

An Analytical Study of Noun Phrase Types in Arabic and English Syntax

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Abstract: *This paper investigates the syntactic behaviour of NP types in English and Standard Arabic with respect to binding principles as stipulated in Chomsky's Government Binding Theory. This research brings about some evidence, based on a comparative analytic method that both languages conform to the main rules adopted in the binding approach though having different syntactic characteristics. Just like English NPs, Standard Arabic NPs seem to behave in accordance with the principles of Binding theory with some differences related to the NP trace syntactic behaviour in each Language.*

Keywords: GB Theory - NP types - Anaphors - Pronominals - Lexical NPS - Syntactic Behaviour

1. Introduction

There has been much interest in the syntactic behaviour of NP types in English and Arabic as laid in the literature concerning the syntax of these languages. Much has been said about Anaphors, lexical NPs and pronominals, focusing on the binding principles underlying the syntactic behaviour of these elements. Exploring this syntactic issue seems to be interesting in two ways: first, it would revive the application of previous syntactic approaches that marked the history of linguistic theory to the syntactic structure of English and Arabic. By adopting a comparative analysis to investigate the two languages, this work would contribute to Syntax, that has been neglected in recent researches as most works in literature become more oriented toward technological implementations in education, focusing more on language beyond its structural characteristics. The ultimate objective is to reinstate the structural analysis of English and Arabic respectively.

2. Literature Framework and Methodology

The theory of binding is concerned with the relation of anaphors and pronominals to their antecedents. It is based on three essential principles which can be stated as follows:
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: 188)

Notice that the definition of binding Theory is closely related to other notions such as: binding, governing category. Binding is defined by Chomsky (ibid) as 'A binds B iff A and B are co - indexed and A C - Commands B'

Whereas the notion of governing category might be explained as follows:

& is the governing category for x iff & is the minimal governor containing x, a governor of x, and a SUBJECT accessible to x. (Riemsdijk and Williams.1986: 275)

Notions such as SUBJECT and accessibility are worth being defined so that the notion of governing category would be clearly illustrated.

According to Riemsdijk and Williams (1986), the subject of a clause is (AGR, S) if there is one; otherwise, (NP, S) or NP, NP) (where (x, y) means the x immediately dominated by y) (275). Whereas accessibility is defined as follows:

A is accessible to B iff A c commands B and the assignment of the index of A to B does not lead to a violation of the i within i Condition. (Ibid: 275)

The i to i Condition stipulates that structures such as (y...&...), where y and & have the same index, are ungrammatical.

Based on the preceding notions, the objective of this investigation is to ultimately show the similarities and the differences between the NPs in English and Arabic languages. To do that, we shall adopt a comparative analysis of the syntactic behaviour of anaphors, pronominals and lexical NPs in both languages within the framework of Government Binding syntactic approach, taking into consideration the syntactic features characterizing each language.

I - NP Types in English

Riemsdijk (1986) states that NP types in English can be classified according to two features: (anaphoric, pronominal) so that anaphors are (+ anaphoric – pronominal); pronouns are (- anaphoric, + pronominal); lexical PNs and variables are (- anaphoric, - pronominal); and PRO is (+ anaphoric, + pronominal). In what follows, we shall shed light on whether this classification adapts to syntactic status of english NPs or not.

A - Anaphors:

It is generally assumed that an anaphor is either overt (morphologically realized) like reflexives and reciprocals, or covert (not realized morphologically) like NP trace. It is subject to principle A of binding theory, that is, it must be bound in its governing category.

To start with overt anaphors, consider the following examples:

(1) a - They'd prefer for each other to win.

(Chomsky.1981: 189, 190)

b - * Each other will win

c - * They believe that Mary likes each other.

(Lasnik and Uriagerica.1988: 30)

- (2) a - John expects that pictures of himself will be on sale.
(Riemsdijk and Williams.1986: 273)
b. * Himself will sing.
c. * John's mother likes himself.
(Lasnik and Uriagerica.1988: 30)

The first set of examples consists of reciprocals while the second one shows reflexives. Taking into account principle A of binding theory, we notice that the reciprocal "each other" in (1a) is bound in its governing category S. The latter is a governing category because it contains "each other", its governor "for", and its accessible SUBJECT "AGR" of the matrix clause. Unlike (1a), (1b) and (1c) are ungrammatical because they violate principle A of binding theory. "Each other" in (1b) has no antecedent, thus, it is not bound in its governing category. In (1c), the reciprocal "each other" must take its reference from some other element in the sentence and must agree with it, which is not the case here. Therefore, "each other" is not bound in its governing category.

