SUBJECT EXTRACTION FROM EMBEDDED CLAUSES IN STANDARD ARABIC

by

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Abstract

Standard Arabic exhibits 'that trace' effect in one instance in the extraction of the subject from an 'anna' clause while the extraction of the object and the subject of an 'an' clause may be exctracted freely in the formation of WH-question. The extraction of the subject of an 'anna' clause may not be extracted unless the extracted position is marked by a clitic on the complementizer 'anna'. If the clitic appears in place of the moved NP in an 'an' clause it renders the sentence ungrammatical.

The adoption of the Government and Binding Framework, Chomsky (1981), (1982) and in particular Case Theory, Government theory and the Empty Category Principle (ECP) enable us to explain this distinct behavior in the extraction of the subject of an 'anna' clause and show that the appearance of the clitic is predicted by the proposed analysis. It is argued that the clitic appears in the extraction of the subject of an 'anna' clause in order to properly govern the trace left by the extracted subject, and so as not to violate ECP. Since verbs are proper governors in SA, extraction of the subject of an 'an' clause must apply from a governed position. In fact this is exactly what our analysis predicts. Since 'an' is not a case assigner and since we are assuming that government and case are assigned only to the right, AGR and verb preposing are obligatory in an 'an' clause to assign case to the subject NP. Therefore extraction of the subject leaves a trace

properly governed by the verb. In the extraction of the subject of an 'anna' clause on the other hand, since 'anna' is a case assigner and assigns a cusative case to its subject, AGR and verb preposing may not apply. Thus, the extraction of the subject leaves a trace which is not properly governed in violation of ECP, and the clitic must appear in order to properly govern the trace left by movement.

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I. INTRODUCTION

This thesis is a study of WH-extraction from embedded clauses in Standard Arabic (SA).. The problem to be explained is the behavior observed in the extraction of subjects from embedded clauses introduced by the 'anna' and 'an' complementizers. If the subject is extracted from an 'anna' clause, a clitic must appear in place of the moved element. This is not the case when the embedded clause is introduced by an 'an' complementizer. A clitic can not be present in place of the moved noun phrase.

Our goal is to show that the adoption of principles introduced in the Government and Binding Framework (Chomsky, 1981, 1982), enable us to explain WH-extraction in SA in a uniform and natural manner. The specific principles needed are Government and Proper Government, the Empty Category Principle (ECP) the Case Theory. It will be argued that a clitic appears in an 'anna' clause in order to properly govern the trace left by the moved element. The extraction of an element that is not properly governed would be in violation of the ECP. Furthermore, the fact that the clitic appears in an 'anna' clause and not in an 'an' clause leads us to assume that the subject in 'an' clause is properly governed. Since only verbs and clitics are proper governors in SA (as will be shown), the extraction of the subject of an 'an' clause must have applied from a governed post-verbal position. VSO, in fact, is the word-order required by an 'an' comlementizer. This word order explains why the clitic

is not required in this case, since the trace will be properly governed by the verb.

The presentation of the arguments for the above analysis will be divided into five Sections. Section One is the present Introduction. Section Two will present an overview of the GB Framework, and in particular definitions of the principles that are of direct relevance to our analysis. Section Three addresses the issue of word order in SA. To explain the extraction of NP's from embedded clauses, it is necessary to establish the underlying word order of sentences in SA. At S-structure, the word order is VSO in 'an' clauses, but SVO in 'anna' clauses. We will argue that the D-structure of SA is SVO, and that this becomes VSO at S-structure via verb movement. Two main arguments will be presented to support this analysis. One is based on evidence from the Binding theory. The other is based on simplicity measures in explaining Case assignment to the subject, since there will be a conflict the in assignment of case to the subject of an 'anna' clause. The Case Filter forces verb movement so that the subject, [NP,S], can get Case. Section Four will discuss Clitics and Pro-Drop phenomena. Pro-drop is tied to cliticization. Both, in fact, involve the empty nominal position, pro. We will argue that the clitic must appear in order to identify the contents of pro as well as absorb the Case assigned to that position. Finally, in Section Five, I present a final set of arguments to show that the distinct behavior in the

extraction of the subject of 'anna' follows automatically from the proposed analysis.

II. AN OVERVIEW OF THE GB FRAMEWORK

A. THE GB FRAMEWORK

The GB theory, Chomsky (1981), has developed directly from earlier work, in particular from the general framework of the 'Extended Standard Theory' (EST): Chomsky (1973, 1976, 1977, 1980), Chomsky and Lasnik (1977) and subsequent literature. Conceptually, GB represents a shift from a system of rules to a system of simple and rather natural principles. Although the principles hold universally, languages may differ from each other with respect to their application. This is the theory of parameters in which languages are the result of parametric variations. A clear example is the pro-drop parameter for the null subject phenomena. Languages that allow missing subjects such as Italian and Spanish are set positively for this parameter. English on the other hand, is set negatively, so the subject position must have phonological content.

The central concern of the GB theory is to predict the distribution of nominal elements, and to determine a typology of empty categories. The theory predicts in a principled manner whether nominal elements are 1) full lexical NP's, ie. a fully realized expression, lexical anaphors or lexical pronouns, or 2) empty categories, ie. NP-traces, PRO, variables (WH-traces) or pro (the missing subject of pro- drop languages). GB theory distinguishes between two perspectives, one emphasizes the rule system,

the other emphasizes the systems of principles. Both perspectives interact to achieve the goal of the theory.

1. THE RULE SYSTEM

The subcomponents of the rule system according to Chomsky (1982) are:

(1)

A lexicon

B syntax

i. base component

ii. transformational component

C interpretive components

i. Phonological form component

ii. Logical form component

Each of these components has a special function. The lexicon specifies the 'inherent' properties of lexical items, in particular properties such as thematic and selectional specifications. For example, a verb like 'persuade' has the property of assigning a certain thematic role to each category it subcategorizes, ie. its object and the clausal complement as in "John persuaded Bill to leave." The lexicon also specifies properties of phonetic form and meaning that are not determined by rule.

The rules of the base generate D-structures through insertion of lexical items associated with θ-roles into representations of grammatical functions (GF), such as subject, object, etc.. Only GF positions assigned θ-roles

are lexically filled at D-structure. There is also the option of phonetically null PRO.

D-structures are related to S-structures essentially by a general rule, 'Move α', which allows any category to move freely. This is feasible because the principles of the GB theory provide constraints on S-structure and on the application of 'Move α'. An element in S-structure bearing a Θ-role may move to a position that is assigned no Θ-role, leaving traces coindexed with their antecedent as is the following example:

(2) a. John$_i$ seems t$_i$ to have left.

