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**ORIGINAL ARTICLE**

## **Pronominals and Anaphors in the English Sentences: A Binding Theory Approach**

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### **ABSTRACT**

This paper studies the relationship between the pronominals and anaphors in the English sentences using the binding theory. It looks at the stand of the government and binding (GB) theory in the construction of grammatical structures and their interpretations. It also x-rayed the basic principles of the GB theory (precedence, dominance, and governing categories) using the tree diagram. The basic objective of this study is to show how the binding theory determines the formation of pronominals and the anaphors; also to show how ungrammatical sentences can result from faulty use of the binding principles. It concludes by noting that the semantic interpretation of the relationship between anaphors and the pronominals is determined by the binding conditions.

**Keywords** Pronominals, anaphors, english sentences.

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### **INTRODUCTION**

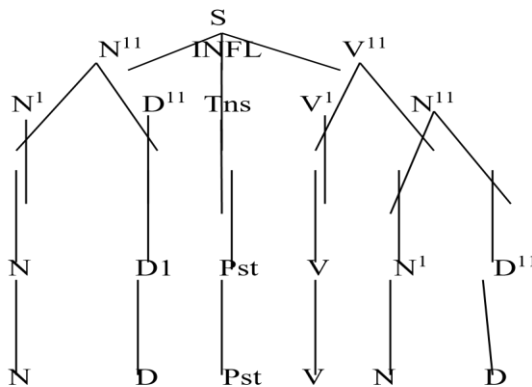
Establishing the parameters of universal grammar has been the concentration of grammatical analysis. Language properties inherent in the human mind make up “universal grammar”, which consists not of particular rules or a particular grammar, but of a set of general principles that apply to all grammars and that leave certain parameters open. Universal grammar sets the limits within which human languages can vary (Cook, 2003). In 1957, Chomsky came up with the notion of generative grammar which accounts for the innate knowledge of a speaker about his language. He argues that every normal child has the language library built up in him, which enables him to acquire the language of his environment. Since then, Chomsky’s universal grammar has gone through several stages (the finite state grammar, FSG, Phrase structure grammar, PSG, transformational generative grammar, TGG, etc). Each of these grammars has various

rules that determined the formation of English sentences. The FSG sees grammar as metamorphic. Constituents are deposited as derivation progressed. Later in 1965, Chomsky came up with the PSG. He states that “a grammar must be projective and generative” and should generate all the possible grammatical sentences and no ungrammatical sentences”. The PSG generates sentences following the structural parsing:  $S \rightarrow NP \text{ AUX (ed) VP}$ . The shortcomings of PSG made Chomsky to propose another model of grammar known as “Transformational generative grammar (TGG)”. Mbah (2006) notes that TGG rules “relate to the transformational syntactic rules which generate rules of surface and deep structure syntax. The TGG rule relates the changes at the surface structure to those of the deep structure and reduces them to a minimum of rules”. Through TGG, various models of grammar have been presented: the standard theory, the extended standard theory, the revised extended standard theory, the government, and the binding theory and the minimalists programme. The government and binding theory is the focus of this study.

### THE GOVERNMENT AND BINDING THEORY (GB)

The government and binding theory was put forward by Chomsky (1981). Mbah (2006) notes “GB concerns relations which lexical items exert on one another in syntactic configurations”. It forms the bridge between syntax and semantics. It is particularly concerned with  $X^1$  syntax which specifies the combinations of grammatical structures and their interpretations. Their interpretation discusses why such syntactical grammatical structures are acceptable (Mbah, 2012, pp. 123). Every sentence or constituent can be analyzed using a phrase marker (PM or a tree diagram). It is a set of nodes linked by lines. The terminal nodes which carry the lexical items of the constituents are seen at the base of each PM. Other non-terminal nodes carry labels such as  $N$ ,  $N^{11}$ ,  $V$ , and so on (see Mbah, 2006). The figure below is a PM.

Figure 1



John Mac Past drove the car  
 The GB theory is limited by the principles of precedence, dominance, and governing categories. In the above figure, each pair of nodes exhibits two types of relations: precedence and dominance. INFL (inflection) precedes  $V^{11}$  and determines its tense.  $V^{11}$

occurs at its left side. So, INFL precedes not only  $V^{11}$  but, also  $V^1$ ,  $N^{11}$  and all other nodes dominated by  $V^{11}$  and  $N^{11}$ . S dominates  $N^{11}$ , INFL, and  $V^{11}$  directly. Always, the dominator is linked to the dominated constituent by an unbroken association line. So, S is the mother and the governor of  $N^{11}$ , INFL and  $V^{11}$ . Another thing that is crucial to the operation of GB theory is the domain of application. It is the minimal category dominating every constituent (Mbah, 2006). The head of every phrase is termed X; the phrasal category containing X is  $X^1$ ; the phrasal category containing  $X^1$  is termed  $X^{11}$ .  $X^1$  and  $X^{11}$  are projections of X (Riemsdijk and Williams, 1986). That is, X corresponds to S (sentence); the NP corresponds to  $N^{11}$ ;  $N^1$  is the intermediate category; the head of a NP is the N.