Turning to the second set, S is the governing category of the reflexive "himself" in (2a) because it contains its governor "of" and its accessible SUBJECT "AGR" of the matrix clause. "Himself" takes John as an antecedent in that they are both co - referential. Thus, the reflexive is bound within its governing category in accordance with principle A of Binding theory. The latter is violated in examples (2b) and (2c). In the former, "himself" has no antecedent and in the latter, John is not close enough to be the antecedent of "himself" and to bind it. In this respect, Lasnik and Uriagerica (1988: 31) claim that "an anaphor must have an antecedent nearby"

Moving to the non - overt anaphor: the NP trace, it is generally assumed in literature that to generate raising constructions and passive structures such as (3a) and (3b) below, an NP moves from its underlying position to the subject position and leaves a trace referred to as NP trace. Consider the following examples:

- (3) a. Mary_i seems e_i to be intelligent.
b. John_i was arrested e_i
c. *John_i was believed that e_i is clever.

The covert NP trace is assumed to behave like bound anaphors in that it must be bound in its governing category as shown in the above examples. The NP trace, above cannot be an R. expression because it would violate condition c of binding theory. It cannot be a pronominal because it is A. bound in its governing category (namely S which contains the trace and its governor "arrested"). The NP trace, then, is an anaphor that behaves in accordance with condition A of binding theory. This is what is shown in both (3a) and (3b) above where the NP trace is bound by the moved NPs "Mary" and "John" respectively. The relation between the NP trace and its antecedent is shown via indexation. The example (c) is rejected on the ground that the subject of a finite clause can never be an anaphor, since it can never have an A. binder within that clause (Lasnik and Uriagerica.1988). In other words, since NP traces are like anaphors, then, they cannot occur in subject

positions of finite clauses; otherwise, they would violate condition A of binding theory. This is what explains the ungrammaticality of (3c) above.

B - Pronominals:

They consist of both overt pronouns and PRO. The behaviour of pronouns is different from that of anaphors in that anaphors seem to be bound in contexts where pronouns cannot. This is illustrated by the following examples:

- (4) a. John likes him.
b. John likes himself.
(Lasnik and Uriagerica.1988: 45)

The pronoun "him" in (4a) cannot be co - referential with "John". Thus, it is free in its governing category S in conformity with condition B of Binding theory. In contrast with (4a), the reflexive "himself" in (4b) is bound in its governing category S satisfying condition A of binding. Therefore, pronouns and anaphors are complementary.

The antecedent of a pronoun, according to Lasnik and Uriagerica (ibid) must be "too close" to it. This stands in contrast with the antecedent of an anaphor which must be "nearby" as stated above. This illustrates the well - formedness of sentence (5a) and the ungrammaticality of (5b) below:

- (5) a. John believes that Mary likes him.
b. *John believes that Mary likes himself.

Therefore, both pronouns and anaphors are subject to different conditions of binding theory. In what follows, we shall analyse the syntactic behaviour of PRO with respect to binding theory relations.

Chomsky (1981) states that PRO is like overt pronouns in that it has never an antecedent within its clause or NP. PRO also resembles anaphors in that it has no intrinsic referential content, but is either assigned reference by an antecedent or is indefinite in interpretation and lacks specific reference.

This means that PRO is a pronominal anaphor that is subject to both conditions (A) and (B) of binding theory. In other words, PRO seems to be bound and free in its governing category, which is contradictory. To illustrate this, consider these examples:

- (6) a. I tried PRO to leave.
b. PRO doing this work is easy for John.
c. It is unclear PRO what to do.

PRO in (6a) takes its reference from the subject "I" while it is arbitrary in (6b) and (6c) in the sense that it has no reference. Since PRO cannot be A. bound and A. free at the same time, it is assumed to be ungoverned and thus lacks a governing category. This explains the ungrammaticality of the following structures:

- (7) a. * John expects PRO will visit him.
b. * I spoke to PRO.
c. * PRO was arrested e

In addition to that PRO must be caseless which is not the case in the above examples, where PRO is assigned objective case by the verb “expect” in (7a); oblique case by the preposition “to” in (7b); and nominative case by tense in (7c). This is why such examples are ungrammatical.

Since PRO is ungoverned and lacks a governing category, its reference, then, can be accounted for by a separate module of government binding theory namely control theory. The latter specifies the controller or the antecedent of referential PRO. This controlled relation between PRO and its antecedent is shown via co - indexation. Therefore, the syntactic behaviour of the referential PRO in the above examples is to be explained by control theory rather than binding theory.