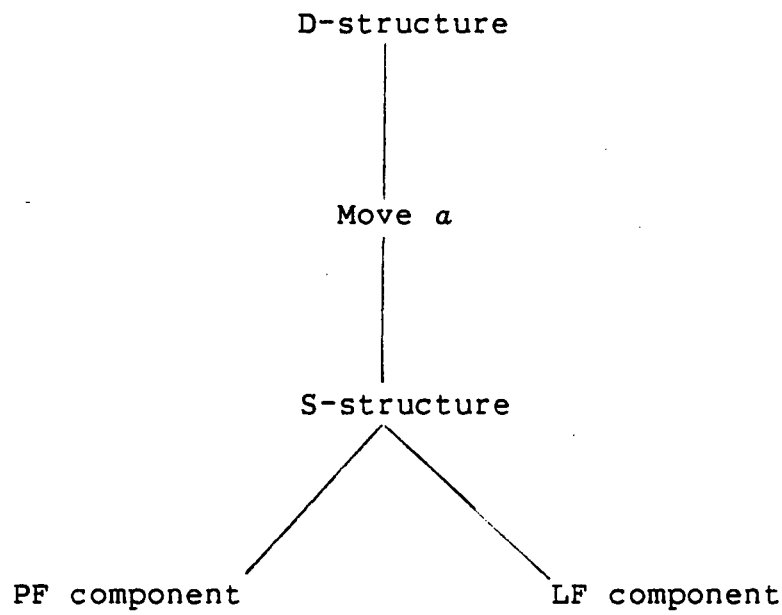
b. *John$_i$ wanted t$_i$ to have left.

In (2)a. the subject 'John', although it is Θ-marked by the verb 'leave', must move to get Case. Movement is possible since the verb 'seem' does not assign a Θ-role to its subject. In (2)b. on the other hand, movement is not possible since both the verbs 'want' and 'leave' assign Θ-roles, thus both positions must be filled with arguments at every level of representation.

S-structures are assigned a PF representation in the phonological component. They are assigned an interpretation in the LF component. Thus S-structure is an association between representations of form and representations of meaning, although the mappings of S-structure onto PF and LF are independent of one another. Hence the core grammar is

represented as follows, (Chomsky and Lasnik, 1977):

(3)



2. THE SYSTEM OF PRINCIPLES

The perspective of the GB theory that focuses on principles contains the following subsystems:

(4) (a) X - bar theory
(b) Θ - theory
(c) Control theory
(d) Binding theory
(e) Case theory
(f) Government theory
(g) Bounding theory

Several of these subtheories will be particularly relevant to our analysis specifically, Case theory, Government theory and the Empty Category Principle (ECP), as well as the Bounding theory and in particular the Subjacency principle.

The X-bar theory

This theory radically reduces the class of possible base components. It expresses the phrasal expansion of any given category by its structural representation. It is assumed that, within a maximal projection $\bar{\bar{X}}$, there is a head X and a complement, a structure of the form X^n ---> $X^n - 1$, where the constituent X^n must contain as its head a constituent X^n -1 bar.

Θ - Theory

The Θ-theory is concerned with the assignment of thematic roles (such as agent, theme, etc.) to certain positions. The basic principle of the Θ-theory is the Θ-criterion. It requires that each argument bears one and only one Θ-role; and that each Θ-role is assigned one and only one argument (Chomsky 1981:36). The Θ-criterion effectively applies to all three levels of representations: D-structure, S-structure and LF. Movement from a Θ-position to a Θ-position is blocked since the element moved would be assigned dual Θ-roles (cf.(2b)). The subject position of a raising verb like 'seem' cannot be a Θ-position since an NP can move into it as in:

(5) John seems t to be a fool.

i i

The Projection Principle is closely associated with the Θ-criterion. It states that representations at each syntactic level (ie. LF, D- and S-structures), are

projected from the lexicon in that they observe the subcategorization properties of lexical items (Chomsky 1981:29). It follows then that the subcategorization frames must be the same at every syntactic level. In other words, the representations at each of the three levels are projections of lexical properties. Both the Θ-criterion and the Projection Principle therfore constitute well formedness conditions that must be met at all levels of representations.

Control theory

This theory is concerned with the potential reference of abstract pronominal PRO. Within this theory, PRO is either linked to an antecedent or it is assigned arbitrary reference.

The Binding theory.

This theory is concerned with the relation of anaphors, pronominals, names and variables to possible antecedents. It provides the grammar with a principled way of determining the types of NP's that can appear. The following are the binding conditions as given by Chomsky (1981:188):

(6) Binding Theory

(A) An anaphor is bound in its governing category.

(B) A pronominal is free in its governing category.

(C) An R-expression is free.

(where X is bound if c-commanded by an antecedent and free

otherwise). It follows from these conditions that lexical pronominals are free in positions where anaphors are bound, as in:

(7) John saw him.
i j/*i

(8) John saw himself.
i i/*j

In (7), since pronominals must be free within the governing category S (condition B) 'him' can not be coindexed with the subject. In (8), on the other hand, since an anaphor must be bound within its governing category S (condition A), and 'John' c-commands the anaphor, it may be coindexed with the antecedent.

Since PRO is a pronominal anaphor, it follows from the binding conditions that it must be free. At the same time, however, it must be bound like anaphors since it has no intrinsic referential content. Because of this contradiction, PRO must appear only in ungoverned positions where it has no governing category and therefore does not fall under the Binding conditions. For example, (9)a. is ungrammatical because PRO is governed by 'for'. (9)b. on the other hand, is grammatical since PRO is not governed and is free within its governing category S. The definition of Government will be given at a later point in this section and will be elaborated upon in Section V.

(9)a. * John wanted $[_{\bar{S}}$ for $[_{S}$ PRO to win]].

(9)b. John wanted $[_{\bar{S}}[_{S}$ PRO to win]].

GB further distinguishes between the empty pronominal PRO [+anaphor, +pronominal], and the empty pronominal pro [-anaphor, +pronominal]. Chomsky (1982) introduced the latter category to account for the pro-drop phenomena. This will be discussed at length in Section IV and will be used in the analysis here to represent missing subjects in SA.

Case theory.

This theory is concerned with the assignment of Case, and requires that every NP with phonological content receives Case. Case is assigned to NP's when they are in Case marking positions, for example subjects of tensed clauses, objects of transitive verbs and objects of prepositions. Assignment of Case is subject to condition of governments (see below).

