

# Strict Logophors in Ewe, Yoruba, and Igbo<sup>1</sup>

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**Abstract.** Logophoric Pronouns (LOGPs) in some West-African Languages occur in attitude environments and are anaphorically linked to an attitude holder in a superordinate clause (*Mary<sub>i</sub> says/thinks/hopes [CP that ... LOGP<sub>i</sub> ...]*). Existing accounts capture this dependency by treating a LOGP as a variable that is obligatorily bound by an operator at the edge of the embedded clause. Culy (1994) and Bimpeh and Sode (2021) however pointed out that from the viewpoint of the strict-sloppy ambiguity of pronouns, LOGPs in Ewe do not behave like bound variables, allowing both sloppy (bound) as well as strict (non-bound) readings. We strengthen this line of criticism by providing novel data indicating that LOGPs in Ewe, Igbo and Yoruba support strict readings in focus contexts. We offer an alternative account to existing approaches which builds on Bimpeh et al. (2023) and can capture both strict and sloppy interpretations of LOGPs.

**Keywords:** logophor, strict/sloppy readings, presupposition, Ewe, Yoruba, Igbo.

## 1. Introduction

The logophoric pronoun in Ewe, *yè*, is known to be bound to an attitude holder in propositional-attitude environments (Clements 1975). It is also known to support both sloppy and strict readings in sentences with *only*. This has been observed by Culy (1994) and later by Bimpeh and Sode (2021), see examples (1) and (2).

- (1) Kòfí<sub>1</sub> kò yé xɔsè bé Ámá<sub>2</sub> lɔ yè<sub>1</sub>. Ewe  
Kofi only FOC believe that Ama love LOGP  
'Only Kofi believes that Ama loves him.' (Culy 1994: 1082)

- a.  $\rightsquigarrow_{\text{sloppy}}$  No one<sub>j</sub> but Kofi thinks Ama loves **them<sub>j</sub>**.
- b.  $\rightsquigarrow_{\text{strict}}$  No one but Kofi<sub>i</sub> thinks Ama loves **him<sub>i</sub>**(=Kofi).

- (2) Kòfí<sub>1</sub> kò yé xɔsè bé yè<sub>1</sub> kpó ŋòlì. Ewe  
Kofi only FOC believe that LOGP see ghost  
'Only Kofi believes that he saw a ghost.' (Bimpeh and Sode 2021: 2)

- a.  $\rightsquigarrow_{\text{sloppy}}$  No one<sub>j</sub> but Kofi thinks **they<sub>j</sub>** saw a ghost.
- b.  $\rightsquigarrow_{\text{strict}}$  No one but Kofi<sub>i</sub> thinks **he<sub>i</sub>**(=Kofi) saw a ghost.

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A context which supports the strict reading for (2) is as follows (Bimpeh and Sode 2021). Kofi stayed overnight in a cemetery to prove his bravery. His friends, Mansa and Yao, planned to play a trick on him. They know the cemetery guard so they ask him to dress up as a ghost to scare Kofi. In the night Kofi sees a scary creature walking through the vicinity. He thinks that he saw a ghost. The next day, when he told the story to Mansa and Yao, they both burst into laughter. (2) is judged true against this context.

As further pointed by Bimpeh and Sode 2021, the only way to get strict readings in Ewe is by the use of the logophoric pronoun. The ordinary 3RD-person pronoun (henceforth ORDP) in the language, *é*, cannot co-refer with an attitude holder in logophoric environments (Clements 1975; Culy 1994; Bimpeh et al. 2023). As such, *é* does not have a strict interpretation in logophoric contexts (see example 3).

- (3) Kòfí<sub>1</sub> kò yé xòsè bé Ámá<sub>2</sub> lɔ́ é<sub>3</sub>. Ewe  
 Kofi only FOC believe that Ama love ORDP  
 ‘Only Kofi believes that Ama loves him.’ (Culy 1994)

Culy (1994) and Bimpeh and Sode (2021) point out that the existence of the strict reading is problematic for standard accounts of LOGPs. As we elaborate later, those accounts predict LOGPs to behave like a bound variable, and therefore to support only sloppy readings.