C - Lexical NPs:

According to principle C of binding theory, an R-expression must be free. Consider these examples taken from V. J. Cook (1988: 46 - 47):

- (8) a. Jane wants the girl to help herself.
b. Kate asked the woman to see her.

The lexical NPS “Kate” and “Jane” refer to persons outside the sentence. They are, then, free in their reference in conformity with condition C of binding theory. The binding of a lexical NP to another element within a sentence leads to ungrammaticality as in:

- (9) a. * John_i thinks John_i likes Mary.
b. * John_i thinks Mary likes John_i

The embedded lexical NP “John” in (9a) and (9b) must be distinct in reference from that of the matrix clause, which is not the case here. It is bound and not free, thus, violating principle C of Binding theory.

From what preceded, we conclude that NPS in English behave in accordance with binding theory principles. Anaphors namely reflexives and reciprocals and NP traces, overt pronouns and lexical NPS are subject to A. binding. This kind of binding is referred to by Chomsky (1981) as “antecedent binding”. Following the claim that the theory of binding is A. binding, we have focused above on the types of NPS that are subject to A. binding.

II - NP types in Standard Arabic

This section aims to investigate the syntactic behaviour of NPs in Standard Arabic (Henceforth SA) namely anaphors, pronominals and lexical NPs within the framework of binding theory. This is to check the extent to which such NPs satisfy the three principles on which this theory is grounded.

A - Anaphors

Overt anaphors in SA consist of reflexives and reciprocals which behave alike syntactically. They are free morphemes which occur in NP positions, hence, assigned case and a role independently. They should be c. commanded and bound by antecedents in A. positions. To illustrate this, consider these two sets of examples:

- (1) a. qatala rraḏulu nafsahu

“The man killed himself”

- b. fu: ḏi?at li qatli rraḏuli nafsahu

“She was surprised for the fact that the man killed himself”

- (2) a. qabbala l ?awladu ba?Dahum ba ?Dan

“The boys kissed each other”

- b. Darab - na ba?Doho - nna ba?D - an

“They (fem) hit each other”

The reflexive in SA is formed by the expression “nafs” to which a clitic is attached. The latter agrees in number, gender, and person with the antecedent as shown in (1a) and (1b), where the reflexive “nafsahu” takes “rraḏul” as an antecedent which c. commands and binds it within its governing category. The governing category in (1a) is IP because it contains the reflexive, its governor v (erb) “qatala”, and its accessible SUBJECT AGR of IP. The governing category in (1b) is the NP (qatli rraḏuli nafsahu) because it also contains the reflexive “nafsahu”, its governor NP “qatli”, and its accessible SUBJECT the AGR of the NP. The latter is accessible because it is more close or nearer to the reflexive. This explains the fact that the reflexive agrees in all features with its binder “rraḏulu”.

This shows the fact that a governing category in SA might be either an IP or a NP respectively. However, we might come across some examples where the NP is not the governing category of the reflexive as in (3) below:

- (3) * jaḥtarimu zajdun sa: ḥiba nafsih

“zaid respects the friend of himself”

(Abdulghany.1981: 45)

If we take NP as the governing category of the reflexive with the noun “saḥiba” as its governor, we notice that the latter is not co - indexed with any c. commanding NP within NP (Abdulghany: ibid). This fact violates principle A of binding theory because the reflexive would be free within NP. Another fact which accounts for the ungrammaticality of such a sentence is that the reflexive requires its antecedent to be adjacent, which is not the case of “zajdun” here.

If we move to the second set of examples regarding reciprocals, we can claim that they are also subject to condition A of binding theory. In (2a), the reciprocal is bound by its antecedent “l. ?awla: du” taking IP as its governing category because it contains its governor v” qabbala”, and its accessible SUBJECT the AGR of IP. This reciprocal matches in all features with the binder “l. ?awla: du”.

The same case for (2b) where the reciprocal “ba?Duhunna ba?Dan” agrees in all features with the AGR of the sentence which is considered as its accessible SUBJECT; Any disagreement between the reciprocal and its binder would lead to ungrammaticality as in:

- (4) a. * qatala rraḏulu nafsaka

*The man killed yourself

b. * juħibbu zajdun ?anfusahum
 “Zaid loves themselves”

The examples above are ungrammatical because the agreement between anaphors and their antecedents does not hold.