Case is presumably assigned or checked at D-structure or S-structure. In PF, lexical items that are not assigned case are filtered out by the Case filter. According to Chomsky (1981:49), the Case filter is stated as follows:

* NP if NP has phonetic content and has no case.

This theory is of direct relevance to our proposed analysis and will be referred to in the discussion of word order in Section III.

Government Theory

The notion government is central to and pervasive throughout the GB theory. It is relevant to

subcategorization and the Θ binding theory, and ties Θ-marking and Case theory. Government is formally defined as follows Chomsky, 1981:250):

[β ... γ ... α ... γ] , where

(a) $\alpha = X^{\circ}$ or is coindexed with γ

(b) where ϕ is a maximal projection, if ϕ dominates γ then ϕ dominates α.

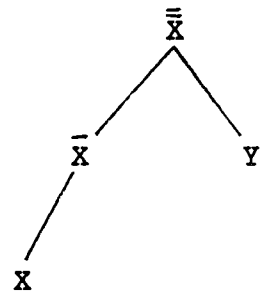
(c) α c-commands γ.

In this case α governs γ.

The definition of c-command that we will use here is the following: α c-commands β iff (i) α does not contain β , and (ii) there is no maximal projection dominating α that does not dominate β .

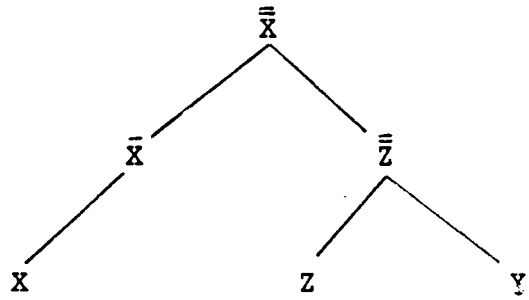
This definition expresses that the domain of government is the maximal projection of the governing head, and that the head must c-command the governee within the maximal projection as in:

(10)a.



where $\overline{\overline{\overline{X}}}$ is the maximal projection of X, X is the head of $\overline{\overline{\overline{X}}}$, therefore X governs Y.

(10)b.



where $\bar{\bar{Z}}$ is a maximal projection, X does not govern Y.

Within the theory of government is the principle the Empty Category Principle (ECP). It requires that traces of moved elements must be properly governed. Proper government is a narrower definition of government. This principle plays a crucial role in our proposed analysis. We will delay discussion of it until Section V.

The Bounding theory

The Bounding theory specifies locality conditions, in particular the Subjacency condition, cf. Chomsky (1977). Subjacency is a condition on the kind of relations that may hold between antecedents and traces and as such, it restricts the movements of NP. According to this condition a moved element can not cross more than one bounding node. To illustrate:

(11) Who did John say [$_{\bar{S}}$ t' [$_{S}$ t" left]]

(12) What did you say [t' John likes t"]

(13)a.

I wonder [$_{\bar{S}}$ what[$_{S}$ Mary claimed [$_{\bar{S}}$ (that) [$_{S}$ John had seen]]]]

(13)b.

*I wonder[$_{\bar{S}}$what[$_{S}$Mary heard[$_{NP}$the claim[$_{\bar{S}}$that [$_{S}$John had seen]]]]]

Sentences (11), (12) and (13)a. are permitted since the movement applies cyclically without violation of the Subjacency Condition. However, (13)b. is ungrammatical since the moved element crosses two bounding nodes (an S and an NP) violating the Subjacency Condition.

Bounding nodes are subject to parametric variation and they vary between languages. For example the bounding nodes in English are S and NP (Chomsky, 1981), and as illustrated above. The bounding nodes in French and Italian are $\bar{S}$ and NP (Sportiche, 1981, and Rizzi, 1978). For simplicity, we will assume that $\bar{S}$ and NP are the bounding nodes in SA. We will not attempt to make a distinction between S and $\bar{S}$.

By using the bounding theory, we will be able to distinguish constructions with moved categories from those that are base generated. In particular, we will show that relative clause constructions are base generated whereas WH-formations result from movement. Both constructions in SA appear to use a resumptive pronoun strategy. To illustrate:

(14)

ra'a-y-tu [$_{NP}$assayārat - a [$_{S}$alati [$_{S}$ hatama - ha arrajul - u]]]

saw- I the car - acc that broke(3sg.m)-it the man-nom

'I saw the car that the man broke'

(15)

man [$_S$ ra'a-y-ta sayārat-u - hu]
who saw-you(sg.m) car-nom- his
'Whose car did you see'

Thus, from (14) and (15), it is legitimate to assume that both constructions may be derived by movement as there is no violation of Subjacency. However, structures such as the following, taken from Aoun (1979), are grammatical.

(16)

ra'a-y-tu [$_{NP}$ aḍ-ḍubāt -a$_i$ [$_{\bar{S}}$ allaðī-na [$_S$ qāla li
saw-I theofficers-acc who-(pl.m) said(3sg.m)to me
l-ḥākim -u [$_{\bar{S}}$ anna-hu [$_S$ sajana [$_{NP}$ almutamarredīn-a
thegovernor-nomthat-he emprisoned(3sg.m)themutineers-acc
[$_{\bar{S}}$ allaðī-na [$_S$ šatamū-hum$_i$]]]]]]]
who-pl.m. insulted(3pl)them
'I saw the officers that the governor told me that he emprisoned the mutineers that insulted them.'

If (16) is derived by movement, it would be in violation of Subjacency as the moved element would have crossed more that two bounding nodes (an NP and S(or$\bar{S}$)). But given that SA obeys the Complex NP Constraint (CNPC) (see below), subsumed under Subjacency, cf.Ross (1977), Aoun (1979), and given that examples such as (16) exist in SA, we are lead to assume that relative clause formation is base generated and not generated by movement.

Now let us compare the following examples:

(17)a.

wajat-tu [$_{NP}$l-kitāb-a[$_{\bar{S}}$allaði[$_{S}$ðanan-tu[$_{\bar{S}}$anna[$_{S}$alwalad-a found-I the book-acc that thought-I that the boy-acc ramā-hu$_{i}$]]]]] threw (it)

'I found the book that the boy threw (it).'

(17)b.