In this paper, first, we provide new data based on original fieldwork from Ewe (Kwa, Ghana), Yoruba (Benue-Congo, Nigeria) and Igbo (Benue-Congo, Nigeria) – three West-African languages with logophoric pronouns. We corroborate the findings of the above works on Ewe and show that the generalization extends to Igbo and Yoruba: LOGPs in these three languages allow for strict and sloppy readings in examples with *only* (section 2). Second, we show why strict readings are problematic for existing approaches to the syntax-semantics of LOGPs (section 3). Third, we offer an alternative account to existing approaches which builds on Bimpeh et al. 2023 and captures the basic distributional facts of LOGPs while at the same time allow to capture strict readings (section 4).

## 2. The data

We elicited data from three Ewe speakers (two Aŋlo dialect and one Evedome dialect), two Yoruba speakers, and three Igbo speakers. All data was elicited via multiple Zoom sessions with each speaker, transcribed live by the experimenters and checked by the speakers. Speakers’ spontaneous comments on the reasoning behind their responses were also noted. Given that the strict/sloppy tests are based on the verbs ‘think’, the data in (4) present the baselines for each language. The indexation indicates that LOGP obligatorily co-refers with the attitude holder.

- (4) a. Kòkú<sub>1</sub> súsú bé yè<sub>1/\*2</sub> lɔ́ Àffí. Ewe  
 Koku think that LOGP love Afi  
 ‘Koku thinks that he loves Afi.’

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- |   |                                  |
|---|----------------------------------|
| <p>b. Adé<sub>1</sub> rò wípé <b>òun</b><sub>1/*2</sub> fé Olá.<br/>           Ade think that LOGP marry Ola<br/>           ‘Ade thinks that he married Ola.’</p> <p>c. Ézè<sub>1</sub> chèrè nà <b>yá</b><sub>1/*2</sub> lúrú Àdá.<br/>           Eze think that LOGP marry Ada<br/>           ‘Eze thinks that he married Ada.’</p> | <b>Yoruba</b><br><br><b>Igbo</b> |
|---|----------------------------------|

The co-reference patterns reported in (4) align with previous observations regarding LOGPs in each language, see Culy (1994); Pearson (2015); Bimpeh (2019, 2023) for Ewe, Manfredi (1987); Adésolá (2005); Lawal (2006) for Yoruba, and Hyman and Comrie (1981); Manfredi (1987) for Igbo.

In the following, we show that in environments including *only* (association with focus) LOGPs display sloppy and, crucially, also strict readings. We used a binary acceptability judgment task designed with joint presentation for both strict and sloppy interpretations of the target sentence. Speakers were asked to express their acceptability judgment on both paraphrases (one strict and one sloppy), but they were free to accept as felicitous both sentences, one sentence or none.

### (5) Strict/sloppy readings with ‘only’ in *Ewe*

Élì kò yé súsú bé **yè** qùdzí lè àwù-dódó fé hòvúlí mè.  
 Eli only FOC think COMP LOGP win in dress-wear POSS contest inside  
 ‘Only Eli thinks that he won the costume contest.’

- a.  $\rightsquigarrow_{\text{sloppy}}$  No one<sub>j</sub> but Eli thinks **they**<sub>j</sub> won the costume contest.
- b.  $\rightsquigarrow_{\text{strict}}$  No one but Eli<sub>i</sub> thinks **he**<sub>i</sub>(=Eli) won the costume contest.

All of our Ewe consultants accepted the paraphrase for the strict reading in (5b). One of our Ewe consultants, however, had difficulties accessing the sloppy reading, as it is paraphrased in (5a). So we provided a more explicit paraphrase for the sloppy reading within the session. For the elicitation sessions with Yoruba and Igbo speakers, we then used the more explicit paraphrase to test sloppy readings, see (6a) and (7a). To keep a minimal contrast, we made the paraphrase for the strict reading equally explicit, see (6b) and (7b). All of our Igbo and Yoruba consultants accepted both paraphrases.

