# Anaphoricty and Logophoricity in Egyptian Arabic (EA): A Minimalist Approach

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# Summary:

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The purpose of this study is to investigate anaphoricity and logophoricity with a special focus on Egyptian Arabic (EA), which is the standard colloquial Egyptian dialect of the Arabic language. The analysis investigated in this study addresses two issues. The first issue is to find an explanation for the violation of some reflexives in EA. The second issue is to specify the diagnostics of logophors in EA. To find answers for these two issues, the analysis of anaphoricity and logophoricity is introduced within the framework of Chomsky's Minimalist Program (MP) (1995, 2000, and 2004) and its basic principles. The Chomskyan Principle A of the Binding Theory (BT) deals with reflexives within the domain of the clause. In contrast, logophors, in EA, violate the conditions constrained by Principle A of BT. In order to account for this violation, it is necessary to resort to Syntax, Pragmatics, and Syntax interface. This analysis confirms the hypothesis that logophors are not puzzling and can be analyzed under a universal mechanism and diagnostics that can account for logophoricity in EA and other languages too.

key words

Binding, Anaphoricity, Logophoricity, Egyptian Arabic, Minimalist Program.

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## **List of Phonetic Symbols**

The following tables<sup>1</sup> are charts of the IPA symbols with their corresponding Arabic letters used in this paper:

		11	11			14/2	Cio.			
	1.	Labial	Pain		Emphatic		Palatal	Velar	Uvular	Pha.
	13		Dental	Alveolar	Dental	Alveolar	1	20		
Nasal	1.2	م m	ن n		a ASE			N	2	
Stop	Voiceless	3	ت t	and a second	ţЪ		1	<sup>ک</sup> k	ق p	
	Voiced	b 🥹	د d		ض hٍ	150	gē	1 =	5	
Fricative	Voiceless	ف f	ث θ	س S	F	ص ۽	ش š	x ~ Xð		ζħ
1 mainte	Voiced		ð i	zj	ظz	a		γĖ	0	٢ع
Trill	1.		655	rј	77	and a	i	1	7	
Approxim	ant	-	ل1~1	1	0	1111	ي j	e W	1	

Table 2. Modern standard Arabic Consonant Phonemes.

The following symbols do not exist in the chart because of space considerations:

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- a. The symbol for the glottal voiceless fricative (h) (°).
- b. The symbol for the Glottal Voiceless stop (?) ( $\epsilon$ ).
- c. The symbol for the Voiceless post-alveolar affricate( f)

<sup>1</sup>These charts are cited from Wikipedia [http://en.wikipedia.org]:

(I) The Consonant table is taken from: [http://en.wikipedia.org/wiki/Arabic\_phonology].

(II) The vowels table is adapted from: [http://en.wikipedia.org/wiki/Wikipedia:IPA\_for\_Arabic].

Vowels	Description	Examples	Trans.	
	coulty of Women f	nr And		
/i/	short high unrounded vowel	inn?	That	
/i:/	long high front unrounded vowel	Ha:ni:	Proper name	
/u/	short high back rounded vowel	Nafs-uh	Himself	
/u:/	back close rounded vowel	garaħ-u:	They hurt	
/a/	short mid unrounded vowel	il-ħafla	The party	
/a:/	long mid unrounded vowel	ayla:?	More precious	
/o/	mid half close back rounded vowel	Hoda:	Proper name	

Table 3. Vowels in Arabic.

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# Anaphoricty and Logophoricity in Egyptian Arabic: A Minimalist Approach

## Abstract

The purpose of this study is to investigate anaphoricity and logophoricity with a special focus on Egyptian Arabic (EA), which is the standard colloquial Egyptian dialect of the Arabic language. The analysis investigated in this study addresses two issues. The first issue is to find an explanation for the violation of some reflexives in EA. The second issue is to specify the diagnostics of logophors in EA. To find answers for these two issues, the analysis of anaphoricity and logophoricity is introduced within the framework of Chomsky's Minimalist Program (MP) (1995, 2000, and 2004) and its basic principles. The Chomskyan Principle A of the Binding Theory (BT) deals with reflexives within the domain of the clause. In contrast, logophors, in EA, violate the conditions constrained by Principle A of BT. In order to account for this violation, it is necessary to resort to Syntax, Pragmatics, and Syntax interface. In African languages, regular reflexives and logophors have distinct morphological forms. In contrast, the confusion, in EA and English, arises from being the anaphoric reflexives and logophors/Locally Free Reflexives (LFRs) have the same morphological form. Furthermore, constructions from EA shed light on the distinction between syntax and discourse with respect to BT. On the one hand, Anaphors have some syntactic constraints, such as C-command and local domain. On the other hand, logophors are motivated by discourse considerations, such as the internal speaker's perspective, verbs of communication, and the subject of consciousness (SC). This analysis confirms the hypothesis that logophors are not puzzling and can be analyzed under a universal mechanism and diagnostics that can account for logophoricity in EA and other languages too.

Keywords: Binding, Anaphoricity, Logophoricity, Egyptian Arabic, Minimalist Program

#### 1. Introduction

This section presents a brief introduction to the following sections. It discusses the three principles of BT (Chomsky, 1981). In addition, this section explores the relation between Principle A and long distance reflexives or logophors. Government and Binding (GB) is introduced by Chomsky (1981, 1982 and 1986). This theory is based on two main concepts; the first one is *Government* while the second is *Binding*. GB existed before Principles and Parameters and is lately developed in the Minimalist Program (1999). Binding Theory (BT) deals with the distribution of noun phrases (NPs) in any given language. It deals with three principles: Principle A, Principle B, and Principle C:

- (A) An anaphor is bound in its governing category.
- (B) A pronominal is free in its governing category.
- (C) An R-expression is free.

## (Chomsky, 1981, p.188)

This paper focuses on Principle A which investigates anaphora represented by reflexives and reciprocals. It discusses the nature of anaphora in EA with reference to its syntactic constraints. A new set of data is presented to show the diagnostics of long distance anaphora or logophoricity in EA with a special focus on its semantic constraints. Logophoricity, according to Clements (1975) and Reuland (2006 a, and b), refers to anaphors that are bound outside their local domain. The long distance anaphora focuses only on reflexives while reciprocals must be bound locally. This study investigates that reflexives in EA can be used as logophors and anaphors according to the context. To support this assumption, some discourse factors have to be mentioned, such as the Subject of Consciousness (SC), verbs of communication, and the speaker's point of view. In addition, a distinction is made between the anaphoric domain and the logophoric domain. All these ideas are discussed in the following sections. The next section deals with the nature of anaphora's distribution and diagnostics in EA.

The paper is divided into four main sections. Section (1) introduces the theoretical framework used in this paper. Section (2) investigates anaphoricity and its diagnostics in EA. Section (3) discusses the definition of logophoricity, the logophoric domain, the diagnostics of logophors, logophoric context, and long distance co-reference & Subject of Consciousness (SC) in EA. The last section, (4), concludes summing up the results of the study.

#### 2. Anaphoricity

This section falls into two main subsections. The first sub-section (2.1) discusses the form of anaphors in EA. The second sub-section (2.2) investigates the universal properties of anaphors in EA: antecedence & co-referentiality, agreement, scope & c-command, and locality condition. Principle A of the BT deals with the distribution of reflexives and reciprocals. Most of the generative literature conducted on anaphora assumes that there is a relation between the anaphor and its antecedent. This relation is restricted by two main syntactic conditions: syntactic prominence condition, and locality condition. Chomsky presents syntactic prominence using the c-command relationship and defines the locality conditions in terms of the governing category. Anaphors in English are exemplified below:

1. a) [The boy]<sub>i</sub> takes care of himself<sub>i</sub>.

b) [The boys]<sub>i</sub> take care of each other<sub>i</sub>.

(1a) and (1b) represent anaphors in English. (1a) includes the reflexive *himself* which is bound by its antecedent *the boy*. Both of the reflexive and its antecedent have the same index "<sub>i</sub>" to denote co-referentiality. The anaphor, in (1b), is the reciprocal *each other* which is bound and co-referential with its antecedent *the boys* bearing the same index. The following sub-sections investigate the syntactic and semantic behavior of anaphora in the syntax of EA.