*man$_{j}$ wajat-tu[$_{NP}$alkitāb-a[$_{\bar{S}}$alaði[$_{S}$ðanan-tu[$_{\bar{S}}$anna-(hu$_{j}$) [$_{S}$ramā-hu]]]]]

By the same line of argumentation, if we assume that WH-constructions are base generated, we would expect (17)b. to be grammatical and the resumptive pronoun to regularize the derivation. But, the destribution of resumptive pronoun in question is far more restricted than in relative clauses. (This issue is raised in Section V). Since this resumptive pronoun behaves differently with respect to Subjacency ie. it obeys the CNPC and the derivation is ungrammatical, we are lead to assume that WH-construction is derived by movement and is not base generated.

In summary, we have observed that the GB framework predicts in a principled manner the distribution of NP's and the domain in which they may appear. The adoption of this framework will aid us in predicting the distributions of nominal elements in SA, in particular the nominal elements

that appear in subject position. X-bar theory and Θ-theory as well as the Projection Principle, Θ-criterion and Case theory predict the distribution of NP's in D- and and S-structures. The type of NP however is determined by the lexicon, Case theory and Binding theory. Furthermore, specific theories such as the Case theory, Binding theory , and Government will be of direct relevance as they will enter into the subsequent analysis of some aspects of the syntax of Standard Arabic. This in turn will aid in accounting for what seems to be a distinct behavior in the extraction of subjects from embedded clauses.

III. WORD-ORDER AND CASE ASSIGNMENT

In this section, I will argue against the analysis that SA is a VSO language and will propose an alternative analysis of SA as an SVO language.

A. VSO ANALYSIS

The "traditional" assumption within the generative framework has been that the underlying word-order of SA is VSO, cf. Aoun (1979), Emonds (1980). This is based on the fact that when a sentence contains a verbal element, the verb precedes the subject when it is lexical as in (18) unless emphasis is on the 'agent' subject, in which case it precedes the verb as in (19):

(18)

ðahaba alwalad - u

went(3sg.m) the boy-nom

'The boy went'

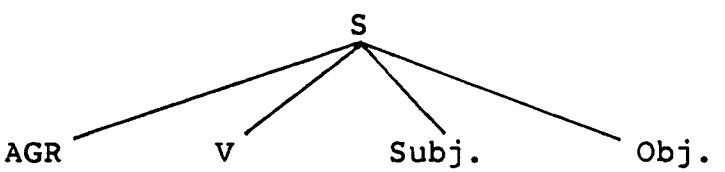
(19)

alwalad - u ðahaba

' The boy went'

It has been assumed that the underlying structure is the following according to Aoun (1979):

(20)



Within this structure, grammatical relations are expressed by co-superscripting. This is a type of indexing that is different from the co-subscripting, the indexing required for binding. This indexing in turn forms a discontinuous VP of the following form:

(21)

k	p	k	p
AGR	V	S	O

Here the subject is defined as the NP coindexed with AGR and the object is the NP coindexed with the verb. This coindexing expresses proper government for Case assignment. Thus, the NP receives its Case from its (proper) governor, cf. Aoun (1979). This notion will be elaborated upon in Section V.

Within this analysis, SVO word order is derived by Topicalization. Hence, the initial position in the sentence is not Θ-marked to allow movement without violation of the Θ-criterion.

B. AN ALTERNATIVE ANALYSIS

I would like to propose that SA is an SVO language. First, SVO word orders, in fact, occur along with VSO ones in matrix sentences as illustrated in (18) and (19), as well as in embedded clauses. The latter may be introduced by either an 'an' or an 'anna' complementizer. The word order in each clause, however, depends on the choice of the complementizer that introduces it. 'an' requires a VSO

word-order and assigns the Subjunctive mood (*muḍāri manṣūb*). 'anna' assigns accusative Case and requires an SVO word order. To illustrate:

(22)

arada almudarres -u [$_{\bar{s}}$an [$_{s}$yaktub-a l-walad-u
want(3sg.m)theteacher-nom that write(3sg.m)-subj.theboy-nom
d-darrs-a]]
the lesson-acc

'The teacher wanted the boy to write the lesson'

(23)

arada almudarres-u [$_{\bar{s}}$anna [$_{s}$l-walad - a yaktub-u d-dars-a]]
the boy-acc write -indic.

'The teacher wanted the boy to write the lesson.'

These facts therefore support an SVO order as well as an VSO one.

Second, the behavior of reflexive anaphors supports the claim that SA is an SVO language. Recall from Section 2 that anaphors must be bound within their governing category. For example, in (24), the anaphor "nafsa-hu" (himself) needs to be bound by "alwaladu" (the boy), its antecedent:

(24)

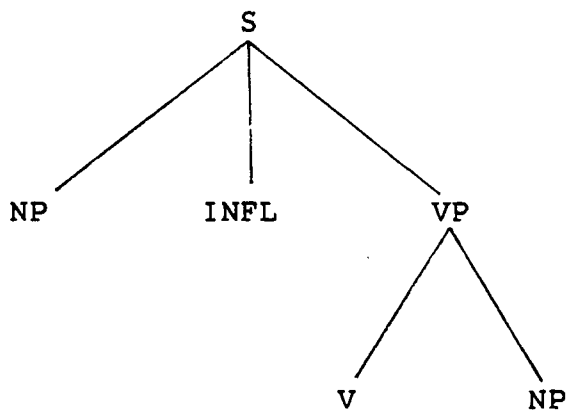
kalama al-walad -u nafsa - hu
spoke(3sg.m) the boy-nom self - him

'The boy spoke to himself.'

If the VSO analysis is adopted, the anaphor is bound in its governing category S according to condition A of the binding theory. The lexical NP "alwaladu", however, is also bound

within the governing category S as illustrated in structure (21). This is in direct violation of condition C of the binding theory, which stipulates that an R-expression must be free. Thus the subject must be higher in the structure, ie. outside the projection of the verb. Therefore, if we assume an SVO analysis with the structure of (25), then this violation is avoid.