### (6) Strict/sloppy readings with ‘only’ in *Igbo*

Náāní Ézè chèrè nà **yá** mérìrì nà ásòmpì i-gó-sì ákwá.  
 only Eze think that LOGP win PREP contest to-show-SUFF clothes  
 ‘Only Ézè thinks that he won the costume contest.’

- a.  $\rightsquigarrow_{\text{sloppy}}$  Eze thinks that he(=Eze) won the costume contest, and Aki doesn't think that he(=Aki) won the costume contest, and Ada doesn't think that she(=Ada) won the costume contest.
- b.  $\rightsquigarrow_{\text{strict}}$  Eze thinks that he(=Eze) won the costume contest, and Aki doesn't think that he(=Eze) won the costume contest, and Ada doesn't think that he(=Eze) won the costume contest.

(7) *Strict/sloppy readings with ‘only’ in Yoruba*

Adé níkan ni ó rò wípé òun mágá tayo nínú ìdíje asó náà.  
 Adé only FOC RES think that LOGP FUT to.win inside contest clothes DEF  
 ‘Only Adé thinks that he will win the costume contest.’

- a.  $\rightsquigarrow_{\text{sloppy}}$  Ade thinks that he(=Ade) will win the costume contest, and Niyi doesn't think that he(=Niyi) will win the costume contest, and Ola doesn't think that she(=Ola) will win the costume contest.
- b.  $\rightsquigarrow_{\text{strict}}$  Ade thinks that he(=Ade) will win the costume contest, and Niyi doesn't think that he(=Ade) will win the costume contest, and Ola doesn't think that he(=Ade) will win the costume contest.

This section demonstrated that LOGPs can receive strict readings alongside sloppy readings across Ewe, Igbo, and Yoruba. The next section will lay out the implications of this observation for current accounts of logophoricity.

### 3. A problem for existing approaches

A prominent approach to LOGPs in the formal-semantic literature captures LOGP's basic property—co-reference with the attitude holder—by treating LOGPs as simple variables over individuals (type  $e$ ) that must be bound in attitude environments. This is the view taken for example by Schlenker (2003); von Stechow (2004); Pearson (2015). We will call this the OBLIGATORY BINDING approach. In the implementation in Pearson (2015), following von Stechow (2003), LOGP is a variable that comes with a syntactic feature, LOG, which forces the variable to be bound at the edge of the embedded clause. To illustrate, the LF representation of *Kofi thinks that LOGP loves Afi* (4a) on this account is in (8a), where [LOG] enforces index matching between the variable and the  $\lambda_x$ -binder at the edge of the CP. This syntax is coupled with a semantics that assigns the embedded clause a property meaning (type  $\langle e, st \rangle$ ), and an appropriate meaning for attitude predicates such as *think*, *say* etc. which involves quantification over Centered Worlds (Lewis 1979). The paraphrase of the resulting meaning is given in (8c).

(8) *Obligatory Binding account of LOGP (based on Pearson 2015)*

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a. **Syntax:**

Kofi thinks that  $[\lambda x_1 \lambda w \underbrace{x_1/*_{2,[\text{LOG}]}}_{\text{LogP}} \text{ loves Afi}]$

b. **Semantics:**

$$[\text{think}]^w = \lambda P \lambda x. \forall \langle w', x' \rangle \in \text{BEL}_{x,w}, P(x')(w') = 1.$$

$$\text{BEL}_{x,w} := \{ \langle w', x' \rangle : w' \text{ is compatible with } x \text{'s beliefs in } w \text{ and } x \text{ identifies as } x' \text{ in } w' \}$$

- c. (8a)  $\approx$  *In all worlds compatible with Kofi's beliefs, the person Kofi identifies as himself in those worlds loves Afi.* *(de se reading*<sup>2</sup>)

The fact that [LOG] requires  $x_1$  to be formally bound by  $\lambda x_1$  in (8a) makes sure that LOGP ends up referring to the attitude holder's recognized self—the ‘Logophoric Center’ of the relevant worlds—and not to any other individual.

