perhaps because irrealis clauses are less

²⁴The observation that control complements are truncated and missing parts of the C-domain is not new: see, for example, Shlonsky and Soare (2011) or Pesetsky (2019) for similar claims. Why exactly the embedded clause being in the realis mood goes together with the addition of the perspectival center is a question I am not able to answer fully at this time, however.

complex, as *yè* lacks a perspectival center, and this leads to it being semantically interpreted as a plain anaphor. Because the realis embedded clause is more independent and more complex, it has a perspectival center, and this requires that it be semantically interpreted as an exempt anaphor.

There seems to be strong empirical evidence in Ewe that these two phenomena should be treated in the same way, given that they have the same phonetic form. However, we have seen strong evidence that this pronoun is not logophoric in the subject position of a irrealis clause. I propose that *yè*, rather than being a logophoric pronoun, might be better characterized as a left-periphery bound pronoun: a pronoun which just needs to be bound in the left-periphery of the embedded clause. 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.

Before concluding, I would like to mention that there seems to be no non-obligatory control (NOC) PRO in Ewe; I have found no examples of irrealis *yè* that might instantiate this. As such, arbitrary control is also impossible in Ewe. In the example below, arbitrary control is possible in English, in a context where Marie told contextually salient people to leave:

- (51) * Marie_i be yè_{arb}-a dzo
 Marie COMP YÈ-POT leave
 '(Intended) Marie_i said PRO_{arb} to leave. (arbitrary reading possible in English)'

However, I believe that the analysis provided here has extensions beyond Ewe. Charnavel's analysis of logophoric constructions can be applied to the distribution of NOC PRO, given that it is logophoric. The logophoricity of NOC PRO was first noted by Kuno (1975), but it has been defended by others since, such as Landau (1999) and Charnavel (2019). Notice that in the examples below, no purely syntactic analysis can explain the following contrast, which differ in the preposition used (*to* vs. *about*).

- (52) a. John said to Mary that there was a picture of herself with a Mafia figure in the newspaper.
 b. * John said about Mary that there was a picture of herself with a Mafia figure in the newspaper.

If Charnavel's analysis here is right, then NOC PRO is nothing more than a subspecies of OC PRO, given that they both have the semantic interpretation, except what we would usually call OC PRO is not bound by a null logophor.²⁵

4.3 Comparison with Landau (2015)

Perhaps the most pressing concern with my analysis 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:

- (53) La victima 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)

²⁵But there is one catch: in Ewe, perspectival centers for *yè* do not seem to allow the attitude holder to be arbitrary; the attitude holder must be present in the sentence. Answering why would go beyond the scope of the paper; I leave it open to future research.

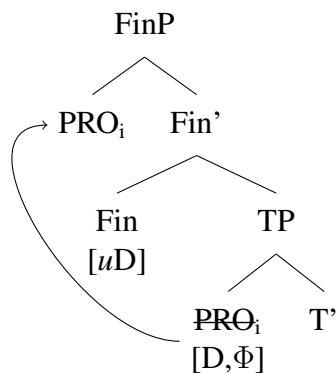
Nothing in the ATC gives us syntactic agreement, as there is no syntactic relation between the controller and PRO. By contrast, an approach to control mediated by the operation Agree such as Landau (1999)'s is able to get the syntactic agreement facts but not that the *de se* reading of PRO is required. 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 Pearson (2013) has attempted to derive syntactic agreement in the ATC framework, though Landau (2015) objects that this is stipulatory.

Based on this issue, Landau (2015) builds 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* in attitude contexts 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 contexts OC is a kind of prediction which is made possible via movement of PRO, where PRO abstracts over the complement. The predicative head is designated as *Fin*, and an example derivation is given in (54).

The second tier of control, for attitudinal complements, 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. As such, *de se* is just a special kind of *de re*, rejecting Chierchia (1990)'s semantics for *de se* binding, following Lewis (1979), Schlenker (2005), Anand (2006), among others. I give a simplified derivation of a sentence with logophoric control in (55); although it is simplified, I have kept the essence of the approach.

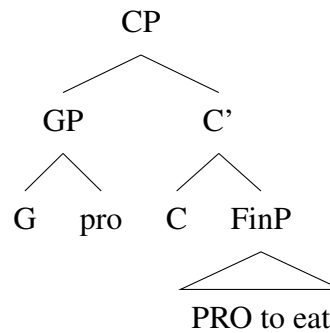
(54) *Predicative control*

John forced the car_i PRO_i to stop.