#### 2.1 Anaphors in EA

This sub-section explores the morphological nature of the anaphors in EA. Reflexives in EA are formed by using *nafs* "self" with a suffixed possessive pronoun, such as *nafs-uh* "himself", *nafs-ha:* "herself", *nafsu-hum* "themselves", etc. Reciprocals in EA are sometimes formed as *basd* "each other" + possessive pronouns or can be formed by adding an optional pronominal suffix, such as the plural first person *basd-ina:*, or the plural second person *basd-ukum* or the plural third person *basd-hum or* the feminine singular *basd-ha:*. The reciprocal with or without the pronominal suffix are used interchangeably. Anaphors obligatorily derive their meaning from a coindexed c-commanding antecedent. It is important to mention that anaphors eliminate recursion, avoid ambiguity and misunderstanding and save efforts. An anaphor does not present new entities, but it helps in denoting co-reference with a pre-mentioned NP in any

written and spoken discourse. The following sub-section, (2.2), investigates the diagnostics of anaphors in EA.

# **2.2 Universal Properties of Anaphors**

This sub-section illustrates the syntactic and semantic constraints on Principle A of BT. Anaphors need to have some conditions and constraints to be well-formed. Chomsky (1981) posits that the anaphor must be bound in its governing category. The binding and the governing category are defined in (2) and (3):

2)  $\alpha$  BINDs  $\beta$  if  $\alpha$  and  $\beta$  are co-indexed and  $\alpha$  c-commands  $\beta$ , where co-indexing includes either co-superscripting or co-subscripting.

(Chomsky, 1981, p.333)

3)  $\beta$  is a governing category for  $\alpha$  if and only if  $\beta$  is the minimal category containing  $\alpha$ , a governor of  $\alpha$ , and a SUBJECT accessible to

α.

(Chomsky, 1981, p.211)

Antecedence, co-reference, agreement, c-command, and scope have a crucial role in anaphoric binding in any given sentence. Those elements are discussed in the following subsection.

# 2.2.1 Antecedence and Co-referentiality

Antecedence and co-referentiality are discussed in this sub-section as universal factors of Principle A. Antecedence, presented by Chomsky (1981, 1986.b), is one of the most important terms in BT. Antecedence is due to the term antecedent. As mentioned in section (2.1), anaphor in its self does not have any meaning. Hence, it needs to refer to an entity or an NP to derive the meaning from it. This NP is called an antecedent which must precede the anaphor. This illustrates the ungrammaticality of the following example:

4) \*nafs-uh šarab il-laban

self-his drank the-milk

"Himself drank the milk."

The ungrammaticality of (4) is due to the lack of antecedence. *nafs-uh* "himself" needs an antecedent to acquire the meaning. Thus, (4) lacks sense.

To achieve the well-formed relation between the anaphor and the antecedent, as pointed out by Chomsky (1981), they must co-refer to the same entity. Co-referentiality/ co-reference is realized by using co-indexation. Each index represents a different reference by using subscript letters which are called indexes. Co-reference depends on Co-indexation. If two NPs have the same index, they co-refer. On the contrary, if they have different indexes, they are disjoint and refer to different entities. Thus, this is linked to Minimalism as we get the minimal meaning as we can. This assumption is clear in the following example:

5. a) ha:ni<sub>i</sub> sa:Sid nafs-uh<sub>i</sub> hani<sub>i</sub> helped self-him<sub>i</sub> *"Hani<sub>i</sub> helped himself<sub>i</sub>."*b) ha:ni<sub>i</sub> sa:Sd -uh<sub>\*i/j</sub> Hani<sub>i</sub> helped-him<sub>i</sub>

*ha:ni* "Hani" and *nafs-uh* "himself", in (5a), has the same index "<sub>i</sub>" which means that they co-refer to the same person. The reflexive *nafs-uh* "himself" is used to avoid recursion. Thus, the reflexive, in (5a), is co-referential with its antecedent *ha:ni* "Hani". In contrast, the pronoun -uh "him", in (5b) is disjoint from the NP *ha:ni* "Hani" as they carry different indexes. Hence, the pronoun -uh "him" and the NP *ha:ni* "Hani", in (5b), have different indices/indexes to denote that they refer to different entities.

### 2.2.2 Agreement

A distinction needs to be made between an anaphor and its antecedent, and the subject of a clause and its predicate. The former is semantic in nature introduced by phi features ( $\phi$  features) while the latter is syntactic in nature. In generative grammar, Chomsky (1981, p.330) defines  $\phi$  features as a set of elements that includes person, number, gender, and case. Every argument (DP) enters the derivation must have its  $\phi$  features valued. Thus,  $\phi$  features are determined in the base as they are purely semantic. In contrast, case is a purely formal feature that needs to be checked by merging through the derivation of the tree. The focus here is on the sematic agreement between the anaphor and its antecedent in all  $\varphi$  features: person, number and gender. This fact is illustrated through the following paradigm:

- 6) a) huda:<sub>i</sub> garaħit nafsa-ha:<sub>i</sub> Huda<sub>i</sub> hurt self-her<sub>i</sub> "Huda<sub>i</sub> hurt herself<sub>i</sub>"
  - b) \*huda:<sub>i</sub> garaħit nafs-i:<sub>i</sub> Huda<sub>i</sub> hurt self-my<sub>i</sub> *"Huda<sub>i</sub> hurt myself<sub>i</sub>"*

The feminine, singular and third person anaphor *nafsa-ha*: "herself", in (6a), agrees with its feminine, singular and third person antecedent *huda*: "Huda" in all  $\varphi$  features. Thus, the sentence is grammatical. Although there is an agreement in gender and number between the reflexive *nafsi*: "myself" and the antecedent *huda*: "Huda", in (6b), the structure is ungrammatical as the reflexive *nafs-i*: "myself" is in the first person form while its co-indexed and c-commanding antecedent *huda*: "Huda" in the third person form.

To summarize, according to the above sections, the anaphor in EA must be co-indexed with an antecedent that agrees with in all  $\varphi$  features. However, those constrains are not enough to account for other examples in EA. This is demonstrated in the following sub-sections (2.2.3) and (2.2.4).

#### 2.2.3 Scope & C-Command

This section illustrates the c-command constraint on the distribution of anaphors in EA. The basic notion that is mainly related to this study is the scope, presented by Chomsky (1965), which refers to the most important structural relations, such as c-command. The term c-command is first introduced by Reinhart (1976) in her dissertation. C-command is a shortened form of constituent command. To understand the concept of c-command, other concepts need to be illustrated, such as domination and linearity. Chomsky (1995) proposes that domination and linearity are not the basic concepts for phrase marking. The following figure collaborates the notion of domination:



#### (Chomsky, 1995, p. 34, no.15)

Chomsky (1995, p.34) argues that B dominates D and E, C dominates F and G, and A dominates all the nodes. He also points out that B precedes C, F and G. Furthermore, D precedes E, C, F and G. Klima (1964), Langacker (1969), Lasnik (1976), Reinhart (1976), Stowell (1981), and Aoun& Sportich (1981) assert that command is a major concept that can be applied throughout the grammar's modules. Chomsky (1995, p.35) mentions that  $\alpha$  c-command  $\beta$  if  $\beta$  is not dominated by  $\alpha$  and every X that dominates  $\alpha$  dominates  $\beta$  too. As a result, B c-commands C, F, G; D c-commands E and vice versa; F c-commands G and conversly. C-command denotes the binary relation among the nodes of the tree. That's why the c-command relation cannot be explained through the linear structure. However, it needs to be clear through the hierarchical structure. Haegeman also defines C-command as in (8):

8) C-command

A c-commands B if and only if A does not dominate B and every X that dominates A also dominates B.