However, as noted by Culy (1994) and Bimpeh and Sode (2021) for Ewe, the Obligatory Binding approach to LOGPs makes the wrong prediction regarding the availability of the strict reading with *only*. On standard assumptions about the syntax-semantics interface, bound-variable representations ( $\lambda$ -binding at LF) translate to sloppy readings in quantificational environments like *only* and other focus-sensitive operators.<sup>3</sup> Therefore, it is predicted that LOGP can only have the sloppy (bound-variable) reading. Specifically, when *only Kofi* replaces *Kofi* in (8a), the predicted meaning can only be paraphrased as ‘no one<sub>1</sub> other than Kofi thinks that they<sub>1</sub> love Afi’, and not as ‘no one other than Kofi<sub>2</sub> think that he<sub>2</sub> loves Afi’. But the facts above in Ewe, Yoruba and Igbo do not bear out that prediction.

What should be the theory of the syntax-semantics of LOGPs in a way that could support strict (as well as sloppy) readings? In the next section we offer an account, building on Bimpeh et al. (2023) and on ideas in Sauerland (2013).

## 4. Proposal

### 4.1. Background: A different route to the *de se* requirement on LOGPs

Bimpeh et al. (2023) recently proposed an analysis of LOGPs that captures LOGPs’ basic distributional facts—*de se* coreference with an attitude holder—differently from the Obligatory Binding approach, by relying on a presuppositional semantics for the feature LOG. Their motivation had nothing to do with strict-sloppy configurations, but was rather to capture the distributional properties of LOGPs and ORDPs within a theory of pronominal competition. We will

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<sup>2</sup>Pearson (2015) claimed that LOGPs are also possible in non-*de se* (*de re*) contexts in which the attitude holder does not recognize themselves as the referent of LOGP. But we follow Bimpeh et al. 2023 who provide contrasting evidence that LOGPs in our languages have a requirement for *de se* readings. The main analytical problem that the current paper is concerned with only becomes more grave if *de re* readings are possible too.

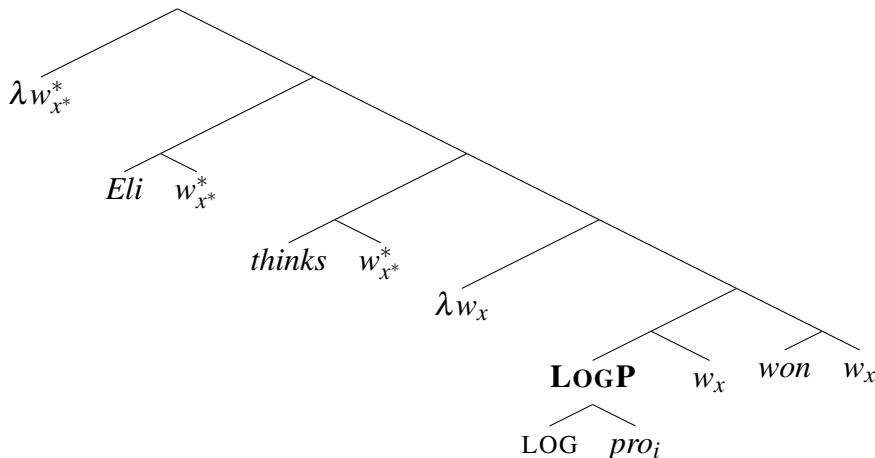
<sup>3</sup>Another relevant environment are ellipsis constructions. See Bassi et al. (2023) for parallel data about ellipsis in Ewe, Yoruba, and Igbo.

dedicate this subsection to review Bimpeh et al.’s (2023) compositional analysis of sentences with LOGPs, as it will be the foreground to our core proposal in section 4.2.