(55) *Logophoric control*

John_i tried PRO_i to eat.



The analysis provided here is fundamentally similar to that of Landau (2015), especially in the case of *realis ye*; they are in fact syntactically identical, with the exception that Landau posits a *pro* controller for all cases of logophoric control, but I propose control by a null logophor, which leads to long-distance readings. The most important points of departure is the semantics of the control construction: I claim that they are properties, but for Landau they are propositions. If we side with Pearson (2018), as I do in 4.4, then we have reason to believe they are properties.

But based on the findings of this paper, I am unsure if it is necessary to posit a second tier for logophoric control. In Ewe, the two tiers of control look identical: (56), 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:

- (56) Ati_i-a dzegome be yè_i-a ŋe.
 Tree-NOM begin COMP YÈ-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.'

By contrast, the account proposed in this paper provides an identical syntactic structure to the two readings of (56), but the animate version of the sentence requires *de se* binding while the inanimate version does not; overt PRO in both sentences is controlled by the matrix subject.

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.

4.4 Further Problems

In this subsection, my goal is to address these three problems for my account:

- (57) a. Can irrealis *yè* be analyzed as an obligatorily operator-bound pronoun, rather than overt PRO?
 b. Why can realis *yè* be read *de re*?
 c. Why must irrealis *yè* be controlled in the subject position, and not the object, given that it can appear as an object?

Starting with (57a), an anonymous reviewer points out that the evidence provided in section 2 may lead to another analysis of *yè*, via an extension of Pearson (2015)'s existing account on realis *yè*. Under this account, *yè* is always embedded in a concept generator but irrealis *yè* is still necessarily read *de se*, perhaps as presupposition on the context generator in the spirit of Landau (2015). The locality constraint could be accounted for by a semantic matching condition. Then perhaps I have not been able to establish the existence of an overt PRO in Ewe.

In fact, Pearson (2018)'s own argument in favor of *de se* binding with PRO helps us eliminate this possibility. Pearson argues that only Chierchia (1990)'s semantics for PRO can get the correct semantics when PRO is in the complement of counterfactual attitude verbs such as *imagine* and *pretend*. A detailed discussion of would take us out of our scope, but it is worth discussing.

Pearson notes that (58) below can have two interpretations: one in which Ivanka imagines being Melania and giving an interview as Melania. and another in which Ivanka imagines being Melania and seeing, from the eyes of Melania, Ivanka Trump give an interview. Let us call the first reading of (58) the counterfactual-self reading, and the second the belief-self reading. With the pronoun *she*, both readings seem to be possible, as Pearson points out.

- (58) Ivanka imagined she was Melania and she was giving an interview.

But the belief-self reading is unavailable for PRO; only the counterfactual-self reading is:

- (59) a. Ivanka imagined PRO being Melania and PRO giving an interview as First Lady.
 b. # Ivanka imagined being Melania and PRO giving an interview as First Daughter.

Pearson argues that the inability for PRO to be read *de re* is related to the unavailability of the belief-self reading, defending the following *De Se Generalizations* (p. 30):

- (60) a. **1:** If a pronoun or anaphor is unambiguously read *de se*, then it cannot receive a belief-self reading in counterfactual reports with counter-identity.
 b. **2:** If a pronoun or anaphor is ambiguous between a *de se* and a *de re* reading, then it can receive either a counterfactual-self or a belief-self reading in counterfactual reports with counter-identity.

Assuming that PRO is read *de se-as-de re* overgenerates: a sentence such as *Ivanka imagined PRO giving an interview* would have both a belief-self and counterfactual-self interpretation, contrary to fact. The lack of a *de re* reading with PRO might be accounted for by building a requirement that the mediating concept is the SELF-concept, as Landau (2015) does, but Pearson notes that this does not offer a principled explanation for the De Se Generalization: namely the correlation between the inability to be read *de re* and the unavailability of the belief-self reading.

Moving onto Ewe, the prediction is that realis *yè* has both the counterfactual- and belief-self readings. This prediction is borne out, as Pearson (2018) shows:

- (61) 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 he gave himself a gift.’
Scenario: Last night, John dreamt that he was Barack Obama. In the dream, he, as Barack Obama, gave himself (John) a gift.