#### (Haegeman, 1994, p.147)

To posit the crucial relationship between c-command and BT, a distinction needs to be made between (9a) and (9b) in the following paradigm:

9) a. magdi:<sub>i</sub> sa:Sid nafs-uh<sub>i</sub> Magdy<sub>i</sub> helped self-his<sub>i</sub> "Magdy<sub>i</sub> helped himself<sub>i</sub>"

> b. \*ma:m-it magdi<sub>:i</sub> sa:Sid nafs-uh<sub>i</sub> mother-'s Magdi<sub>i</sub> helped self-his<sub>i</sub> "Magdy<sub>i</sub>'s mother helped himself<sub>i</sub>"

The anaphor *nafs-uh* "himself", in (9.a), is co-indexed with the antecedent *magdi* "Magdy" and agrees with it in all  $\varphi$  features. Thus, the structure is grammatical. Moreover, the anaphor *nafs-uh* "himself", in (9a), is c-commanded by its antecedent *magdi*: "Magdy". Although the reflexive *nafs-uh* "himself" and the antecedent *magdi*: "Magdy", in (9b), agree in all  $\varphi$  features, the structure is ungrammatical. The ungrammaticality of (9b) is due to violating the c-command relation as *magdi*: "Magdy" does not c-command the anaphor *nafs-uh* "himself"; it's inside this bigger DP *mam-it magdi*: "Magdy's mother". Chomsky

(1995, p.36) proposes that a node c-commands its sister, and everything dominated by this sister.

C-command as a structural relation is another constraint on anaphors. To demonstrate, consider the following trees in (10a, b) which represent (9a) and (9b) respectively as below:

10.a)



On the other hand, the structure of (9b) is different from (10a) as illustrated in the following tree diagram (10b):

10.b) \*



The structure (10b) represents (9b). The DP *magdi* "Magdy", in (9b), is coindexed with the anaphor *nafs-uh* "himself" and agrees with each other in all  $\varphi$ features (singular, masculine, and third person). While (10a) is well-formed, (10b) is ill-formed. In both of the trees in (10a, and b), for example, the node *v* c-commands the VP, and also the V *sa:Sid* "helped", and the DP *nafs-uh* "himself". Also, *v* is dominated by the nodes: *v*P, T', and TP. In addition, *v* ccommands VP, V, and DP. The DP *magdi*: "Magdy", in (10a), c-commands the DP *nafs-uh* "himself"; the node dominating *magdi* is TP, and this node also dominates *nafs-uh* (along with the rest of the sentence). In contrast, the DP *magdi*: "Magdy", in (10b), doesn't c-command the DP *nafs-uh* "himself". The biggest DP *mam-it magdi*: "Magdy's mother" c-commands the anaphor *nafs-uh* "himself".

As defined by Chomsky (1981, p.333), being a bound anaphor means that it must be both co-indexed and c-commanded by its antecedent that agrees with in all  $\phi$  features. Hence, the antecedence, co-referentiality, agreement in all  $\phi$ 

features, and c-command are the constraints of BT in EA. Another crucial point in BT is the binding domain which is explained in the following section.

As shown above, the anaphor in EA must be co-indexed with its antecedent that agrees with in all  $\varphi$  features. In addition, the anaphor must be c-commanded by its antecedent. The following sub-section illustrates the effective role of the locality condition on anaphors in EA.

# 2.2.4 Anaphoric Domain & Locality Constraint

This subsection illustrates the anaphoric domain, Specified Subject Condition (SSC), Tenses Sentence Condition (TSC), the locality constraint on the distribution of anaphors in EA. The binding domain or the governing category is defined by Chomsky (1981, p.211) as the domain or the scope that includes both the anaphor and its clause-mate antecedent. According to the minimalist approach, it must be the smallest or minimalist TP that contains the anaphor and its antecedent. The following paradigm illustrates this point.

11) a) ha:ni:<sub>i</sub> garaħ nafs-uh<sub>i</sub>

Hani<sub>i</sub> hurt self-his<sub>i</sub>

"Hani<sub>i</sub> hurt himself<sub>i</sub>"

b) \*ha:ni:<sub>i</sub> fa:kir [inn Sali garaħ nafs-uh<sub>i</sub>]

Hani<sub>i</sub> thinks [that Ali hurt self-his<sub>i</sub>]

"Hani<sub>i</sub> thinks [that Ali hut himself<sub>i</sub>]"

The antecedent *ha:ni*: "Hani", in (11a), agrees with its co-indexed anaphor *nafs-uh* "himself" in all  $\varphi$  features. In addition, the anaphor *nafs-uh* "himself" is c-commanded by/within the scope of its antecedent *ha:ni*: "Hani". Furthermore, they are in the same clause/clause mates. Although the anaphor *nafs-uh* "himself" is co-indexed, and agrees with its antecedent *ha:ni*: "Hani" in all  $\varphi$  features, (11b) is ungrammatical. Although the anaphor *nafs-uh* "himself", in (11b), is in the scope of its antecedent *ha:ni*: "Hani", the sentence is ungrammatical. The ungrammaticality of (11b) is because the anaphor *nafs-uh* "himself" is not locally bound by its antecedent *ha:ni*: "Hani".

Hence, apparently it is not enough for an anaphor to be bound; it must be bound by something which is not too far away. The locality constraint on anaphor binding needs to be focused on. The part of the sentence within which the anaphor must be bound is called the **binding domain** of the anaphor. This constraint asserts that the anaphor must be bound in its governing category. They must be clause-mates. Chomsky presents a crucial condition that supports this constraint. This constraint is as follows:

12) Specified Subject Condition (SSC): "No rule can involve X, Y in the structure ... X ... [a... Z ... - WYV ...] ... where Z is the specified subject of WYV in a."

(Chomsky, 1973, P.239)

SSC restricts the application of specific syntactic transformational rules. The specified subject here is a lexical verb with a semantic content like proper names, complex DPs or pronominals. SSC does not permit any intervening subject between the anaphor and its antecedent. There is no intervening subject, in (11a), which acts as a blocking antecedent for *nafs-uh* "himself". Conversely, the presence of the DP *Sali* "Ali" in (11b) between the DP *ha:ni:* "Hani" and *nafs-uh* "himself" violates this condition. The DP *Sali* "Ali" plays a role as a specified subject to block binding between the DP ha:ni:"Hani" and nafs-uh "himself". SSC goes along with another vital factor that affects BT in the sense of disjoint reference and restricts locality condition. This constraint is called Tensed Sentence Condition (TSC). TSC asserts that the anaphor must be bound in the tensed clause domain. It prevents the application of some syntactic transformational rules across clause boundaries. TSC is illustrated as follows:

"No rule can involve X, Y in the structure ... X ...  $[\alpha ... Y ...]$  ... where  $\alpha$  is a tensed sentence." (Chomsky, 1973, P.238)

SSC and TSC are from the most prominent constraints presented by Chomsky (1973). The following minimal pair, presented in (13a, b), proves that anaphors in EA cannot violate both TSC and SSC. The following minimal pair (13a and b) proposes also that the examples in EA should obey TSC.

13) a. [ha:ni:<sub>i</sub> fa:kir [ nafs-uh<sub>i</sub>] zaki:]

Hani<sub>i</sub> think self-his<sub>i</sub> intelligent "Hani, thinks himself; to be intelligent." b. \*ha:ni:<sub>i</sub> fa:kir [inn nafs-uh<sub>i</sub> zaki:]
Hani<sub>i</sub> thinks [that self-his<sub>i</sub> intelligent]
"Hani<sub>i</sub> thinks[ that himself<sub>i</sub> is intelligent.]"

The above two sentences in the minimal pair (13a) and (13b) are not different in meaning. The difference is that, in (13a), *nafs-uh* "himself" is bound by *ha:ni:* "Hani" in the tensed clause *ha:ni: fa:kir nafs-uh* "Hany thinks himself". *nafs-uh* "himself" is assigned by the verb *fa:kir* "thinks". In contrast, (13b) is ungrammatical because *nafs-uh* "himself" is not bound in the embedded tensed clause. It violates TSC. The anaphor *nafs-uh* "himself", in (13b), cannot cross the boundary to be bound by its antecedent *ha:ni:* "Hani". As a result, the tensed sentence forms a local domain in which the anaphor must be bound.

In conclusion, according to the above sections, Anaphora in EA must be bound (c-commanded and co-indexed) by its antecedent in the minimal local binding domain. Moreover, the anaphor (reflexives and reciprocals) must agree with its antecedent in all  $\varphi$  features (person, number, and gender). SSC and TSC are crucial conditions that support the above constraints to determine the distribution of anaphors in EA. The following section, (3), deals with logophoricity and explores a new set of data which proves that long distance reflexives do really exist in EA governed by some constraints.