(25)



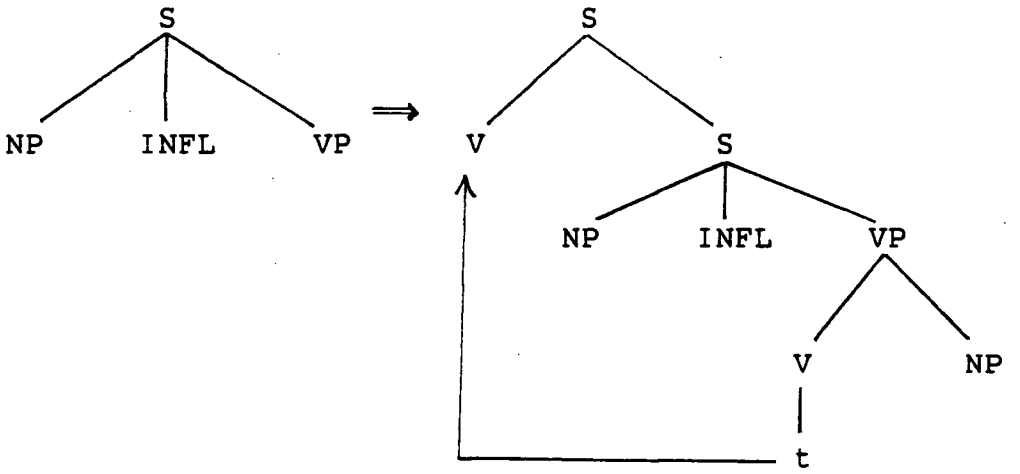
Further support for the SVO proposal concerns Case assignment to the subject of an 'anna' clause. In the VSO analysis, where SVO is derived by Topicalization, it is difficult to explain how Case is assigned to the subject of 'anna' and why it gets accusative Case. There will be a conflict in the Case assignment of that position since 'anna' is a Case assigner and must assign its Case. At the same time the coindexing between AGR and the subject position for Nominative Case assignment will also hold. Thus, within the VSO analysis there is no obvious way to answer these questions and block Nominative Case assignment. However, in the analysis proposed here there is a simple

solution as is shown below.

If we assume that SVO word order is basic in SA, we then need to show how VSO is derived. The two possibilities are either the verb is preposed or the subject moves into VP. These two options are shown in (26) and (27) respectively.

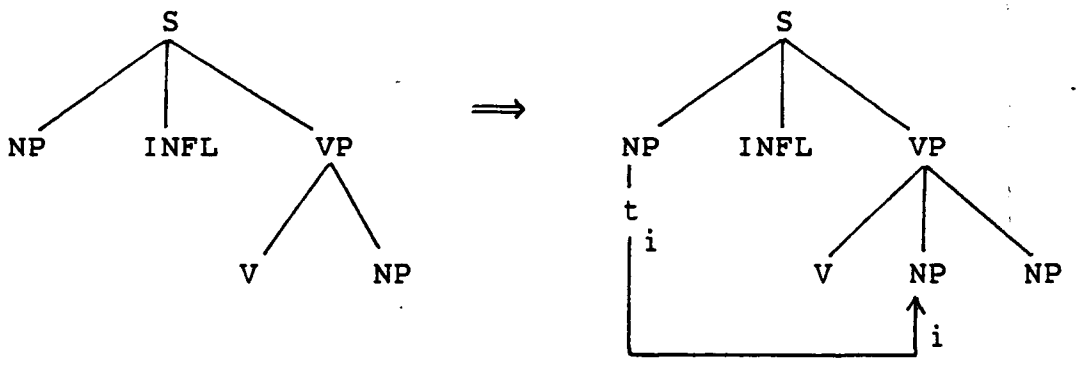
(26)

Verb-preposing



(27)

Subject movement



If the latter option (27) is chosen, and NP moves adjacent

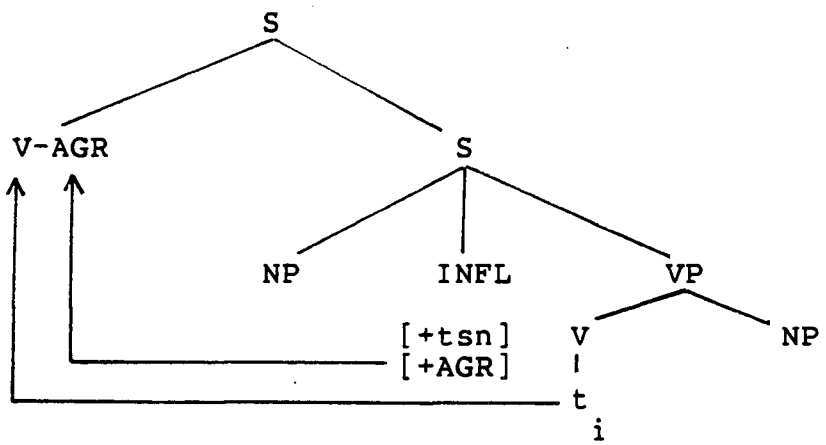
to the verb, the verb would govern the subject but not directly Θ-mark it. Since this movement would change the argument structure of the verb, this will be in violation of the Projection Principle. Furthermore, the trace of the moved NP will bind a lexical NP, in violation of condition C of the binding theory. Hence, the Projection Principle as well as condition C of the binding theory lead us to reject subject movement. We are led to adopt the other alternative, verb movement - where the verb adjoins to S.

If we adopt this analysis, there are three further questions we need to answer. These are: 1) How does the subject get its Case? 2) Why is there no verb movement in 'anna' clause and the word order is SVO? 3) How does the subject get case in Matrix SVO order? To answer these questions we will rely crucially on Case theory. We will assume that Case assignment in SA only applies to the right and requires adjacency. This is a result of parametric variation (these specific parameters have been discussed in recent work in Government by Sproat (1983) and Koopman (1985)). We will further assume that the "inflectional" and binding element (INFL) is directly dominated by S and is the head of S (Chomsky, 1981). It contains the features [±tense], and an agreement element (AGR). AGR is nominal in character and has the features person, number and gender. It appears when the sentence is finite ie. [+tense]. It is assumed that AGR is the element that governs and assigns Case to the subject NP.

With these assumptions and Case theory, we will show how the previously raised questions are answered. Since AGR is the element that assigns Case to the subject, and Case is only assigned to the right, there must exist a rule in the grammar that moves AGR to the left and adjoins it to S. AGR is then in a position to assign Case to the subject NP to its right.[1]

Since INFL has no full lexical status, it appears phonetically as part of a verbal affix system in surface structure. Thus, verb preposing is obligatory in order to provide a locus for AGR to cliticize to. We will assume that this verb movement adjoining the verb to AGR applies prior to S-structure. This results in the word order we find in matrix sentences with verbal elements where the verb precedes the subject as in (18). The following structure illustrates this:

(28)



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[1] Another possibility is to assume that AGR originates in an initial position in the base i.e., the underlying word order is INFL NP VP. This possibility was rejected since there will be no adjacency between the complementier 'anna' and the embedded subject NP to which it assigns accusative case.