If irrealis *yè* truly is an overt PRO, then we would expect only the counterfactual-self reading to be available. This prediction is borne out with my primary native speaker consultant—who also agreed with the judgments on Pearson’s context-sentence pairs—as shown in (62), in which the belief-self reading is unavailable; that is, if Ivanka imagines that she is Melania and that Ivanka, seen from the first-personal perspective of Melania, preparing to leave the White House.

- (62) Ivanka twe be yè-a dzo le White House a
 Ivanka imagine COMP YÈ-POT at White House DEF
 ‘Ivanka imagined leaving the White House.’

The counter-analysis in (57a), then, misses Pearson (2018)’s De Se Generalization in Ewe.

Let us move to (57b). To understand why the availability of realis *yè*’s *de re* reading is so unusual, it might help to look at logophoric pronouns in other Niger-Congo languages, like 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 been able to verify that the logophoric pronoun *òun* in Yoruba must be read *de se* in realis contexts, unlike in Ewe. The sentence below is not possible in a context in which Taiwo does not know that he is referring to himself as fat.

- (63) # Taiwo_i ro pè òun_i sanra
 Taiwo thinks COMP YÈ fat
 ‘Taiwo_i thinks that he_i is fat.’ (attempted *de re* reading, but fine if read *de se*)

Another way in which Ewe and Yoruba’s logophoric pronouns differ is that *òun* undergoes the *de re* blocking effect, as Anand (2006) points out, but Ewe does not, according to Pearson (2013). Anand (2006)’s *de re* blocking effect is defined as follows: *no obligatory de se anaphor can be c-commanded by a de re counterpart.*

Evidence of this is provided below. 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).

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

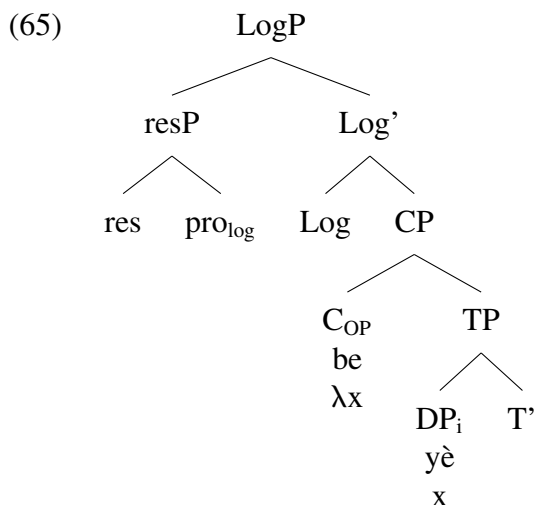
Ewe’s *yè* does not behave like Yoruba’s *òun* in this regard—Pearson (2013)’s evidence has already been given in (61) above. As such, the fact that so-called logophoric pronouns in Ewe can be read de re is quite problematic for Charnavel, and my account here. For Charnavel, logophors are expected to always be read de se, and this is indeed a diagnostic for logophors. It is surprising that realis *yè* can be read de re at all, and does not undergo the de re blocking effect.

To attempt to solve (57b), I propose that realis *yè* requires that it be embedded in a resP. Pearson (2018), too, entertains the idea that there might be two paths to de se. For irrealis *yè* and PRO more generally, it is always de se binding in the spirit of Chierchia (1990). On the other hand, realis *yè* is always embedded in a resP.

This is not a mere stipulation, and has empirical justification if we follow Anand (2006), given the lack of the blocking effect with realis *yè* and given the possibility of both the belief- and counterfactual-self readings with realis *yè*. On the other hand, only the counterfactual-self reading is possible with *yè*, and this fits in with Pearson’s De Se Generalization.

I see two paths that we can take, for the correct syntax for these structures. We might adopt Pearson (2015)’s hybrid de se-de re semantics, just in the case of realis *yè*, but use Chierchia’s simple semantics for control constructions for irrealis *yè*. Under Pearson’s account, *yè* is always embedded in a resP: I must stipulate that it is only the case in realis embedded clauses, which might seem troubling. Why does the mood condition the presence of resP on *yè*?