# 3. Logophoricity

This section presents a brief historical background of logophoricity. It is divided into three main sub-sections. The first sub-section (3.1) defines the logophor in EA. Moreover, the second sub-section (3.2) investigates the logophoric domain. Furthermore, the third sub-section (3.3) discusses the diagnostics of logophors, the logophoric context, and the long distance co-reference & Subject of Consciousness (SC).

The logophor is a long distance reflexive that violates locality constraint of Principle A in Chomsky Theory. The logophor is licensed by SC/ a logophoric trigger/antecedent in Chomsky's terms. SC is the internal speaker (protagonist) whose speech, thoughts, and feelings are reported. The antecedent of the logophor does not necessarily show up in the sentence. It could be mentioned in farther sentences. The concept logophor(icity) has been introduced from two different perspectives. On the one hand, the term logophor(icity) is first

presented by Hagège (1974) through the study of West African languages where he presents the unique logophoric pronouns as distinct from other pronominal forms. Those logophoric pronouns take the external subject of the discourse as an antecedent. On the other hand, this term is also adopted by Clements (1975) and Reuland (2006) who treat anaphors as bound outside the local domain. Those Locally Free Reflexives (LFRs) are also called indirect reflexives. Culy (1994) considers these two cases completely distinct from ordinary reflexives and should be analyzed separately. Culy (1994) classifies languages into three kinds with respect to the techniques for expressing logophoricity. The first kind is pure logophoric languages, the second is Non-logophoric languages, and the third is Languages of mixed logophoricity as illustrated in the following points:

- Pure logophoric languages, African languages, in which some morphological or syntactic forms, such as logophoric pronouns, logophoric, addressee pronouns, logophoric verbal affixes are used to denote logophoricity within logophoric domain or reported speech as illustrated by the following examples:
- Free logophoric pronouns in Donno So: Oumar<sub>i</sub> Antak inyemɛñ<sub>i</sub>/woñ<sub>j</sub> waa be gi. Oumar Antak LOG.Acc/3SG.Acc seen Aux said "Oumar<sub>i</sub> said that Anta<sub>k</sub> had seen him<sub>i/j</sub>." (Huang, 2007, p.174)
- 2. Cliticized logophoric pronouns to the verb in Ewe :

Kofi<sub>i</sub> be ye<sub>i</sub>-dzo/e<sub>j</sub>-dzo. Kof<sub>i</sub> said LOG-leave/3SG-leave "Kofi<sub>i</sub> said that he<sub>i</sub>/<sub>j</sub> left." (Huang, 2007:174

I.

**II**. Non-logophoric languages, such as English and Arabic that do not have any distinct forms used for expressing logophoricity.

**III**. Languages of mixed logophoricity, such as Chinese, Italian, Icelandic, Japanese, Korean, etc. which use SE-anaphors (simple anaphors) in logophoric contexts as demonstrated in the following example from Chinese:

14) mama biaoyang le zij<sub>i</sub> shi Xiaoming hen gaoxing. Mum praise PVF SE make Xiaoming very happy. *"That Mum<sub>i</sub> praises SE<sub>i</sub>/<sub>k</sub>makes Xiaoming very happy"* (Huang, 2007, p.192)

In West African languages, anaphoric/syntactic reflexives can easily be distinguished as they are morphologically distinct from logophoric/semantic reflexives. In contrast, in EA and English, anaphoric/syntactic reflexives and logophoric/semantic reflexives are confusing as they have the same form. Logophors in African languages like Ewe are syntactically and semantically different from the anaphoric reflexives as illustrated in the following paradigm:

15) a. Kofi be yè-dzo.
 Kofi say LOG-leave
 'Kofi said that he (Kofi) left.'

- b. Kofi be me-dzo.
   Kofi say I-leave
   'Kofi said that I left.'
- c. Kofi be e-dzo.
  Kofi say PRO-leave
  'Kofi said that he/she (≠Kofi) left.'
- a. Kofi lõ e dokui.
   Kofi love himself
   'Kofi loves himself.'
  - b. Kofi be yè-lõ yè dokui.
    - 'Kofi said that he (Kofi) loves himself.'

(Clements, 1975, p.142)

yè is used, in Ewe, as a logophoric pronoun which is distinct from the reflexive and personal pronoun e. In (15) and (16), the logophoric pronoun (LOG) yè refers to *Kofi*, whose speech, feelings, and thoughts are being reported. In contrast, the regular/reflexive pronoun e is disjoint with *Kofi*.

Faltz (1985, p.153) distinguishes between simple (SE) anaphors, as illustrated in (14), and complex (self) anaphors, presented by *-self* forms in English and *-nafs* forms in Arabic. Faltz (1985) finds a relation between the

morphological complex nature of anaphors and their structural properties. On the one hand, complex (self) anaphors are locally bound in their antecedents. On the other hand, simple (SE) anaphors can be long distance bound. Moreover, complex anaphors select non-subjects whereas simple anaphors are tied only to subjects as antecedents. This study introduces a new set of data that refutes Faltz's argument. Although the logophors in EA is in the complex form (self), they can be both locally and long distance bound and tied to subjects of the matrix clause.

In addition, logophoricity is used also to account for the distribution of long distance reflexives (LDRs) that exist in some languages, such as Icelandic, Korean, and Japanese. In these languages, the logophoric pronouns have different distribution from anaphors. Huang (1994, p.185) cross-linguistically divides the forms of logophoricity into three sections: the first section is logophoric pronouns, the second one is logophoric verbal suffixes, and the third section is Long Distance Reflexives (LDRs). Hence, logophoricity is a binding relation between the internal reflexive and the external antecedent of the clause.

As can been seen, EA is from the non-logophoric languages in the sense that it does not have any distinct morphological forms to express logophoricity. The following sub-section (3.1) presents the definition of the logophor and its form in EA.

# **3.1 Logophors in EA**

This subsection presents the definition and the form of logophors in EA. The logophor is not a regular reflexive as it does not have to have an antecedent in the same sentence. This study deals with the syntax, semantics, and pragmatics interface in order to account for the behavior of logophors in EA and other languages of African, Icelandic, and Chinsese. Logophors and anaphoric reflexives can be easily distinguished, in African languages, as they have different morphological forms. In contrast, logophors and regular reflexives, in EA, are confusing as they have the same morphological form. Huang (1994) defines logophor(icity) as a phenomenon where the point of view or the perspective of a discourse is reported. Clements (1975) also defines the logophoric pronouns as the individual's reported speech, thoughts, emotions, or general state of consciousness in any context. Therefore, a logophor refers to the person whose point of view is being reported or who is called the subject of consciousness (SC). Logophors are always found in the context of verbs of communication and thought. Zribi-Hertz (1989, P.711) asserts that, in English, a

reflexive pronoun may occur in a violation of the syntactic conditions if it refers back to the minimal SC.

Kuno (1987, p.26) and Cantrall (1974, p.45) assert that Locally Free Reflexives (LFRs) express the speaker's empathy or "camera angle" with the referent of the reflexive in the sense that the current event is reported by the external speaker's perspective. He (1987, p.153) asserts that the referent of the reflexive is the target of the event or mental state. The sentences with the logophoric context are only grammatical if the clause containing the reflexive introduces the point of view of the referent of that reflexive. The logophoric trigger/ antecedent in Chomsky's terms refers to the person whose thoughts, feelings, emotions, and knowledge are delivered. The following examples are presented in English to support this assumption.

16. (a) John said to Mary that physicists like himself were a godsend.(b) John thinks that physicists like himself are a godsend.

#### (Kuno, 1987, p.123)

Although the reflexive "himself", in (16a, b), is not locally bound in its domain by its antecedent "John", both sentences are perfectly grammatical. The common thing between the two sentences is the kind of verb. The verb *said*, in (16a), and the verb *thinks*, in (16b), are verbs of communication or reporting verbs. Those verbs are used to communicate people's intentions, ideas, feelings, and sayings. In addition, both of the sentences are reported from the speaker's point of view *John* as a logophoric trigger/antecedent for the long distance reflexive *himself*. Thus, *John*, being the center of the perspective supports the logophoric context. Logophors in EA are represented by the reflexive *-nafs* attached to pronominal suffixes that agree with the reflexive's antecedent in all  $\varphi$  features, such as *nafs-uh* "himself", *nafsa-ha*: "herself", *nafsu-hum* "themselves", etc.