Bimpeh et al. (2023) propose that the logophoric pronoun in Ewe, Yoruba and Igbo underlyingly consists of two syntactic pieces:  $\text{LOGP} \equiv [\text{LOG } pro_i]$ . In a nutshell,  $pro_i$  is a variable (over Individual Concepts), which need not be bound, and  $\text{LOG}$  has a presuppositional semantics that restricts the reference of  $pro_i$  to be the Logophoric Center of the embedded clause. The LF of (9), for instance, is in (10), which shows how  $\text{LOGP}$  is decomposed.

- (9) Élì súsú bé yè qùdzí. Ewe  
 Eli think COMP LOGP win  
 ‘Eli<sub>1</sub> thinks that he<sub>1</sub><sup>de-se</sup> won.’

- (10) *LF of (9) in Bimpeh et al. 2023*



The semantics that comes with this LF relies on a framework (standard to capture *de se* readings) where attitude ascriptions involve quantification over centered worlds (Lewis 1979). Centered worlds are world-individual pairs, notated here as ‘ $w_x$ ’.<sup>4</sup> It is also embedded in an approach to intensional semantics which uses syntactically-represented (Centered-)world pronouns that saturate argument slots in the denotation of verbal and nominal predicates (see e.g. von Fintel and Heim 2011; Percus 2000). Denotations that fit this structure are supplied in (11).

- (11) a.  $\llbracket \text{Eli} \rrbracket = \lambda w_x. \text{the person in } w \text{ named ‘Eli’}$ . type  $\langle s, e \rangle$   
 b.  $\llbracket \text{win} \rrbracket = \lambda w_x. \lambda z. z \text{ wins in } w$ . type  $\langle s, et \rangle$

The innovation in Bimpeh et al. 2023 has to do with the structure and interpretation of the logophoric pronoun.  $pro_i$  is a variable over individual concepts (type  $\langle s, e \rangle$ ). Just like the typical

<sup>4</sup> ‘ $w_x$ ’ throughout is a shorthand for the pair  $\langle w, x \rangle$ . Below, ‘ $s$ ’ is taken to be the semantic type of centered-worlds.

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pronoun, it can be bound or free; if free, its value needs to be supplied or accommodated from context (by some salient description, see below). The added feature LOG, however, effectively restricts  $pro_i$  to pick out the Center of the embedded clause. It does so by way of a presupposition. Formally, LOG's denotation is in (12) (we employ the notation of Heim and Kratzer 1998 for encoding partial functions, where the part between a colon and a dot defines the domain of the function and is meant to model presuppositional information).

$$(12) \quad [\![\text{LOG}]\!]^g = \lambda f_{\langle s,e \rangle}. \lambda_{w_x} : \underbrace{f(w_x) = x}_{\text{presupposition}} . x \quad (\text{type } \langle se, se \rangle)$$

According to (12),  $\text{LOG}(f)$  is a function from centered-worlds to their Center, defined only for those  $w_x$  whose Center equals  $f(w_x)$ .

$$(13) \quad [\![\text{LOGP}]\!]^g = [\![\text{LOG}]\!]^g([\![pro_i]\!]^g) = [\lambda_{w_x} : [\![pro_i]\!]^g(w_x) = x. x]$$