For matrix sentences with no overt verbal element such as:

(29)

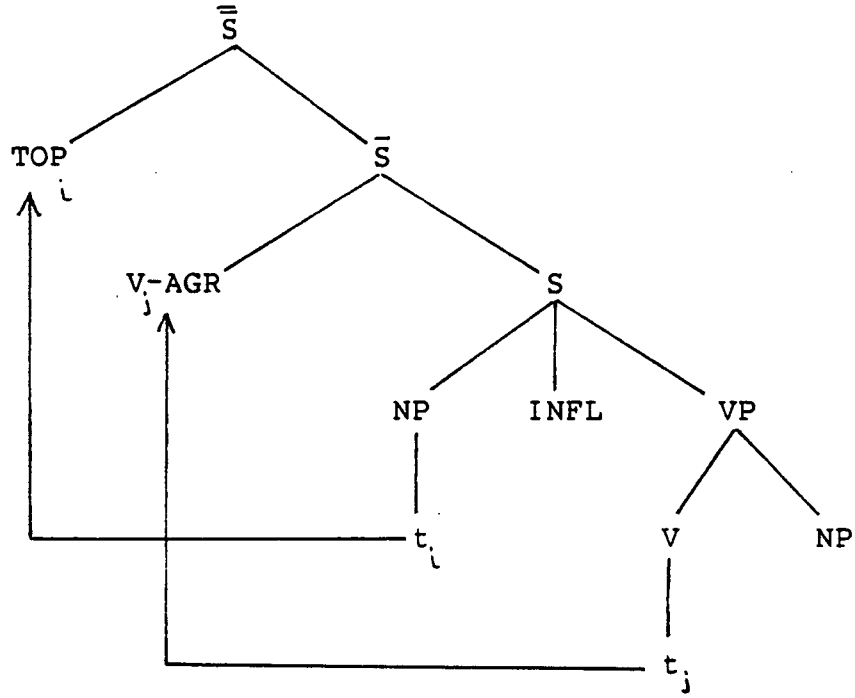
alwalad - u fi - l-manzel - i
the boy- nom in -the-house - gen
'The boy is in the house.'

we propose that there is an empty copula, following a suggestion of M. Rochemont. This copula functions in the same manner as a lexical verb. It must be present in order for Case to be assigned to the subject NP, otherwise the sentence would be ruled out by the Case filter.

We can now apply this analysis to embedded clauses. The difference between 'an' and 'anna' clause can now be explained if we further specify that 'anna' is a Case assigner, but 'an' is not. As in matrix sentences, verb preposing must occur in 'an' clauses in order to assign Case to the subject of the embedded clause. Since 'anna' is a Case assigner, however, it assigns Case to the subject so that no verb preposing is necessary. The result of this is the required SVO word order in 'anna' clauses.

A remaining problem is SVO word order in matrix sentences. We propose that this results from Topicalization, a movement rule. The Topic is moved to a higher $\bar{A}$ position peripheral to S. Hence the SVO order has the following structure:

(30)



As far as the ECP is concerned, the trace of the subject will be properly governed by the verb. In summary, we have argued in this section that if the underlying structure of SA is SVO, not only grammatical relations are expressed in terms of their constituent structures but Case assignment can also be accounted for in a unified way in matrix and embedded clauses. Furthermore, it follows automatically from the proposed analysis that the subject of 'anna' is assigned accusative case. Thus, this analysis resolves what seemed to be a conflict in the case assignment of this position under the VSO analysis.

IV. PRO-DROP PHENOMENA AND CLITICS.

Up until this section, the proposed analysis has dealt with subject position filled with full lexical nominal elements. To complete our analysis, we will consider instances where argument positions are filled with empty nominal elements . Hence, we talk about missing subjects and clitics.

SA is a null argument language, with missing subjects or objects appearing as in (31) and (32) respectively.

(31)

ðahaba

went(3sg.m.)

'He went.'

(32)

kataba - hu

wrote(3sg.m.) - it(m.sg.)-acc

'He wrote it.'

In languages that allow missing objects such as Italian, Spanish, French and SA, a clitic must necessarily be present.

In this Section, first we will present the analysis of the missing subject property adopted here. Then we will attempt to answer the following questions: 1) How are clitics analyzed? 2) What is the relationship between clitics and missing objects? 3) Why are there no subject clitics? 4) Why may a clitic appear in the subject position in 'anna' clauses?

A. PRO-DROP ANALYSIS

Thus far we have assumed that the subject position in a sentence is obligatory Chomsky, 1981,1982). In Section Three, we argued that the subject in SA is generated outside VP. Now let us turn to examples where we have null subject positions as in the following examples:

(33)

ðahaba

went(3sg.m.)

'He went.'

(34)

ðahab - ū

went(3pl.m)

'They went.'

From the surface form of these sentences, we cannot tell whether the subject position is obligatory or not since it is empty. However, to account for the morphological differences in the agreement marker that is reflected on the verb and to satisfy the Θ-criterion and the Projection Principle, we have to assume that there must be an empty pronominal with which the verb agrees. I will assume that this empty pronominal is pro [-anaphor, +pronominal] following Chomsky (1982).

In the discussion of the typology of empty pronominals, Chomsky (1982), argues that pro is best suited for representing the missing subjects in pro-drop languages for

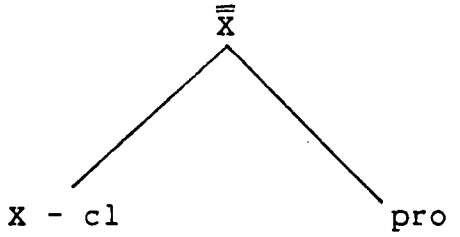
various reasons. First, missing subjects in pro-drop languages can never be arbitrary in reference. This is not accounted for if PRO is used in this position. Secondly, in Spanish interrogatives a rule of verb fronting applies, placing the subject in a governed position, cf. Torrego (1984). This makes it impossible to use PRO to represent the missing subjects, at least in Spanish. Thirdly, the use of pro makes it unnecessary to invoke a parameter involving movement of INFL in the syntax in order to allow PRO to appear in the ungoverned position (rule R of Chomsky, 1981). The only condition on the appearance of pro to represent the missing subject is that it must be 'locally determined' by AGR. This is only permissible if AGR is rich enough to identify the features of pro. For example, rich agreement is reflected on the verb as illustrated in (33) and (34). This contrasts with English where there is no rich agreement and therefore, a full pronoun must appear as in He went. / * Went.