In essence, the anaphor and the logophor have the same form in EA. However, both are restricted by different constraints. The anaphor is governed by syntactic constraints whereas the logophor is constrained by some semantic and pragmatic restrictions. Hence, the reflexive in EA can be used as an anaphor and a logophor depending on the context. The following subsection (3.2) illustrates the logophoric domain.

#### 3.2The logophoric domain

The anaphoric domain contains the anaphor and its antecedent which must be clause-mates. In contrast, this sub-section deals with the logophoric domain that includes the logophor and its closest potential antecedent which cannot be clause-mates. This section focuses on defining four main concepts: the logophoric trigger, the logophoric domain, the sentential logophoric domain, and the discourse logophoric domain.

Culy (1994, 1997) defines the logophoric trigger/ antecedent in Chomsky's terms as the referent in the matrix clause whose thoughts, speech, feelings, or knowledge are being reported. He defines the logophoric domain as a stretch of discourse in which the perspective of the internal protagonist is presented. In addition, he asserts that the logophoric domain can be restricted to sentences in the sense that the LDR/LOG is in an embedded clause whereas its antecedent in Chomsky's terms/ logophoric trigger exists in the matrix clause explicitly or implicitly. This kind of domain is called a sentential logophoric domain where the logophoric trigger's feelings, thoughts, and emotions are reported. In contrast, the discourse logophoric binding across sentences. Huang (2007) demonstrates that LDRs denote subjects of matrix clauses as the center of perspective and deixis. This assumption is illustrated by in 17:

Sentential logophoric domain

17) [s ... logophoric trigger ... [s ...] [s ...]

Discourse logophoric Domain

(Culy, 1994, p.1057)

Ultimately, the logophoric domain is distinct from the anaphoric domain in the sense that the latter is constrained by the locality conditions while the former violates this constraint. However, this violation does not affect the grammaticality of the sentences in EA. This is explained in the following section that investigates the diagnostics of logophors in EA.

#### **3.3Diagnostics of Logophors in EA:**

This section deals with the properties of logophors in EA. It is divided into two main sub-sections: the first is the logophoric context and the second is the long distance co-reference and the SC. Although the conditions and constraints of principle A of BT apply in EA, there are some examples that violate these constraints. It has been demonstrated that anaphors in EA must be bound in the minimalist local domain. However, some reflexives in EA can be LDRs in special cases with some constraints. LDRs are called logophors instead of anaphors. Reinhart & Reuland (1993) investigate that a logophor is any anaphor that is not locally bound. In contrast, Hunag (2007) disproves the idea that logophoricity is circular as it is defined in the terms of BT where any anaphor that violates BT constraints is a logophor. It has been argued that any accurate theory must:

- Assume conditions and constraints that license the long distance reflexives in a language.
- Assign a domain in which an antecedent exists.
- Recognize the potential antecedents within the specified domain.
- Illustrate the stimulus for using long distance reflexives (LDRs).

(Huang, 2007, p.100)

In the long run, not all long-distance anaphors are logophors as logophors have some conditions that license the long distance reflexivization in a specific context. Logophors are local free reflexives that can be bound by the minimalist subject of consciousness (SC) whose speech, feelings, and thoughts are reported. SC is the logophoric trigger for the logophor. The logophor must agree with its antecedent in all  $\varphi$  features. Above all, logophors in EA must be associated with specific type of verbs which is illustrated in the following section (3.3.1).

## **3.3.1 Logophoric Context**

This sub-section discusses the logophoric context that motivate the presence of the logophors. A special property of logophors in EA is that their referential properties are sensitive to the verb's type under which they are embedded. The same constraint is found also in West African languages too. Logophors exist in embedded clauses introduced by verbs of thinking, saying, emotions, knowing, and perceiving. Butler (2009) argues that the logophor in some languages such Kwa, Abe, and Niger-Congo of Ivory Coast is introduced only by the verb of saying to mark the logophoric context. Culy (1994) asserts that the logophor, in West African languages, is licensed by the following set of verbs:

#### 21) Say >Know >Think > Perceive

This set of verbs is called verbs of communication, perception and psychological state. The hierarchy in (21) illustrates that if a language licenses logophors embedded under verbs of perceiving, it will also license them under verbs of thinking, saying, knowing, and showing emotions. Butler (2009) suggests that, through the above hierarchy, logophors seems to be used in contexts of reported speech. Although the logophoric context is marked in some languages by only the verb of saying, EA allows logophors embedded under verbs of saying, emotions, knowing, and thinking too as shown in the following paradigm:

18) a. ha:ni:, ?a:l [?inn ?ibnj-uh ?ayla: /?ayla: Sali-hi
Hani, said [ that sonj-his more precious than/ more precious for- himi
min nafs-uhi]
than solf his l

than self-his<sub>i</sub>]

"Hani<sub>i</sub> said[ that his son<sub>j</sub> is more precious than/ more precious for him<sub>i</sub> than himself<sub>i</sub>]"

- b. ?aħmad<sub>i</sub> ?iftakar [?inn nafs-uh<sub>i</sub> ?aham min ?ay ħa:gah]
   Ahmed<sub>i</sub> thought [that self-his<sub>i</sub> more important than anything]
   "Ahmed<sub>i</sub> thinks [that himself<sub>i</sub> is more important than anyone.]"
- c. ?aħmad<sub>i</sub> ?iftakar [?inn ?aham ħa:gah nafs-uh<sub>i</sub>]
  Ahmed<sub>i</sub> thought [that the most important thing self-his<sub>i</sub>]
  "Ahmed<sub>i</sub> thinks [that the most important thing is himself<sub>i</sub>.]"
- d. ma:ma:<sub>i</sub> be-thes [?in-nik ?ayla: / ?ayla: Sali-ha<sub>i</sub> min mom<sub>i</sub> pres-feel [ that-you more precious/ more precious for her than nafsa-ha:<sub>i</sub>] self-her<sub>i</sub>]

"Mom<sub>i</sub> feels [that you are more precious/ more precious for her than herself.]"

e. \* ma:ma:, be-thes [?in-nik ?ayla: min-ha:,] mom, pres-feel [that-you more precious than-her,]
"Mom, feels [that you are more precious than her.]" f. mona: I ?adraket [?inn ma-fi:-š ħad ye?dar yeħel il-moškela /moškelet-ha Mona\_i realized [that no-there one can solve the problem/problem-her\_i yair nafsa-ha: ]

but self-her<sub>i</sub>]

"Mona<sub>i</sub> realized[that there is no one can solve the problem/her<sub>i</sub> Problem but herself<sub>i</sub>]"

The reflexive form *nafs-uh* "himself, in (18a), is co-indexed with its longdistance antecedent *ha:ni:* "Hani". Both agree in all  $\varphi$  features. If the structure *?ayla: Sali-h min nafs-uh* "more precious for him than himself" is used, in (18a), the reflexive *nafs-uh* "himself" would be an anaphoric reflexive which is bound by the close attached pronoun –h "him" in *Sali-h* " for him". In contrast, if the structure *?ayla: min nafs-uh* "more precious than himself" is used, in (18a), the reflexive *nafs-uh* "himself" would be a logophor licensed by *ha:ni:* "Hany". In addition, the reflexive *nafs-uh* "himself", in (18b and 18c), agrees with its coindexed long-distance antecedent *?ahmad* "Ahmed" in all  $\varphi$  features too. While *nafs-uh* "himself", in (18b), is a subject, *nafs-uh* "himself", in (18c) is a predicate. Hence another basic distinction between anaphors and logophors in EA is that logophors assume different grammatical functions (subject and predicate) that cannot be assumed by regular/anaphoric reflexives. Syntactic/ regular reflexives, in Chomskyan BT never come in a subject position.