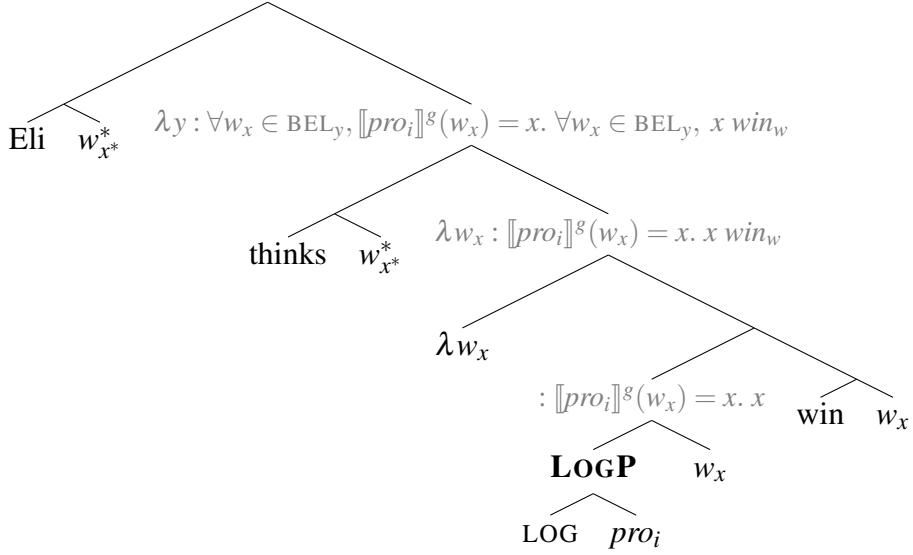
Attitude predicates relate a proposition to an individual by quantifying universally over some set of Centered-worlds; *think*, in particular, encodes quantification over BEL—the set of doxastically accessible centered-worlds. Since LOGP introduces partiality in the embedded clause through LOG's presupposition, an entry for such predicates is required that can handle partial propositions in its scope. The entry in (14), after Karttunen 1974 and Heim 1992, says that presuppositions of the embedded clause project universally to BEL.

$$(14) \quad [\![\text{think}_{w_x^*}]\!]^g = \lambda p_{\langle s,t \rangle} \lambda y : \forall w_x \in \text{BEL}_y, p(w_x) \text{ is defined.}$$

$$\quad \quad \quad \forall w_x \in \text{BEL}_y, p(w_x) = 1.$$

$\text{BEL}_y := \{w_x : w \text{ is compatible with } y \text{'s beliefs and } x \text{ is the Center of } w\text{—the individual in } w \text{ who } y \text{ perceives as } y \text{ themselves in } w.\}$

A full composition of the structure is shown in gray in (15). In the top line, the assertion part (the part after the dot) captures the desired *de se*-dependency between LOGP and the attitude holder (cf. (8c)). Notably, the attitude holder-LOGP dependency is obtained here less directly than in the Obligatory Binding approach (cf. section 3), through LOG's presupposition.

(15) :  $\forall w_x \in \text{BEL}_{\text{Eli}}, \llbracket \text{pro}_i \rrbracket^g(w_x) = x. \forall w_x \in \text{BEL}_{\text{Eli}}, x \text{ win}_w$ 

The presupposition part of the top line in (15) (the part before the dot) contains a free Individual-Concept pronoun,  $\text{pro}_i$ , which needs to be recovered by some contextually-salient description. Not just any contextually-salient description will do, of course; only those which can safely satisfy the presupposition. That is, only concepts which Eli associates with himself. One option is the CENTER concept in (16a), which we assume is salient in any context. Another is the concept in (16b), assuming it is common ground that Eli knows himself as ‘Eli’. Some possibilities are out in most natural contexts since they would incur a presupposition failure, e.g. (16c); and others are heavily context-dependent, for instance (16d) which would satisfy the presupposition only in contexts where Eli identifies himself as wearing the red hat.

(16) Options for the value of  $\text{pro}_i$  in (15)

- a.  $\checkmark \llbracket \text{pro}_i \rrbracket^g = \lambda w_x. x.$  (the CENTER-concept)
- b.  $\checkmark \llbracket \text{pro}_i \rrbracket^g = \lambda w_x. \text{the person in } w \text{ named ‘Eli’}$
- c.  $\times \llbracket \text{pro}_i \rrbracket^g = \lambda w_x. \text{the person in } w \text{ named ‘Ann’}$
- d.  $\llbracket \text{pro}_i \rrbracket^g = \lambda w_x. \text{the person in } w \text{ who is wearing the red hat in } w.$