Similarly, if the relation of c - command between anaphors and their antecedents fails to hold, ungrammaticality will arise as in the examples below where the reflexive is not c - commanded by any antecedent in (5a) below and where it is the reciprocal which governs and c - commands its antecedent in (5b):

(5) a. * nafsaha Ğarah. at
 “She wounded herself”
 b. * Daraba ba?Duhum ba?Dan al. ?awla: du
 “The boys hit each other”

From what have been discussed, it has been proved that the overt anaphors: reflexives and reciprocals in SA behave like overt anaphors in English namely that they are both subject to principle A of binding theory. Let us move to NP traces in SA and check their syntactic behaviour in relation to binding principles.

Syntactic traces in SA result from syntactic movement. The NP trace results from a NP movement to an A. position while the wh. trace is a result of the movement of a wh. phrase to an A. position. This implies that NP trace is A. bound by the moved NP, and the wh. trace is A. bound by the moved wh. word. The following examples illustrate this point:

(6) a. Ğuniqa raĞZulu
 “The man was hung”
 b. al ma: ?a Ğaribtu e
 “The water I drank”

The NP. Movement in (6a) is case motivated and obligatory. The NP “rraĞZul” must move to a subject position to receive nominative case; otherwise, the sentence would be ungrammatical as shown in:

(7) * Ğuniqa (e) rraĞZul
 “The man was hung”

When the NP “rraĞZul” moves to the empty NP position, it leaves a NP trace behind. The latter is A. bound by the moved NP, satisfying principle A of binding theory.

However, such an example might be addressed otherwise if we assume that there exists no NP trace here, thus, no NP movement. This is based on the ground that we may have two alternative orders of the sentence in SA as shown in:

(8) a. arraĞZulu Ğuniqa
 “The man was hung”
 b. Ğuniqa rraĞZulu
 “Was hung the man”

Based on such an assumption, the postulation of a NP trace in sentences like (8b) seems to be debatable. On the other hand, (6b) above is an instance of a NP movement referred

to as Topicalisation. The NP “al ma: ?a” moves to the spec of CP (a topic position) which is an A. bar position, and leaves an empty position behind. The question that is raised, in this respect, is whether this empty position is occupied by a NP trace or not.

In fact, this empty position cannot be filled by a NP trace because, as we know, a NP trace is caseless and A. bound by an element in an A. bound position, while the empty category that must occupy this place must be case marked and A. bound. Hence the presence of a variable in (6b) above and not a NP trace.

B- Pronominals

This section consists of the analysis of pronominals in SA in relation to binding theory namely subject and object pronouns and the small pro in this language. Consider these examples:

(9) a. daxala huwa
 v. agr. he
 “He comes in”
 b. safarat hijja
 v. agr. she
 “She travelled”

c. *sa: farat huwa
 v. agr (fem). He (masc)
 * “travelled. She. He”

(10) a. Darabtu ?ijja: hu
 hit. past. I. him
 “I hit him”
 b. ra?ajtu. ha
 saw. I. her
 “I saw her”
 c. Dannat zajnab. u anna. ha dakijjat. un
 “Zainab thinks that she is intelligent”

According to Chomsky (1981), pronominals have the features gender, number, person, case, and some other phi - features. They are subject to condition B of binding theory which states that a pronominal must be free in its governing category. This means that they must not be bound to any antecedent in the domain in which they occur. This is illustrated by the two sets of examples above, where the subject pronouns “huwa” (he) and “hijja” (she) agree in features of gender, number and person with the AGR of the sentence; and this relation of agreement is shown via co - indexation. The disagreement in features between the AGR element and the subject pronoun leads to ungrammaticality as in (9c) where “huwa” (he) disagrees with AGR in gender.

The object pronouns in (10a) and (10b) take their reference from no element within the sentence: they are not bound by any antecedent. In (10c), the clitic pronoun “ha” may be referring to “zajnab” or to other person outside the sentence; thus, it is free in its governing category in conformity with condition B of binding theory.

The fact that pronouns are free in their governing category distinguishes them from anaphors. They stand in complementary distribution as shown in (11) below:

- (11) a. ra?ajtu Suwara. hum
 "I saw their pictures"
 b. * ra?aj. tu Suwara ?anfusi. him
 "I saw the pictures of themselves"

The reflexive "?anfusi" in (11b) above occurs in a position where it is free, allowing its grammaticality as there is no violation of principle A. The reflexive is not bound in its governing category. Notice that pronouns are free in contexts where anaphors should be bound. Hence, their complementarity.