Alternatively, we might follow Landau (2015)’s structure for logophoric control, in which the null pronoun—*pro*_{log} in my case—is itself embedded in a resP, and *not* *yè*. Following Landau, realis *yè*’s de se reading is a special kind of de re. This would not have the aforementioned problem of the lack of resP in irrealis embedded clauses, as *pro*_{log} is itself embedded in a resP and then truncated, allowing only de se binding. A tree is shown below of a realis embedded clause:



In this tree, notice that Charnavel’s null logophor is itself embedded in a resP, but there is a catch. This approach would have to stipulate that pro_{log} can be embedded in a resP, but only, as far as we know, in Ewe. But the evidence *does* seem to suggest that Ewe is unique. But perhaps one could find a reason why it is so uncommon crosslinguistically for null logophors to be embedded in a resP. I do not have a strong opinion on which path to take here, as long as both get the desired result. But for the time being, I can only offer solutions which require some stipulation, but nevertheless have some empirical basis.

Finally, we move to (57c). *Yè* can also appear in the object position of a control complement with *-a*, as in (66), 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:

- (66) Agbe_j kadedzi be Kofi_i dzagbagba be yè_{i/*j}-a fo yè_{j/?i}.
 Agbe believe COMP Kofi try COMP YÈ-IRR hit YÈ
 ‘Agbe_j believes that Kofi tried to hit him_j.’

There are two problems that arise from (66). The easier problem is why object *yè* be licensed, with long-distance readings, if subject *yè* is already bound by the one *be* heading the embedded clause? In other words, where is the abstraction operator for the second *yè* in (66)?

Charnavel (2019) gives us a possible explanation to account for the distribution of object *yè*. Under her account, a logophoric projection can be inserted into the Spell-Out domain of any phase. This includes phases such as vP, so it is plausible for there to be a perspectival center present—in the Spell-Out domain of vP—that can bind the second *yè* in (66).²⁶

But more problematic is the problem in (57c): why can object *yè* have long-distance readings, even in an irrealis embedded clause? To help solve this problem, let us look another language with logophors. A language very similar to Ewe in this regard is Balinese, as Udayana (2013) points out; he compares the complex Balinese anaphor *awakne* to the logophoric pronoun in Ewe, arguing that the anaphor is itself a logophor. Like *yè* in Ewe, *awakne* in Balinese always allows long-distance readings, even if it is the object of a transitive verb:

- (67) Nyoman_i ngaden Ayu_j nanjung awak-ne_{i,j}
 Nyoman think Ayu AV.kick self-POSS.3SG
 ‘Nyoman_i thinks Ayu_j kicked him/herself_{i,j}.’

What this shows is that it is possible for a perspectival center to be inserted into the Spell-Out domain of vP, which is VP, and bind the object. This allows long-distance readings of object logophors like *yè* in Ewe and *awakne* in Balinese. By contrast, I have argued that irrealis embedded clauses in Ewe may be truncated compared to realis ones, and this entails the removal of a perspectival center. This is precisely why object *yè* cannot be controlled: because vP and realis CP in Ewe license perspectival centers, whereas irrealis CPs do not.²⁷

²⁶But this leaves a question open. Why is object *yè* not licensed in matrix clauses as well? Here, I must stipulate that it can be licensed only by the complementizer *be*, perhaps due to certain syntactic features that license it.

²⁷At this point, the reader might be wondering why vP licenses perspectival centers, if vPs less complex and more integrated than CP_{irrealis}. Here, I must leave the details of this open to future research, but I am able to sketch an analysis. It is possible that irrealis embedded clauses are not phases while vPs and realis CPs are; (29a)-(29b) may be evidence for this claim, given that NPI-licensing is possible across an irrealis embedded clause boundary but not a realis one. So, LogP is not inserted. Alternatively, because under Charnavel’s account LogP is inserted at the very top of the tree, this is necessarily truncated if truncation does indeed take place, as I have argued here.

To conclude, I have proposed an analysis of PRO in (48) for Ewe that might be carried onto languages such as English: PRO is semantically interpreted as a plain anaphor, while logophors such as logophoric pronouns are semantically interpreted as what seem to be "exempt" anaphors, but are really just plain anaphors bound by perspectival centers. In other words, control is just binding by a local antecedent with the right sort of predicate, which often requires a *de se* reading and an embedded clause that is not in the realis mood.

This is the only difference between the two *yè*; and indeed, this treatment of control and logophoricity treats the two as very similar phenomena. And although this approach may seem parochial and only be relevant to Ewe, it is possible for the approach to be extended to NOC PRO—which seems to be a logophor—in languages like English, which I have claimed would be a subspecies of OC PRO under Charnavel’s account.