#### 4.2. Strict readings by ignoring LOG in alternatives

So far we merely replicated the basic result of previous accounts of LOGPs, only using a different compositional route. Our account of strict readings builds on the above, specifically on the decomposition of LOGP, and makes one more assumption: LOG’s meaning can be ignored

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when computing focus alternatives (in the sense of Rooth 1992) to an expression. This proposal is an extension of an idea put forth by Sauerland (2013), according to whom presuppositions coming from pronominal features do not have to contribute their meaning at the level of focus alternatives. Sauerland (2013) suggested this as a way to explain why locally-bound reflexives in English (*self*-anaphors) can have strict readings, as well as why pronominal  $\phi$ -features on bound variables can be ignored across alternatives (see also McKillen 2016; Sudo and Spathas 2020; Bruening 2021; Bassi 2021 for variants of this idea). If LOG is a pronominal feature, like the *-self* part of reflexives and like  $\phi$ -features on pronouns, then it too, we suggest, can be suspended in alternatives.<sup>5</sup>

Consider again an example that brings strict-sloppy ambiguity to light, i.e., when *only* is added. Example (5) is repeated in an abbreviated form in (17).

- (17) Élì kò yé súsú bé yè qùdzí.

Eli only FOC think COMP LOGP win

‘Only Eli thinks that he won.’

a.  $\rightsquigarrow_{\text{sloppy}}$  No one<sub>j</sub> but Eli thinks **they**<sub>j</sub> won.

b.  $\rightsquigarrow_{\text{strict}}$  No one but Eli<sub>i</sub> thinks **he**<sub>i</sub>(=Eli) won.

We analyze these constructions as involving a focus feature [FOC] on the subject, as represented in (18a). [FOC] generates focus alternatives—structures resulting from substituting *Eli* with some (relevant) individual. *only* says that the prejacent (its sister) is true and all the alternatives are false. This much is fairly standard. The core proposal, to repeat, is that LOG’s contribution can be ignored in the tier of focus alternatives, like other pronominal features. In (18b), LOG is deleted from the tier of alternatives (though not from the prejacent).

- (18) *Analysis of (17) with LOG deleted from alternatives*<sup>6</sup>

a. LF: Only  $[\text{Eli}_{[\text{FOC}]} \text{ thinks } \lambda w_x [ [\text{LOGP } [\text{LOG pro}i]_{w_x} ] \text{ won}_{w_x} ] ]^7$

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<sup>5</sup> Sauerland argued that only what he called ‘purely-presuppositional’ elements can be ignored at the level of focus alternatives. The underlying intuition is that an element is purely-presuppositional if it adds nothing but a presupposition to the semantics (i.e., it doesn’t add anything to the assertive dimension of meaning). The denotation of LOG in (12) does fit Sauerland (2013)’s definition of pure-presuppositionality in (i).

(i) A functor F of type  $\langle \tau, \tau \rangle$  is *purely presuppositional* iff for every  $f, a$  such that  $F(f)(a)$  is defined,  $f(a)$  is defined too and  $F(f)(a) = f(a)$ .  
(adapted from Sauerland 2013:167)

The reader can verify that LOG is purely-presuppositional because  $[\text{LOG}](f)$  is of the same type as  $f$  and outputs the same value as  $f$  wherever defined.

<sup>6</sup>To simplify the presentation we encode alternatives as syntactic objects, i.e., LFs (Fox and Katzir 2011), and we use a deletion operation to cash out the core idea about LOG. Nothing crucial depends on this; instead of syntactically deleting LOG across alternatives, we could use the definition of *pure-presuppositionality* from fn.5 and stipulate (as in Sauerland 2013) that the meaning of a pure-presuppositional element can be reset in the alternatives to the total-identity function  $[\lambda f.f]$ . Both implementations capture the idea the LOG’s contribution is ignored in alternatives.