The sentences (18d and 18e) form a minimal pair. On the one hand, in (18d), which is perfectly grammatical, the reflexive *nafsa-ha*: "herself", agrees with its co-indexed long-distance antecedent *ma:ma*: "mom" in all  $\varphi$  features. If the structure *?ayla: Sali-ha min nafs-ha* "more precious for her than herself" is used, in (18d), the reflexive *nafs-ha* "herself" is an anaphoric reflexive which is bound by the close attached pronoun –ha "him" in *Sali-ha* " for her". In contrast, if the structure *?ayla: min nafs-ha* "more precious than herself" is used, in (18d), the reflexive *nafs-ha* "more precious than herself" is used, in (18d), the reflexive *nafs-ha* "more precious than herself" is used, in (18d), the reflexive *nafs-ha* "more precious than herself" is used, in (18d), the reflexive *nafs-ha* "herself" would be a logophor licensed by *ma:ma:* "mom". On the other hand, the pronoun *ha:* "her", in (18e), agrees with the DP *ma:ma:* "mom" in all  $\varphi$  features. However, the sentence would be more acceptable if the pronoun *ha:* "her" refers to someone in the discourse not *ma:ma:* "mom". Both sentences (18d, and e) are reported from the SC's, *ma:ma:* "mom", point of view. Hence, this minimal pair proves that the pronoun cannot replace the logophor in EA. In the last example of the paradigm, (18f), the reflexive *nafsa-*

*ha*: "herself" agrees with its co-indexed singular, feminine and third person long-distance antecedent *mona*: "Mona" in all  $\varphi$  features. If *moškelet-ha* "her problem" is used, in (18f), *nafsa-ha*: "herself" is a regular/anaphoric reflexive bound by the pronoun *ha* "her" in *moškelet-ha* "her problem" in its local domain. In contrast, If *il-moškela* "the problem" is used, in (18f), *nafsa-ha*: "herself" is a logophor licensed by its non-local DP *mona*: "Mona".

If the long distance reflexives in the above paradigm (18a, b, c, d and f) are considered to be anaphors, they would violate principle A of BT. Reflexives in those sentences are locally free reflexives (LFRs). ha:ni: "Hani" is the LFR, in (18a), *?aħmad* "Ahmed" is the LFR in (18b and 18c), *ma:ma:* "mom" is the LFR in (18d), and mona: "Mona" is the LFR in (18f). LFRs represent reflexives that can be bound outside their local domain. Two observations can be detected in the above paradigm. The first is that all long distance reflexives are not locally bound and the second is the type of the matrix verbs that introduce the embedded clauses. (18a) is presented by the matrix verb of saying *?a:l* "said", (18b and 18c) is introduced by the matrix verb of thinking *2iftakar*, "thought",(18d) is introduced by the matrix verb of emotions be-thes "feel", and (18f) is introduced by the matrix verb of perception Padraket "realized". From the crucial factors that mark the logophoric context is the verbs of communication under which the logophor is embedded. From the above paradigm, it has been proven that co-reference in EA is achieved between the embedded logophor introduced by verbs of communication and the matrix subject. In EA, all the logophors are LFRs. However, not all LFRs can be logophors as the logophors must be motivated by some semantic and pragmatic factors, such as the type of verbs used to introduce the embedded clauses, the protagonist's point of view, and the SC.

Butler (2009) assumes that, in Aghem, if a logophor is used with verbs different from verbs of saying, thinking, perceiving, and knowing, it shows the referential properties of normal pronouns as shown in the following example from Aghem, a Grassfields Bantu language spoken in and around the city of Wum in the Northwest Province of Cameroon, Africa:

19) Abaŋi zɨgha ndugho mo  $\hat{\mathbf{e}}_{i/j}$  gbɨn zɨ Abang leave house PST LOG morning eat 'Abang<sub>i</sub> left the house when  $he_{i/j}$  "ate breakfast.' (Butler, 2009, p.3, no.7) (19) displays that, in Aghem, the logophor can either establish co-reference or disjoint reference with the matrix subject *Abaŋi* " Abang" when the logophor  $\acute{e}$  "LOG" is embedded under a verb like "leaving,". Hence, the type of verbs plays a vital role in licensing logophors. The same constraint is found in EA also as illustrated in the following paradigm:

- 20) a. maha:<sub>i</sub> ?alet le-soha: [inn ma-fi:-š had ?aɣla: min nafsa-ha<sub>i</sub>]
  Maha<sub>i</sub> said to- Soha [that no-there one more precious than self-her<sub>i</sub>]
  "Maha<sub>i</sub> told Soha [that there is no one more precious than herself<sub>i</sub>]"
  - b. .\*soha:<sub>i</sub> ?alet Sann maha: [inn mafi:š ħad ?aɣla: min nafsa-ha<sub>i</sub>]
    Soha<sub>i</sub> said about maha [that no one more precious than self-her<sub>i</sub>]
    "Soha<sub>i</sub> said about Maha [that no one is more precious than herself<sub>i</sub>]"

c.\* soha: semSet Sann maha: [ inn mafi:š ħad ?aɣla: min nafsa-hai]
sohai heard about maha [that no one more precious than self-heri]
"Sohai heard about Maha [that no one is more precious than herselfi]"

The LDR *nafsa-ha* "herself", in (20a), co-refers with its co-indexed long distance antecedent maha:"Maha". The LDR nafsa-ha "herself" is introduced by a verb of saying *?alet* "said" that reflects the reported speech by the matrix subject maha: "Maha". The existence of the verb of saying marks the logophoric context. Hence, the LDR *nafsa-ha* "herself" is a logophor. Although the LDR *nafsa-ha* "herself", in (20b), agrees with the matrix co-indexed DP soha "Soha", it is not a logophor. In addition, it violates Principle A of BT that governs anaphors. Although the embedded LDR nafsa-ha "herself", in (20b), is introduced by a verb of saying, the sentence is ungrammatical. The ungrammaticality of (20b) is due to using the preposition *Sann* "about" as a complement of the verb *?alet* "said". Hence, the speech is reported by the external speaker soha "Soha" not the internal protagonist/ SC maha: "Maha". Adding the preposition Sann "about" as a complement to the verb Palet "said" delivers the event from Soha: "Soha's" point of view. soha: "Soha", in (20b), is not the center of perspective/SC and the verb Palet Sann "said about" does not give the subject, Soha: "Soha", the opportunity to be co-referential with the LDR nafs-ha: "herself". Hence, this sentence is not grammatical because of the lack of the discourse factors "the protagonist's point of view", and "verbs of communication". In addition, the LDR nafsa-ha "herself", in (20c), is introduced by the matrix verb semset "heard" which is not a verb of communication the delivers a reported speech. The event, in (20c), is delivered by the external speaker *Soha*: "Soha" who is not the SC. When the reflexive is

embedded under a verb of hearing, the logophor establishes disjoint reference with the matrix subject. Hence, the reflexive *nafsa-ha* "herself", in (20b, c), is neither an anaphor nor a logophor.

Butler (2009) suggests that the verb set of communication, as a vital factor for logophor(icity), selects Speech Act Phrase (SAP) in the sense that the logophor establishes reference with the subject of the verb that selects the SAP. When a SAP is selected, an embedded logophor shows obligatory co-reference with the minimal c-commanding DP. This idea is illustrated in the following paradigm:

SAP



<sup>(</sup>Butler, 2009, p.13, no.36)

To sum up, the referential properties of logophors in EA are achieved only when they are embedded under verbs of saying, feeling, thinking, and perceiving. The set of verbs differs from one language to the other. However, Butler (2009) assumes that if a logophor is licensed by only one verb in any language, it should be a verb of speech, such as *say* and *tell*. In addition to the set of communication verbs, logophors must be licensed by a long distance SC as an external argument to those verbs. This is illustrated in the following subsection (3.3.2).