## **BINDING THEORY**

Binding in GB theory is used to give semantic interpretation to sentence structures generated by syntax. Binding theory determines the relation of anaphors and pronominals in the English sentences. Its work is to seek out whether, in sentences containing more than one NP (noun phrase), a given NP can be interpreted as co-referential to another. Three types of NPs have been identified: anaphors, pronominals, and lexical NPs (Mbah, 2012, pp. 135).

## **ANAPHORS**

Anaphors are NPs that take their reference from their antecedences. There is the reciprocal anaphor and the reflexive anaphor.

## **REFLEXIVE ANAPHOR**

Mbah (2012, pp. 135) notes that “the reflexive pronoun is an anaphoric pronoun, which bears the action performed by its antecedence”. It is marked in the English language by affixing “self” or “selves” to the pronominal form of the antecedence. For example, 1. The Policeman shot himself with a gun.

2. Jane cut herself with a knife.

3. The goat wounded himself on a tree.

In the above sentences, the pronouns “himself”, “herself” are reflexive pronouns. They bore the action performed by their antecedents “policeman”, “Jane”, and “Goat”. The marker of the number (plurality) of the subject is borne by the reflexive pronoun. For example,

4. Jack and Jill cooked for themselves in the valley.

5. They hate themselves.

6. The man asked them, “do you love yourselves?”

In examples 4 and 5, the reflexive pronouns, “themselves” bore the plurality of the subjects, “Jack and Jill”, “They”. In example 6, the reflexive pronoun “yourselves” bore the plurality of its antecedent “them”.

## RECIPROCAL ANAPHOR

The reciprocal anaphor is the pronoun that occurs in coordinated form and exchanges actions performed by each on the other. When the head NPs (the actors) are two, the reciprocal pronoun to be used is “each other”. On the other hand, if the head NPs (actors) are more than two, the reciprocal pronoun to be used is “one another”. For example, 7. David and Divine fought each other.

8. Mr Enoch’s dog and Mr Jude’s dog barked at each other.

9. The Principal, the teacher, and the student argued with one another about the examination malpractice.

10. All the animals in the reserved forest: Lions, Zebras, Cheetahs, Cobras, and the Elephants fought one another for food.

In the above examples (numbers 7-10), “each other”, “one another” are the reciprocal pronouns.

## PRONOMINALS

Mbah (2012, pp. 136) notes that pronominals are mainly personal pronouns. They are NPs that can either take their reference from some other NP (this is called their anaphoric or proximate use), or they can refer independently (this is their deictic or obviate use). For example,

11. Peace thought that she will marry John.

12. The community reviewed its constitution.

13. The Policemen burnt their homes.

14. Jude imagined that his car was burnt.

For example 11, “she” can be anaphoric (that is, it could refer to “Peace”). It could be disjoint when it does not take its reference from “Peace”. When this is the case, it is called a deictic or an obviate pronoun. This same semantic interpretation applies to “their” in numbers 12, 13, and “his” in number 14.

## THE LEXICAL NPS

The lexical NPs are overt NPs (Mbah, 2012, pp. 136). For example,

15. John Kennedy. (Proper name)

16. Adolf Hitler. (Proper name)

The binding theory operates by binding principles. Some of the binding principles pointed out by Riemsdijk and Williams (1986, pp. 270-271) are,

a. A bound anaphor must be bound in the smallest domain of a subject in which it occurs.

b. A pronoun must be free in the smallest domain of a subject in which it occurs.

c. A lexical NP must be free in all domain (where “domain of” is formulated as X is in the domain of Y if X=Y and Y C- commands X (Mbah 2006, pp. 340). For example, 17. Grace bought herself a car.

18. The thieves hate themselves.

In the above examples, the subjects “Grace”, and “The thieves” bind the reflexive pronouns (“herself”, and “themselves”) as anaphors. So, “Grace”, and “The thieves” have the same referential indices. This is however subject to the indexation principle which states that “NPs should be freely co-indexed and NPs should freely be indexed. For example,

19. Jim<sub>1</sub> told Jack that he<sub>1</sub> wanted to buy a car.

20. Jim<sub>1</sub> told Jack<sub>2</sub> that he<sub>2</sub> wanted to buy a car.

In the above examples, the natural numbers “1” and “2” are used as referential indices to indicate movement and interpretation. Where two expressions refer to the same discourse entity; that is, they co-refer; then, the same index is assigned to both expressions; or, they are co-indexed. So, “he” could refer to “Jim” in example 19. It is could also refer to “Jack” in example 20. The pronoun “he” could also refer to “Jack’s brother “John”. In that case, we have the example below.

21. Jim<sub>1</sub> told Jack<sub>2</sub> that he<sub>3</sub> wanted to buy a car.

In other words, the above expression could mean that, “Jim told Jack that John wanted to buy a car”. The indexation principles show reference relations which are actually linguistic relations. In the example below, we can have “Jim” and “him” co-refer.