<sup>7</sup>Here we evidently analyze *only* as taking scope over the whole clause at LF, although the surface structure of (17)

- b. Alt's:  $\{ \text{Kofi thinks } \lambda w_x [ [\text{LOGP } \text{LOG } pro_i]_{w_x} ] \text{ won}_{w_x} ],$   
 $\text{Koku thinks } \lambda w_x [ [\text{LOGP } \text{LOG } pro_i]_{w_x} ] \text{ won}_{w_x} ], \dots \}$

$pro_i$  is crucially free in this derivation (not  $\lambda$ -bound), so its value remains constant across the alternatives in (18b). The interpretation of this configuration is given in (19). Since LOG is active only in the prejacent, the relevant presupposition is absent in the alternatives.

(19) *The Interpretation of the prejacent and alternatives in (18)*

- a. *Prejacent:*  $\underbrace{:\forall w_x \in \text{BEL}_{\text{Eli}}, \llbracket pro_i \rrbracket^g(w_x) = x}_{\text{presupposition}}. \forall w_x \in \text{BEL}_{\text{Eli}}, x \text{ win}_w$
- b. *Alternatives:*  $\{ \forall w_x \in \text{BEL}_{\text{Koku}}, \llbracket pro_i \rrbracket^g(w_x) \text{ win}_w,$   
 $\forall w_x \in \text{BEL}_{\text{Kofi}}, \llbracket pro_i \rrbracket^g(w_x) \text{ win}_w, \dots \}$

This paves the path towards the strict reading—depending on the value chosen for  $pro_i$ . All that is required is a concept that Eli as well as all of his alternatives (Koku, Kofi,...) mentally associate with Eli. If, for example, it is common ground that everyone knows Eli by the name ‘Eli’, then accommodating the value in (16b) for  $pro_i$  results in strict reading, as desired.<sup>8</sup> The sloppy reading can be obtained by setting the value for  $pro_i$  to the CENTER-concept in (16a).

It is crucial for the derivation that LOG’s presupposition could disappear from alternatives. If it didn’t, only the sloppy reading could be derived (again by plugging the CENTER-concept as the value for  $pro_i$ ). To wit, if LOG were active in the alternatives, then its presupposition in each alternative would restrict LOGP to be the Center of the relevant worlds, forcing LOGP to end up (*de se-*) bound in each alternative by the respective attitude holder. Attempting to resolve the value of  $pro_i$  to be a concept like (16b) and thus to obtain a strict reading, but without ignoring LOG’s contribution in the alternatives, would suffer from a presupposition failure.

## 5. Conclusion

To sum up, this paper provided evidence that logophoric pronouns (LOGPs) in Ewe, Yoruba and Igbo support both strict and sloppy readings in sentences with *only* (following observations in Culy 1994 and Bimpeh and Sode 2021), and offered a formal analysis that could capture this behavior. The account supplants existing accounts of LOGPs with the idea that LOGPs are

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and the other sentences from section 2 might suggest that *only* forms a constituent with its associate (the subject). We could instead adopt the LF-structure  $[[\text{only } DP_{\text{Foc}}] VP]$ , where *only* composes with two arguments (Wagner 2006, a.o.). Our main proposal is not affected by this choice, as long as the subject DP triggers focus alternatives.

<sup>8</sup>What if a context furnishes no suitable description that could be the value of  $pro_i$  in this derivation? Our predictions might change. Imagine a scenario where it is impossible to find any (salient) description which is vivid enough in the minds (i.e., across the doxastically-accessible worlds) of Eli and of all his relevant alternatives. In such a context, we predict that sentence (17) would not support the strict reading—even if intuitively the intended reference of LOGP across the alternative is Eli (we thank Amir Anvari (p.c.) for raising a similar point to us). We think, however, that finding convincing cases of such contexts is not trivial. Since we weren’t able to construct relevant contexts, we could not test the prediction.

## Strict Logophors in Ewe, Yoruba, and Igbo

pronouns that contain a semantic feature LOG in charge of encoding the (*de se-*) reference to the attitude holder (see Bimpeh et al. 2023), but whose contribution can be ignored at the level of focus alternatives.

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