B. CLITICS

The analysis which we will adopt of clitics is that they are base generated as a feature on the head that they cliticize to. It follows from the Projection Principle that a Θ-marked position must be structurally represented even if it is empty. Therefore, the clitic must be associated with an empty argument position. We further assume that since the clitic appears as a feature on the head, it c-commands

and governs that empty position (Borer, 1984). The question arises as to the type of this empty category. I will adopt Chomsky's (1982) analysis and assume that it is pro. Thus, the structure that will be adopted for clitics is the following:

(35)



Since the features of pro must be determined and since the clitic is nominal in nature, ie. it has the features person, number and gender, we could assume that the clitic is obligatory present in order to determine the features of pro (cf. Hurtado, 1985, Roberge,1985). We will further assume that the clitic is a 'spell out' of the Case feature assigned by the head (Aoun,1979), (Borer,1984).

To provide evidence to support this assumption, we need to discuss construct state structures. Construct state structures are a form of complex noun phrases formed by a succession of bare nouns. They are right branching similar in their form to the Hebrew ones (Borer (1984)). This structure is restricted in its formation in that the determiner can only appear attached to the last constituent. This is illustrated in (36) - (38):

(36)

bāb-u l- manzil - i

door-nom the-house - gen

'the door of the house'

(37)

bāb- u manzil - i l- mudarres - i

door-nom house -gen the-teacher(m)-gen

'the door of the house of the teacher'

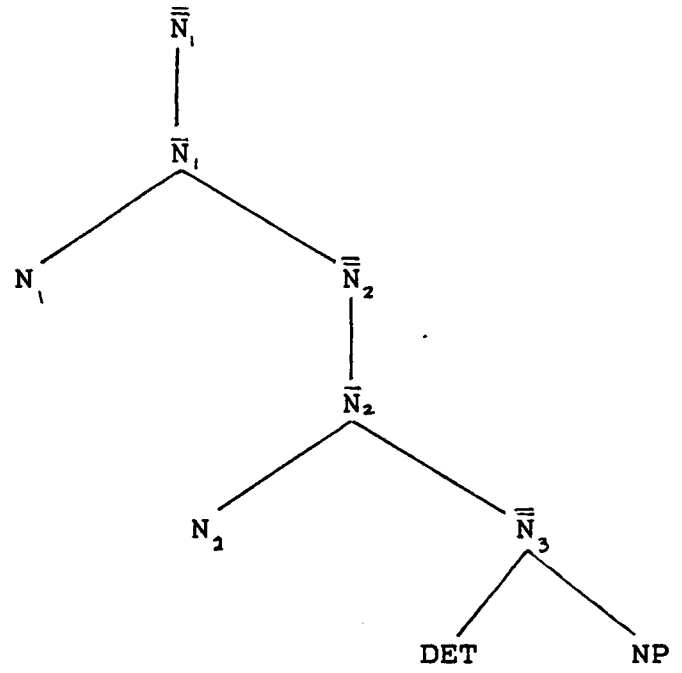
(38)

*bāb-u l-manzil-i l-mudarres

door-nom the-house-gen the-teacher

The construct state structure is thus represented as:

(39)



We will assume, following Borer's analysis, that Genitive Case is assigned by the head noun only if the first node ($\bar{N}$), which dominates that head (N) immediately

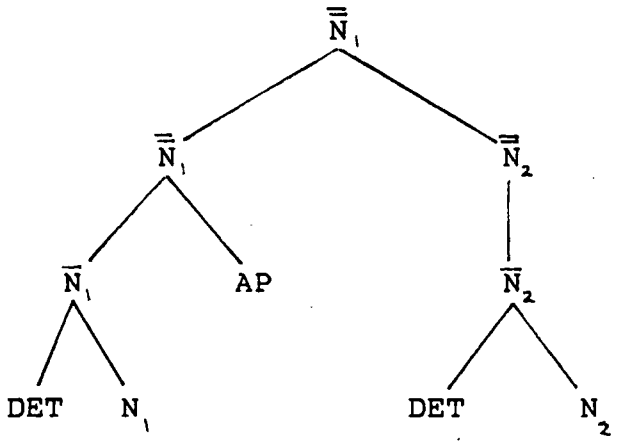
dominates the complement,cf. Borer (1984:48). Any expansion which results in right branching of the head such as the use of adjectives, leads to the ungrammaticality as in (40) represented as (41).

(40)

* al-bāb-u l-kabīr-u l-manzil

the-door-nom the-big-nom the-house

(41)



the door the big the house

The ungrammaticality of (40) can be explained as follows. Since the first node (N) which dominates the head (N) does not dominate the complement (N), (N) can not be assigned Case and the structure is ruled out by the Case filter. For the derivation to be grammatical, a Case assigner must be inserted to assign Case to (N) as in (42) represented as (43).

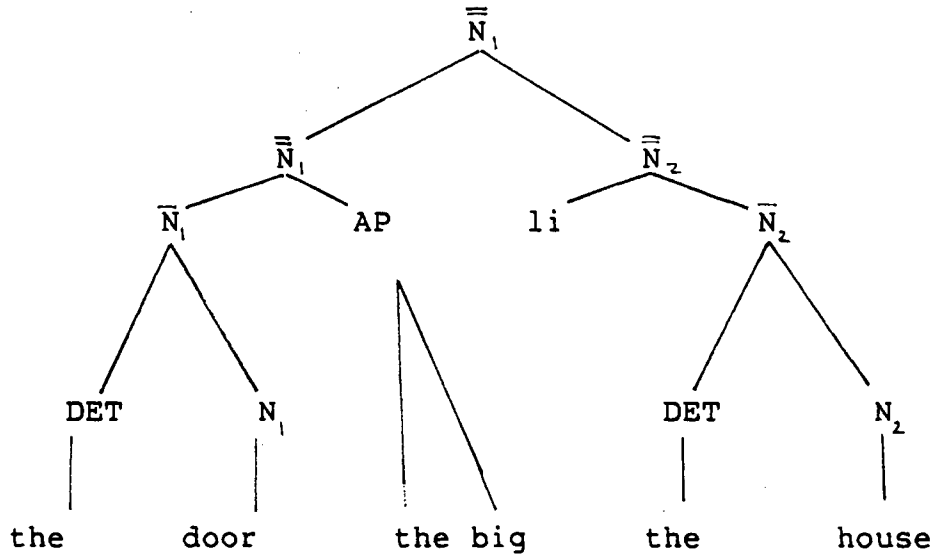
(42)

al- bāb- u l- kabīr - u li- l - manzil - i

the-door-nom the - big - nom of -the- house -gen

'the big door of the house'

(43)



It should also be mentioned that, in construct state structures, the distinction between specifiers and complements is not reflected structurally. Thus, (44) and (45) have identical structures.