## 3.3.2 Long Distance Co-reference and Subject of Consciousness

This sub-section discusses the SC, as a very crucial factor of logophoricity, which licenses a long distance logophor. In addition, a definition of a minimal SC is provided. Some Icelandic, Agem, and Chinses examples are used to collaborate this definition. Butler (2009) suggests that, in Aghem, if the logophor is embedded under more than one verb of communication that license the logophor, the logophor can be co-referential with either of the higher subjects/ SCs as illustrated in the following example from Aghem:

22) Tsoŋ<sub>i</sub> mo<sup>2</sup>nlo enyia Abaŋj dzε enyia é<sub>i/j/\*k</sub> zaŋso nù Tsong think that Abang say that LOG smart FOC *Tsong thinks that Abang said that he is smart.'* (Butler, 2009, p.7, no.20)

The example in (22) illustrates that the logophor e "LOG" can either refer to Abang's saying dze or Tsong's thinking  $mo^2nlo$ . This is due to the fact that the logophor is embedded under two types of communication verbs. In contrast to Butler's (2009) assumption illustrated in the above example, Zribi-Hertz (1989) asserts that if the logophor is bound under two verbs of communication, it must refer to the minimalist/closest potential matrix subject. Zribi-Hertz (1989, p.711) assumes that a reflexive pronoun, in English, can violate c-command and clause boundedness if it refers back to the Minimal Subject of Consciousness (SC). She proposes that this idea recalls Kuno's (1987) and Cantrall's (1974). Zribi-Hertz (1989) suggests that SC is a semantic characteristic of a referent whose feelings or thoughts, are conveyed in the discourse. Hence, SC must be [+human]. The notion of SC is presented as follows:

(23) Minimal SC = either (a) or (b):

a) The nearest NP or a set of NPs (split antecedent) which exists in discourse to the left of the pronoun, and is read as logophoric;

b) The addressee or the speaker, or a group including either a single or plural pronoun, implicitly or explicitly mentioned in discourse.

(Zribi-Hertz, 1989, p.711, no.52)

Butler (2009) argues that logophors or long distance reflexives violate SSC, which does not permit any intervening subject between the anaphor and its antecedent. This case can be found in Icelandic presented by Maling (1984, p.213) as in (24), and Mandarine Chinese introduced by Harbert 1995, p.194) as in (25):

24) Jón segir að María telji að Haraldur vilji að Billi heimsaki sig John says that Maria believes that Harold wants that Billy visit REFL 'John says that Maria believes that Harold wants Billy to visit him.' 25) Zhangsan<sub>i</sub> renwei Lisi hai-le ziji<sub>i</sub> Zhangsan thought Lisi hurt-ASP self 'Zhangsan thought that Lisi hurt himself.'

(24) illustrates that the reflexive element sig "Reflexive" in Icelandic can be licensed/bound by any of the higher subjects. In addition, (25) shows that in Mandarin Chinese, the reflexive element ziji can be licensed by the higher subject Zhangsan across the intervening subject Lisi. Hence, the SSC can be violated if the reflexive is a logophor licensed by the long distance SC. The above case found in Mandarin Chinese and Chinese exists in EA too. The current study adopts Zribi-Hertz's (1989) definition of the SC. Another property of logophors in Aghem, as illustrated by Butler (2009), is that they establish an obligatory long distance co-reference between the logophor and the subject/SC of the matrix clause across sentences. The subject of the matrix clause must be the center of perspective whose feelings, thoughts, saying and knowing are reported through verbs of communication. Hence, the logophor or the LDR's referent must be licensed by the minimalist/closest SC whose point of view/ perspective is reported through using verbs of communication. The long distance antecedent in this case becomes the logophoric trigger for the logophor. The notion of the SC is shown in the following EA examples:

- 26) a. ma:ma:<sub>i</sub> be-thes [?inn hoda:<sub>j</sub> ?aγla: min nafsa-ha:<sub>i/\*j</sub>] mom<sub>i</sub> pres-feel [that Huda more precious than self-her<sub>i</sub>] "Mom<sub>i</sub> feels [that Huda is more precious than herself<sub>i</sub>.]"
  - b. \* ma:ma: be-thes [?inn hoda:, ?ayla: min nafsa-ha:,] mom pres-feel that Huda, more precious than self-her,]
    "Mom feels [that Huda, is more precious than herself,.]"

On the one hand, the LDR is a logophor not an anaphor, in (26a), as it is embedded under the matrix verb of feeling *be-thes* "feel". The LDR *nafsa-ha:* "herself", in (26a), refers to the minimal potential SC *ma:ma:* "mom" though it violates SSC. Although there is an intervening subject, *hoda:* "Huda", between the reflexive *nafsa-ha:* "herself" and the DP *ma:ma:* "mom", in (26a), the reflexive *nafsa-ha:* "herself" refers to the furthest DP *ma:ma:* "mom" and disjoint from the nearest NP *hoda:* "Hoda". However, (26a) is grammatical as the logophor *nafsa-ha:* "herself", in (26a), refers to the SC *ma:ma:* "Mom"

whose feeling is reported from her perspective through the communication verb *be-thes* "feels" that marks and strengthens the logophoric context. Therefore, this sentence is reported from the mother's point of view who is the internal speaker/ protagonist at the same time. On the other hand, (26b) is ungrammatical and nonsense as the reflexive *nafsa-ha:* "herself" refers to the nearest DP *hoda:* "Huda" who is not the center of the perspective. The sentence is not reported from *hoda:* "Huda" 's point of view. On the contrary, the sentence is delivered from *ma:ma:* "mom's" point of view who is the SC. The reflexive *nafsa-ha:* "herself" is not licensed by the discourse factor "point of view". Hence, the above minimal pair (26a, b) shows that EA reflexives used as logophors are licensed by the minimalist potential SC whose point of view is reported. The ungrammaticality of (26b) is due to the cross of perspectives.

EA adopts Zribi-Hertz's (1989) assumption that if the logophor is embedded under more than one communication verb, the logophor gets licensed by the minimalist potential antecedent as illustrated in the following example:

27) ?aħmad ?iftakar [?inn Sali<sub>j</sub> ?a:1 [?inn ha:ni: ?aɣla: min nafs-uh<sub>j</sub>]]
 Ahmed thought [that Ali<sub>j</sub> said [that Hany more precious than self-his<sub>j</sub>]]
 "Ahmed thought that Ali said that Hany is more precious than himself"

The above EA example (27) has two embedded clauses presented by two different verbs of communication. The first embedded clause is presented with the verb of thinking whereas the second embedded clause is introduced by the verb of saying. The LDR nafs-uh "himself" can optionally refer either to the nearest higher subject ha:ni: "Hany" or the furthest matrix subject ?ahmad "Ahmed". Both of the subjects ha:ni: "Hany" and Pahmad "Ahmed" are SCs. The first embedded clause is reported from "Ahmed's" point of view through using the verb of thinking *?iftakar*. In addition, the subject "Hany" is the SC of the second embedded clause which is reported from his point of view presented by the verb of saying 2a:1. According to Zribi-Hertz's (1989) assumption that the logophor must be licensed by the minimalist SC, the logophor nafs-uh "himself" is licensed by its minimalist SC ha:ni: "Hany". In addition, Butler (2009) assumes that the logophor is referential dependent (R-dependent) on the minimalist and closest c-commanding DP with a positive Referential value (+ R). The logophor gets its feature -R valued from the DP<sub>speaker</sub> which matches its R-value. This idea can be illustrated in the following EA example:

28) mona:, ?a:let [?inn ha:ni:, fa:ker[?inn ma-ħade-š ?aɣla: min Mona, said [ that Hany, thinks [that no- one more precious than nafsa-ha:, i/\*, ]]
self-her, i/\*, ]]
" Mona, said that Hany, thinks that no one is more precious than herself, i/\*, "

There are two embeded clauses, in (28), presented by two verbs of communication: saying and thinking. Hence, the higher subjects *mona:* "Mona" and *ha:ni:* "Hany" are SCs of the embedded clauses licensing the logophor *nafsa-ha:* "herself". According to Zribi-Hertz's (1989) assumption that the logophor must be licensed by the minimalist SC, the logophor *nafsa-ha:* "herself" must be licensed by the closest SC *ha:ni:* "Hany". However, they are disjoint as the logophor, according to Butler (2009), does not get its value from the closest c-commanding DP. However, the logophor is licensed by the c-commanding DP with matching features to get its R- feature valued. Hence, the logophor *nafsa-ha:* "herself" is not licensed by the closest c-commanding SC *ha:ni:* "Hany" as it does not value the logophor's R- feature. However, the c-commanding SC *mona:* "Mona" with matching features license the logophor *nafsa-ha:* "herself" though valuing the R-feature. This process is shown in the following derivation:

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The above derivation (28) that represents the sentence (29) shows that the logophor *nafsa-ha:* "herself" is c-commanded by both the higher SCs *mona:* "Mona" and *ha:ni:* "Hany". However, the logophor chooses the furthest SC *mona:* "Mona" as it gets its referential feature valued because of their matching in features.