Moving to the small *pro* in SA, we can define it as an empty pronominal which appears in many SA constructions but it does not always have the same syntactic status" (Sadiqi.1992: 5). In fact, the small *pro* occurs in complement positions as well as in specifier positions as exemplified below:

- (12) a. katabt. tu ha *pro*
 "I wrote it"
 b. Žalas. tu maČa. ha *pro*
 "I stayed with her"
 (Souali.1992: 151)

- (13) a. ġahab. u *pro*
 "They went"
 b. firařu. hu *pro*
 "His bed"
 c. kabi: ru. hum *pro*
 "Their oldest of them"
 d. jami: Ču. hum *pro*
 "All of them"

What is to note is that *pro* is in a complement position of a verb in (12a) and of a preposition in (12b). The syntactic status of *pro* in the first set is "a direct consequence of the projection principle" (Souali. Ibid: 152). This means that the existence of *pro* in a complement position above is subcategorized by the verb and by the preposition in (12).

On the other hand, *pro* in the second set (13) occurs in the specifier position of the lexical categories: V in (13a); N in (13b); and adjective in (13c); and the quantifier in (13d). The existence of *pro* in the specifier position of the verb is determined by the extended projection principle which requires that any clause must have a subject. This is as far as the syntactic distribution of *pro* in SA.

Moreover, one of the properties of the small *pro* is that it is always case marked. It is assigned nominative case by the verb in (12a) above and oblique case by the preposition "maČa" in (12b). *pro* may also be governed as in:

- (14) ġanan. tu ?anna. ha *pro* na: m. at *pro* fi: baiti. ha
 "I thought that she had slept in her house"

Here, the complementizer "?anna" serves as a governor to *pro*. This stands in contrast with the (+anaphoric, +pronominal) *PRO* that exists in English. The latter must

be caseless and ungoverned. A fact which explains the ungrammaticality of these structures:

- (15) a. *PRO* will stay
 b. * He spoke to *PRO*

Since *pro* is a pronominal element, it might, then, be accounted for under binding theory in the sense that it must be free in its governing category. Hence, the ungrammaticality of (16) below, where *pro* is bound to the noun "zaid":

- (16) a. sa?ala. hu zaid. un *pro*
 "Zaid asked him"
 b. * sa ?ala. hu i zaid. un i *pro* i indexation
 "zaid asked him"
 (Souali.1992: 174.175)

Therefore, the example (16a) above conforms to principle A of binding theory while (16b) does not.

Pro is not only A. free in its governing category as has been shown above but it might also be $\bar{A}$. bound by elements that are situated in $\bar{A}$ positions (namely spec of CP). The example below is a case in point:

- (17) ?ajju film. in ?axraŽa. hu zaid. un?"
 "Which film does zaid?"
 (Sadiqi.1992: 7)

Here *pro* is co - indexed with the resumptive pronoun "hu" that licenses it. It is $\bar{A}$. bound by the NP "filmin" in the spec of CP. We conclude that *pro* in SA is subject to $\bar{A}$ binding and not A. binding.

C - Lexical NPs in SA

They are also referred to as referential expressions (R. expressions). According to principle C of binding theory R. expressions must be free. That is, they must not be bound to any antecedent in all domains as in:

- (18) a. tana: qařa maČa Čami: d. i l. Ža: miČa. ti
 "He discussed with the dean"
 b. * ġanna. t marijam. u i ?anna zaid. an juřibu marjam. a i
 "Mariam thinks that zaid likes Mariam"

The object of the preposition "Čami: di l. ŽamiČati" must be free in its reference, that is, bound to no antecedent. In fact, R. expressions, in general, must have no antecedents as stated by Riemsdijk (1986) that antecedents of lexical NPs are impossible. In (18a) above, the NP "Čami: di l. ŽamiČati" cannot be co - indexed with the AGR of the matrix clause; otherwise, the sentence would be violating principle C of binding theory, and thus, would be ungrammatical. The same point can be raised for (18b), both NPs ("Mariam" of the embedded and of the matrix clause) must be distinct in reference, that is they must be free, which is not the case here, leading to the ungrammaticality of (18b) above.

The preceding examination of NPs in SA has focused namely on NPs that are subject to A. binding, making reference to those that are subject to $\bar{A}$. binding when

necessary. This is in line with Chomsky (1981) stipulation that "...the theory of binding is a theory of A. binding" (p184).

3. Conclusion

So far, we have investigated the syntactic structure of NPs in English and Standard Arabic with respect to binding principles. We achieve the conclusion that just like English NPs, Standard Arabic NPs seem to behave in accordance with the binding restrictions. However, the most striking difference resides in the syntactic status of the NP trace in both languages. In English, the NP trace is a result of NP movement in that it is a trace that is A. bound by the moved NP, satisfying principle A of binding theory. In SA, the syntactic status of NP trace remains debatable namely in passive constructions as discussed above, some researchers advocate that it is a result of NP movement; others claim that it is not.

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