5 Problems for the MTC

My goal here is to discuss four issues for the MTC. The novel data from Ewe, I believe, either raises novel objections to the MTC in two instances, and significantly builds upon objections that have already been made in the literature in two other cases. My goal is to show that the novel data provided here moves the MTC debate forward.

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 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. By contrast, in footnote (22), I attempted to derive this similarity via syntactic features, building on Heim (2002)’s proposal. I noted that binders can condition the form of their bindees, ex. with *Mary* and *herself* via agreement. Something similar, I propose, is going on with *yè*.

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.

- (68) (ká) wānā_i *(āti) fi pá:-chīm *(wà_i) àli 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).

- (69) 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).

- (70) 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.

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 realis *yè* in general is the latter may have long-distance antecedents. I repeat (6) in (71) below.

- (71) Marie_i be Kofi_k xuse be yè_{i/k} na yè_{i/k} cadeau
 Mary say Kofi believe COMP YÈ give YÈ 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 realis *yè* can freely have long-distance antecedents shows that its distribution is unlikely to be accounted for via movement.

Here is another path for the MTC. Both realis and irrealis *yè* in embedded Spec,TP can start out differently, but they both end as bound variables, spelled out as *yè*. Both cases involve movement, but to different positions: in irrealis contexts, the DP moves to the matrix clause to pick up another θ -role; the lower copy becomes a bound variable and is pronounced as *yè*. In realis contexts, an operator moves to Spec,CP, and again leaves a variable, which is pronounced as *yè*.

Such an account would lead to minimality violations, however. Recall that if *yè* is an object it can always be read long-distance, even if the embedded clause is in the irrealis. So object *yè* is an operator, which must therefore move to embedded Spec,CP. Let us now turn the embedded clause in (71) into an irrealis one, as in (72), where the subject *yè* is PRO while the object *yè* is a logophoric pronoun, so that the subject *yè* cannot refer to the long-distance *Marie*:

- (72) Marie_i be Kofi_k xuse be yè^{*i/k}-a na yè_{i/k} cadeau
 Mary say Kofi believe COMP YÈ-POT give YÈ gift
 ‘Mary_i said that Kofi_k believed that he_k/she_i will give him_k/her_i a gift.’

The embedded clause would have the following structure at one point of the derivation:

- (73) [CP OP_{i/k} [C] [TP [Marie_i/Kofi_k] ...]]

Both the operator and *Marie* or *Kofi* are DPs, but the operator is higher up at one point of the derivation. Due to minimality, no movement would be able to take place above the operator.

No movement is required in my account of (72). As mentioned in section 4, object *yè* is anteceded by a perspectival center in the Spell-Out domain of Spec,VP; *pro*_{log} can refer to either of the attitude holders, which are *Marie* and *Kofi*, and this binds object *yè*. By contrast, the subject *yè* has no perspectival center, so it must refer locally, that is to *Kofi*:

- (74) [CP [C λx [TP yè [T' [VP [LogP *pro*_{log-i/k} [VP yè_{i/k}]]]]]]]

In the previous section, I have attempted to argue that the distribution of the *yè* provides us evidence for thinking that the distribution of OC PRO and logophoric pronouns should be treated 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 many such as Hornstein (2003), Bowers (2008), Rodrigues (2007) Boeckx et al. (2010) attempt to deny the existence of PC given that the head of an A-chain must be identical to its trace, and not merely "partially" identical in some sense. But novel data from Ewe makes it difficult to deny that genuine PC exists. (17) is repeated in (75) below, in which the embedded predicate *kpe* ‘meet’ precludes the possibility of exhaustive control.

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

Furthermore, like English, *Marie kpe ga ade* ‘Mary met at 6’ is ruled out. 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. The examples below are reproduced (Boeckx et al., 2010, p. 185):²⁸

²⁸Rodrigues (2007) proposes a theory of partial control under the MTC that would be the best-equipped at handling the facts seen in Ewe. According to Rodrigues, partial control emerges when a null pronoun such as *pro* adjoins to the controllee DP, forming a larger DP [_{DP} *pro* DP]. The internal DP raises, as in the MTC, and *pro* is stranded lower down. She considers *pro* similar to the associative morphemes in Japanese and Chinese. For example, *Mary* together with such a morpheme would mean *Mary and the others*. In fact, *wo* in Ewe, seen in partial control constructions, is also an associative morpheme, as Ameka (2017) points out. So it may well be the best account to handle the facts seen in Ewe. However, as Boeckx et al. (2010) points out, Rodrigues’s account has several indepen-

- (76) 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 would predict that the phonetic form of *yè* should be singular, *yè*, rather than plural, *yèwo*. It is easy to verify that partial control is allowed in (75) and exhaustive control is not. The embedded predicate in (75) is *meet*, which requires that its subject be semantically plural in Ewe and in other languages like English. This also shows that we are not dealing with mere syntactic plurality but semantic plurality as well.