All the above EA examples prove that the logophor must be licensed by the minimalist SC whose point of view is reported through using verbs of saying, thinking, feeling, and knowledge. However, the following EA example violates the logophor's constraints as shown in (30):

30) nafs-uh ?aham min ?ay ħadd self-his more important than any one "Himself is more important than anyone"

29)

Although the EA reflexive *nafs-uh* "himself", in the subject position, is not co-indexed with any antecedent in the whole sentence, (30) is grammatical and acceptable. This reflexive is a LDR which refers to an entity in the discourse. This example proves that in narratives, it can be found instances of the logophor as the subject of the matrix clause (non-embedded clause). In this example, the logohor *nafs-uh* "himself" co-refers with a much higher antecedent that agree with in all  $\varphi$  features introduced by a much higher verb of saying which can occur many sentences before it in a discourse. Butler (2009) suggests that this case can be interpreted as larger chunks of reported speech.

The definition of SC, as proposed by Zribi-Hertz (1989) asserts, for two reasons, that the 3rd-person LDRs is more restricted than that of 1st- and 2nd-person ones. The first reason is that the 3rd-person LDR's antecedent must explicitly occur in discourse, while the antecedent of a 1st- or 2nd-person LDB reflexive may remain implicit. In addition, only certain 3rd-person NPs are possible potential antecedents for 3rd-person LDRs. In contrast, the speaker and addressee of a discourse are read as logophoric. Though the logophoric trigger/lexical antecedent is required for the logophoric context, the first person reflexive *nafsi:* "myself" in EA does not need a logophoric trigger. The first person self-form by definition reflects the speaker's perspective or point of view. Thus, the SC exists implicitly. This is illustrated in the following minimal pair:

31) a. San nafs-i: meš ha-arouh il-hafla for self-my not will- I go the-party *"For myself, I won't go to the party"* 

b.\*San nafs-uh meš ha- yrouh il-hafla for self-his not will- he go the-party "For himself, he won't go to the party"

The first person reflexive, in (31a), does not require the logophoric trigger to license *nafsi:* "myself" as it refers, by definition, to the speaker or the SC who is the center of the perspective. The sentence reported from the point view of "*I*" which is implicitly denoted by the first person, singular reflexive *nafsi:* "myself". This explains the grammaticality of the first person reflexive as, in (31a), in contexts where the third person, in (31b), is disallowed. Thus, those LFRs are not restricted by the sematic constraints, such as anaphors. In Contrast, they are explained by the sematic constraints, such as the discourse

factors: the speaker's point of view, subject of consciousness, and verbs of communication and thought.

All in all, all the above examples prove that LDRs exist in EA governed by some constraints. The main elements that the referential properties of logophors hang on are: the sectional nature of the class of verbs that license logophors where the SAPs are selected, the SC, and the protagonist's point of view. Those elements are semantic factors that mark the logophoric context. Without those factors, the LDRs cannot be logophors as they lack logophoic triggers.

### 4. Conclusion

In summary, this paper deals with anaphors and logophors with a special focus on EA from a minimalist approach. This study focuses on principle A of BT presented by Chomsky (1981). A new data distinguishes between logophors and anaphors according to the context. On the one hand, locally bound anaphors are constrained by some syntactic conditions, such as local domain and ccommand. In addition, anaphors are licensed by some semantic conditions, such as agreement, antecedence, and co-referentiality. On the other hand, LDRs are associated with some discourse factors, such as the speaker's point of view, the SC and verbs of communication. Hence, reflexives in EA can be used as anaphors or logophors according to the context. Regular reflexives and logophors, in EA, are confusing as they have the same morphological forms. However, EA has its own diagnostics that distinguishes logophors from anaphors. A logophor, in EA, assumes different grammatical functions (subject, and predicate). The first and second person reflexives, in accordance with Zribi-Hertz (1989), do not need a logophoric trigger/lexical antecedent. Logophors violates the Chomskyan locality condition of Principle A. It is necessary to resort to Syntax, Pragmatics, and Semantics interface to account for the violation of Principle A. It will rest on the shoulders of future studies to test this analysis on long distance reflexives in other languages in various diverse languages.

# List of Abbreviations

Abbreviation	Definition
ASP	Aspect
BT	Binding Theory
С	Complementizer
C-command	Constituent Command
СР	Complementizer Phrase
DP	Determiner Phrase
EA	Egyptian Arabic
EF	Edge Feature
EPP	Extended Principle Projection
Fem	Feminine
GB	Government and Binding
GC	Governing Category
GG	Generative Grammar
IF	Interpretable Feature
LDR	Long Distance Reflexives
LFR	Locally Free Reflexives
LOG	Logophor
MP	The Minimalist Program
N	Noun
NP	Noun Phrase
Р	Preposition

Below is a list of abbreviations and symbols used throughout this paper:

P&P	Principles and Parameters	
РР	Prepositional Phrase	
REFL	Reflexive	
S	Sentence	
SC	Subject of Consciousness	
Spec	Specifier	
SSC	Specified Subject Condition	
T,TNS	Tense	
ТР	Tense Phrase	5
TSC	Tensed Sentence Condition	NCO.
U Case	Uninterruptable Case	17 U
UG	Universal Grammar	
V	Verb	
VP	Verb Phrase	9
Х	Head	1
Χ'	X Bar	0
φ features	Phi Features	1

Table1. Abbreviations used in the paper

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# ظاهرة ربط الضمائر الانعكاسية عن قرب وعن بعد في اللهجة العربية المصرية : بسمة أشرف عبد القادر دياب طالبة ماجستير بكلية البنات للآداب والعلوم والتربية قسم اللغة الإنجليزية وآدابها، جامعة عين شمس

#### الملخص

يتناول البحث ظاهرة ربط الضمائر الانعكاسية عن قرب Anaphoricity وعن بعد Logophoricity في اللهجة العربية المصرية من خلال نظرية الربط Binding Theory التي صاغها تشومسكي في الثمانينات بتطبيقها على اللهجة العربية المصرية باستخدام أحدث إصدار لنظرية تشومسكي هو منهج الحد الأدنى الذي صاغه تشومسكي في التسعينات. تهدف نظرية الحد الأدنى لتقليص البنية التحتية و السطحية للجملة لأدنى حد. حيث تبدأ نظرية الربط بالمبادئ والقيود التي تضبط توزيع المركبات الأسمية في المستوى التركيبي والدلالي. و تتكون نظرية الربط من ثلاثة مبادئ. يركز هذا البحث على المبدأ الأول Anaphoric حيث يختص بالعائد (Anaphor) الذي يأخذ معناه من الاسم العائد عليه (السابق) Antecedent و يأتي معه في المجال النحوي و الدلالي. و سيتم ذلك من خلال تطبيق ظاهرة Logophoricity و التي أستخدمها لأول مره كليمينتس عام ١٩٧٥ حيث ربط الضمائر الانعكاسية بسوابقها خارج الحيز النحوي و الدلالي لها. يتضمن البحث المحاور الآتية :

المحور الأول: الإطار النظري الخاص بنظرية الربط <mark>لتشومسكي.</mark>

المحور الثاني: ظاهرة ربط الضمائر الانعكاسية عن قرب وخصائصها في اللهجة العربية المصرية. المحور الثالث: ظاهرة ربط الضمائر الانعكاسية عن <mark>بعد وخص</mark>ائصها في اللهجة العربية المصرية. اخيرا الملخص.

الكلمات الدالة : ظاهرة ربط الضمائر الانعكاسية عن قرب ، نظرية ربط الضمائر الانعكاسية عن بعد، منهج الحد الأدنى.