22. Jim<sub>1</sub> believes that everyone loves him<sub>1</sub>.

The indexation principles have excessive power and continue to generate and over generate. Sometimes it results to ungrammatical expressions such as.

23.\* Jane loves himself.

24.\* Jane loves themselves.

25.\* The Elite love themselves.

26.\* The class loves ourself.

In the above examples, numbers 23 and 24 are ungrammatical because the bindees “himself” and “themselves are disjointed from the binder “Jane”. Examples 25 and 26 are wrong because there is no concord between the binders “The Elite”, “The class” and the bindees “themselves” and “ourself”. This disjunction disobeys the binding principles stated in 2.1.3a. The second binding principle which states that a pronoun must be free in the smallest domain of a subject in which it occurs, can freely be verified through the following examples,

27. They kicked him/her/it.

28. The man slapped him/her/it.

29. She/ He /It matched /her / him /it.

In the above example, all the complements of the verbs “him”, ‘her”, ‘it” are free in the clauses they occur. They show distinct referential indices. That is, they cannot be

interpreted as being co-referential with the subjects of the sentences. Also, the third binding principles (2.1.3c) can be shown in the following sentences.

30. The Police sergeant shot the thief.

31. The President praised the good senator.

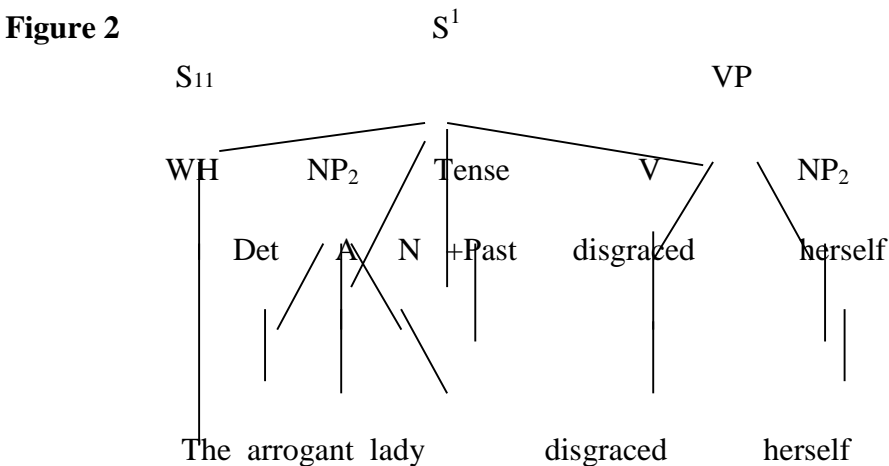
In the above examples, the referential NPs “the thief”, “the good senator” are free and disjoint from the commanding NPs “The Police sergeant”, and “The President”.

The indexation principle massively over generates in all sorts of ways. This results in ungrammatical constructions as shown in examples 23-26. To curtail the excessive power of the indexation principle, Chomsky (1980) introduced the “Binding conditions”

### Binding conditions

The binding condition states that,

- a. An anaphor must be bound in its governing category, if it has one.
- b. A pronominal NP must be free in its governing category, if it has one.
- c. A lexical NP must be free everywhere. The tree diagram below illustrates the binding condition.



In figure two above, S1 is the governing category for NP<sub>2</sub> (the one after the V). The NP<sub>2</sub> “herself” is co-indexed with the NP<sub>2</sub> “The arrogant lady” as an anaphor. So, it is properly governed. This confirms the first binding condition. If the anaphor is replaced by a pronominal NP such as “him”, it would mean that “him” cannot be co-indexed with the c-command NP<sub>2</sub> “The arrogant lady” under the S1 node. Hence, we have the structure such as

32. The arrogant lady disgraced him.

The above structure confirms the second binding condition. If the NP<sub>2</sub> after the V is replaced by a lexical NP such as “George”; the lexical NP cannot be co-indexed with the c-command NP<sub>2</sub> after the WH node, as the third binding condition stipulates.

## RECOMMENDATIONS

The pronominals and anaphors are very important in the English sentences because they are the subjects of sentences. Referencing and indexing using them must be carefully distinguished. Good application of the binding conditions is important to avoid ambiguity and confusion. Since learning a language means learning the grammar of the language which according to Chomsky (1981, cited in Naeem, 2011:1 [www.profnaeem.com](http://www.profnaeem.com)) deals with the mechanism of sentence construction that establishes sound-meaning relation, adequate attention should be given to the teaching and use of pronominals and anaphors to curtail errors in the use of English language.

## CONCLUSION

The above study has shown the semantic relationship between pronominals and anaphors in the English sentences. The binding theory has x-rayed the importance of anaphors being properly governed in any structure. The binding principles discussed have shown that grammatically correct sentences are formed when the binding conditions are observed. Understanding the three types of NPs is relevant in sentence construction.

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