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.

This is not possible in English. If we take the expression *as an adult*, we see that PC PRO in (77c) rejects *as an adult* like (77b) and unlike (77a). Imagine a context in which Kofi's 18th birthday will happen the next day, and Kofi and Marie will meet then:

- (77) 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.

In Ewe, (78a)-(78c) translate similarly to their respective counterparts in (77a)-(77c):

- (78) a. Kofi a kpe Marie abe ame tsitsi ene etsor.
 Kofi POT meet Marie like person adult as 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 like person adult as 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 YÈ-PL-POT meet like person adult as 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 (79) 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:

- (79) * Kofi dzi be Agbe a kpe ga ade
 Kofi want COMP Agbe POT meet at 6

dent problems; for example, not deriving comitative restrictions on the embedded predicate in sentences like *The chair hoped to meet with the president*, which is also possible in Ewe with *yèwo*. I do not believe I am able to offer further insight on her account from the facts seen in Ewe at this time. But there are problems outside of Ewe with assuming the existence of a null comitative, including for Rodrigues's account. The reader is referred to Landau (2016) for further discussion on assuming null comitatives in partial control constructions.

‘(Intended meaning) Kofi wanted for them (including Agbe) to meet at 6.’

The ATC can account for all of the data in this section straightforwardly, given that it argues partial control does exist and PRO may be semantically plural. I assume a framework like Pearson (2016)’s for an account of partial control. At the very least, my goal in this subsection has been to give evidence for the existence of genuine partial control, for which assuming the null comitative analysis seems to lead to several complications, even outside of Ewe.

5.3 Split control

It has been noted by Fujii (2006), Boeckx et al. (2010) and Landau (2013), among others, that split control remains one of the most difficult aspects of control to account for, especially for the MTC. Due to this, in some papers such as Hornstein (1999), the entire existence of split control was questioned. However, the consensus today, even among the proponents of the MTC, is that split control does exist.

The overtness of split control in Ewe, repeated in (80) 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:

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

Prima facie, this is 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:

- (81) [[_{MoodP} [A + B] [_{Mood} TP]]]

+ is assumed to be a phonetically null coordinator. 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 (83). 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.

This solution is problematic for two major reasons that come to light due to the data from Ewe in this paper. 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*.

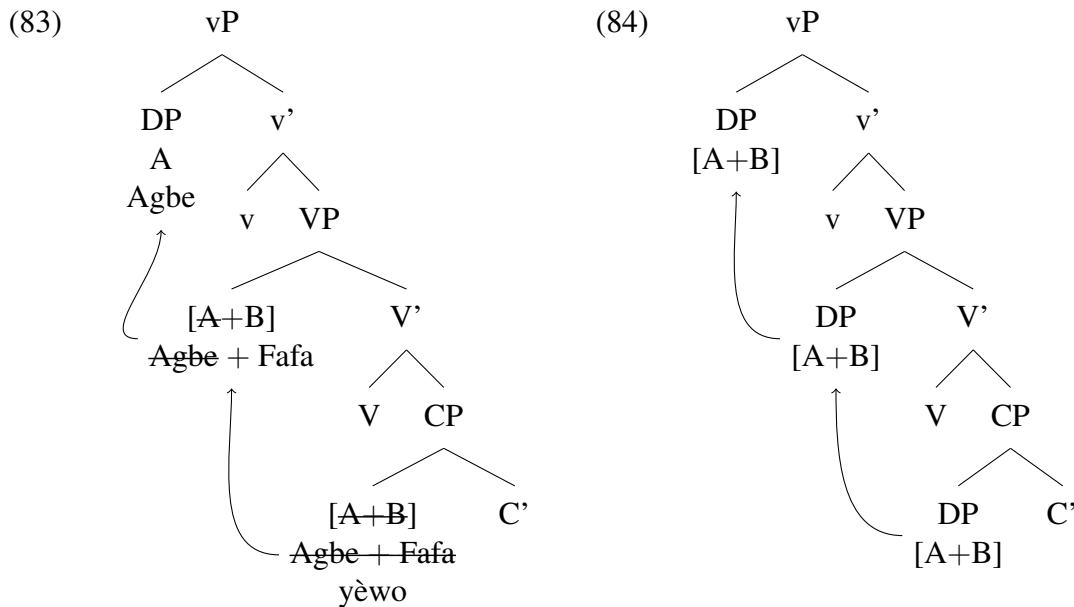
Another problem is that it is not clear in Fujii (2006)’s solution whether [A + B] is a DP or something else entirely, or perhaps a PP. If it is a DP, movement of a DP from inside another DP would violate minimality conditions. If it is not a DP, then there is no minimality violation,

but the novel data from 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 make the object of the embedded verb into a reflexive, as in (82), given that the external argument must c-command the internal argument reflexive:

- (82) Agbe_i gblo ne Fafa_k be yè-wo_{i+k} (meve yè-wo_{i+k}) a fo wo-ɖokui.
 Agbe told to Fafa COMP YÈ-PL (two.person YÈ-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 (84), where we would expect there to be two resumptive pronouns, both spelled out as *yèwo*. This is not the desired outcome:



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.²⁹

[+ 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* in the object position, since there is no trace of *Agbe*. But this brings about two further problems. First, notice that in (80), 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:

²⁹This is motivated by the need to fix an incorrect prediction in (ia)-(ib); *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.

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

(85) [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 as in (83)-(84) remains.

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.³⁰ 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 might instantiate *hyperraising*, which involves raising out of a finite clause. Other Niger-Congo languages such as Zulu (Halpert (2016)) have optional hyperraising. 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 (86a)-(86b):³¹

- | | | | | |
|------|----|----------------------------|----|----------------------------|
| (86) | a. | E wo be e hodzo | b. | *E wo be e-a hodzo |
| | | It feel COMP 3SG hot | | It feel COMP 3SG-POT hot |
| | | ‘It seems that it is hot.’ | | ‘It seems it will 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 (87a)-(87b) below. However, this contrasts with Ewe in which (hyper)raising is not possible with the same predicate, as in (87c)-(87d).

- | | | | |
|------|----|---|------|
| (87) | a. | Kù m̀ags̀i Asouk ch̀eŋ s̀uk̀u | |
| | | it right Asouk go school | |
| | | ‘It is right (for) Asouk to go to school.’ | |
| | b. | Asouk _i m̀ags̀i ẁa _{i/*j} ch̀eŋ s̀uk̀u | |
| | | Asouk right 3SG go school | |
| | | ‘It is right (for) Asouk to go to school.’ | Buli |
| | c. | E nyo be Agbe na ỳi s̀uk̀u. | |
| | | It right COMP Agbe NA go school | |
| | | ‘It is right for Agbe to go to school.’ | |

³⁰Here, I am remaining agnostic on whether irrealis embedded clauses in Ewe are finite or nonfinite; as such, I am referring to this possibility as (hyper)raising.

³¹I 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.

- d. * Agbe nyo be yè_i-a na yi sukuu.
 Agbe right COMP YÈ-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 (13), which is repeated in (88a) below. Notice that the expletive-constructions in (88b) are impossible in this case; expletive-insertion is one of the classical tests to distinguish between raising and control predicates because a raising predicate does not assign a θ -role to its matrix subject.

- (88) a. Ati-a_i dzegome/dzudzo/yidzi be yè_i-a ɲe.
 Tree-NOM begin/stop/resume COMP YÈ-POT break.
 ‘The tree_i began/stopped/resumed to break.’
- b. * E dzegome/dzudzo/yidzi be ati-a_i ɲe.
 It begin/stop/resume COMP tree-NOM break.
 ‘It began/stopped/resumed (for) the tree to break.’

Another test for raising is the idiom test. ‘Adoglo lia ati’ *the lizard climbed the tree* (meaning ‘one is hungry’) is one such idiom; ‘detsi vivie hea zikpui’ *a savory bowl of soup makes one draw her chair closer* (meaning ‘it’s good to be welcoming to guests’) is another. The idiomatic meaning cannot be obtained in sentences such as (89a) or (89b); both are completely unacceptable:³²

- (89) a. * Adoglo-a_i dzegome/dzudzo/yidzi be yè_i-a lia ati (ga ade).
 Lizard-NOM begin/stop/resume COMP YÈ-POT climb tree at 6.
 ‘(Intended meaning) One began/stopped/resumed to be hungry/being hungry (at 6).’
- b. * [Detsi vivie]_i dzegome be yè_i-a hea zikpui.
 Soup savory begin COMP YÈ-POT draw chair
 ‘(Intended meaning) Tasty meals began to draw one’s chair closer.’

But as an anonymous reviewer points out, control requires a semantic role. If *begin* and other aspectual predicates in Ewe are not raising predicates, and they are control, how is this possible? I do not have a conclusive answer, but I provide one possibility here. In Ewe, a sentence like *The tree began to break* may actually be a control construction, in which *the tree* is a Patient. A Patient θ -role is when someone or something undergoes a change implied by that verb: for example, in *The hurricane destroyed the city*, *the city* is the Patient of the destruction by the hurricane. The matrix subject may also be a Patient in this case; perhaps because Ewe does not have raising, as a last resort it instantiates control with a Patient.³³

³²An anonymous reviewer points out that idiom tests may be impossible with aspectual predicates like *begin*, ex. **a cat began to come out of the bag*. But this is because of the animacy of the subject of the idiom; this point is valid only for my first idiom test. *Shit is beginning to hit the fan* has an inanimate subject, and has the idiomatic meaning in English. The second idiom test also has an inanimate subject, and is still unacceptable.

³³Perlmutter (1970) convincingly argues that *begin* is both a raising and a control predicate in English. I do not wish to challenge this conclusion; indeed, *E dzegome be e-a hodzo* ‘It began to feel hot’ is grammatical in Ewe. Of course, it need not involve raising in Ewe; just expletives inserted into both the matrix and embedded subject positions. I will leave further investigations of inanimate control in Ewe to future research.

If it is correct that Ewe has no (hyper)raising, 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 as Collins (1997) notes, 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 not reasonable to give up the MTC just for Ewe.

The problem with the arguments I have given in this subsection is that they are not positive arguments against hyperraising in Ewe. I grant that this could merely be a lexical fact: there could potentially be an untested predicate in which (hyper)raising is possible. However, I believe this is still worth reporting; why would the expletive and idiom tests fail, if the MTC was correct?

6 Conclusion

I must admit that this paper might raise more questions than it answers. Some examples are given in (90a)-(90c) below.

- (90) 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?

At this point, I leave most of these questions open for future research. For (90c), 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).

Regardless, the central concern of this paper has been to accomplish these three goals:

- (i) Goal 1: Show that *yè* behaves as an overt PRO in the subject of an irrealis clause.
- (ii) Goal 2: Propose an analysis of *yè* which assumes both Chierchia (1990)'s theory of control and Charnavel (2019)'s theory of logophoricity, accounting for Heim (2002)'s intuition that PRO and logophoric pronouns have very similar properties.
- (iii) Goal 3: Present four arguments against Hornstein (1999)'s movement theory of control based on the overtness of PRO in Ewe.

In section 2, I have attempted to provide empirical evidence for goal (i), arguing that *yè* cannot be a logophoric pronoun—at least as defined in the literature—because it does not have the properties of a logophoric pronoun in the subject position of an irrealis clause. Rather, it has the exact same properties as OC PRO.

As mentioned in goal (ii), I have proposed an analysis for this, in which I argue that the phonetic output, *yè*, is one that is associated with the control relation. Both realis and irrealis *yè* involve binding by an abstraction operator, but the only difference is the controller. Irrealis *yè* must be bound by a local antecedent, because it is missing a perspectival center, whereas realis *yè* is not missing its perspectival center, so it is controlled by it. In this way, control and logophoricity are very similar phenomena—treated much like how Hornstein (1999) treats control and raising.

I have argued in favor of the final goal, (iii), with four empirical arguments. First, I have demonstrated that partial control seems to exist, and second, that split control is difficult to derive without violating minimality constraints. Third, Ewe is a language without raising but with control, which seems to be unexpected given Hornstein (1999), and finally, it would be coincidental for *yè* to have the same phonetic form as the logophoric pronoun if control were movement, despite their different properties.

To recap, 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 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. The theory proposed here also might help in accounting for the similarity between OC PRO and NOC PRO via Charnavel’s theory of logophoricity, assumed in this paper. This similarity between two seemingly distant phenomena—control and logophoricity—which I have argued for based on empirical evidence from the Anlo dialect of Ewe leaves a great deal of exciting avenues for future research.

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