(44)

kitābat - u l- bint - i

writing -nom the-girl-gen

'the girl's writing'

(45)

kitābat - u l- qasīdat - i

writing -nom the- poem - gen

'the writing of the poem'

In sum, we have illustrated that the head in a construct state structure assigns genitive Case to its complement. This follows from the Case theory. Since Case is always realized morphologically in SA, it must be stipulated in the grammar that case must be realized, c.f. Stowell (1981). This stipulation is essential to our proposed analysis for clitics.

Now with this dicussion of construct state structures and the assumption that Case must be realized, we can proceed to show how clitics absorb case.

Since clitics may appear as a feature on the head of a phrase, we expect them to appear cliticized to heads of construct state constructions as in

(46)

[kitābat - u - ha pro]

writing -nom - her/it (3sg.f)

'her writing / the writing of it'

(47)

* [kitābat - ϕ - pro]

The clitic "ha" in (46) can refer to either a specifier as in (44), or a complement as in (45). This clitic appears in order to locally determine the features of the empty pronominal pro. A bare noun can not do so since there is no head-complement agreement as in (47). Since the head of construct state structures assigns Case and that Case is morphologically realized, it is correct to assume that the

clitic must be present to identify the features of pro as well as absorb the Case assigned by the head. Based upon this (47) is therefore, ungrammatical since the features of pro are not identified and the Case assigned by the head noun 'kitābat' is not realized.

Consider now the cases when both a specifier and a complement appear in a sentence as in :

(48)a.

kitābat -u l-bint-i l- qasīdat- a
writing-nom the-girl-gen the-poem-acc
'The girl's writing of the poem'

(48)b.

kitābat -u l-bint -i li-l-qasīdat- i
writing-nom the-girl-gen of -the poem-gen
'The girl's writing of the poem'

(49) a. kitābat-u - ha l-qasīdat - a

(49) b. kitābat-u - ha li-l- qasīdat-i

(49) c. * kitābat-u -ha l-qasīdat

In (49), the clitic appears to identify pro as well as absorb the Case assigned by the head noun. Since the verbal noun 'kitābat' may take multiple arguments and assigns two Θ-roles, the complement 'qasīdat' may be assigned accusative Case by the head as in (49)a., or a Case marker may be inserted and assigns genitive Case to that comlpement NP as in (49)b. The complement however does not receive the genitive Case assigned by the head of the construction since

the clitic absorbs that case. Consequently if the complement does not receive Case, the derivation is ungrammatical and it is ruled out by the Case filter as in (49)c.

Further evidence to support the fact that clitics absorb Case is provided from cases where clitics appear attached to verbs or prepositions. According to subcategorization frames and $\bar{X}$-theory, heads of constructions require the presence of their complements. If the comlement is empty, ie. pro, its contents must be identified. To illustrate:

(50)a.

ḍaraba l- walad - a
hit (3sg.m) the- boy - acc
- hu
him(3.sg.m)
'He hit the boy./ He hit him.'

(50)b.

* ḍaraba pro

(51)a.

laʿiba fi - l - hadīqat - i
played(3.sg.m)in - the garden - gen
-ha
it(3sg.f)
'He played in the garden./He played in it'

(51)b.

* laʿiba fi- pro

Verbs and prepositions assign accusative case and genitive case respectively under the assumption that whenever Case is assigned, it must be realized as in (50)a. and (51)a. It should also be noted that the clitic may appear attached to these heads. We can conclude that the clitic identifies the features of pro as well as absorbs the Case assigned by the head of the phrase.

With the adoption of this assumption, we can proceed to show how this analysis can account for missing subjects and objects in matrix sentences as well as embedded clauses. The missing subject property can be explained in the following manner. Since we are assuming that AGR is generated under INFL, as mentioned earlier in Section Three, this blocks PRO from appearing in subject position at D-structure since it is a governed position. Pro, on the other hand can appear in this governed position. Recall that the features of pro must be determined by the rich agreement on the verb and that AGR governs and assigns Case to the subject NP to the right. We will further assume that the identification of pro is rightward as well. Thus AGR moves to the left of pro in order to identify its features. Since AGR has to attach to the verb, the verb moves adjoining to AGR.

That rich agreement (ie. identification of pro by AGR) is a necessary condition for identification of missing subjects is illustrated by the participle form of the verb. This participle form agrees in number and gender but not in

person. Therefore, AGR is not rich enough to identify a missing subject and the subject must be lexical as shown in (52)b.

(52)a.

* pro ðāhebūna

going (part. pl.m)

(52)b.

al-alwadu ðāhebūna[2]

the boys going (patr.pl.m)

'The boys are going'

That INFL is adjacent to the verb in surface form supports our assumption that the verb in fact moves to the AGR element. If this is true, then AGR never moves down adjoining the verb. Therefore, we can assume that in matrix sentences with missing subjects, AGR as well as verb movement apply in order to identify the features of pro.

This is also the case in 'an' clauses, as illustrated in (53):

(53)

arāda [$_{\bar{S}}$ an [$_{S}$ pro INFL yaðhaba]]

want(3sg.m) that go(3sg.m.subj.)

'He wanted to go'

AGR is generated in a position that governs the subject pro.

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[2] Although there is no verbal element in this sentence, we are assuming that the base order is SVO and involves an empty copula. This empty copula functions as its overt counter part where AGR and verb preposing must apply to assign case to the subject. The surface word order is VSO although it does not show it.

But since we are assuming that the identification of pro is to the right, AGR must move to the left of the subject position in order to identify its features. The verb in turn moves and adjoins AGR. This in fact is the required word order in an 'an' clause since 'an' is a mood assigner and it assigns the Subjunctive mood to the verb adjacent to it.

In 'anna' clause on the other hand, there is obligatory presence of a clitic when there is a missing subject as in (54):

(54)a.

amara [$_{\bar{S}}$ anna- hu[$_{S}$ pro INFL yaktubu]]

ordered(3sg.m) that-he write(3sg.m. indic).

'He ordered him to write.'

(54)b.

* amara [$_{\bar{S}}$ anna- Ø[$_{S}$ pro INFL yaktubu]]

Since we are assuming that the identification of pro is right ward, AGR in an 'anna' clause can not identify the features of pro. Furthermore since 'anna' is a Case assigner and it assigns accusative Case to the subject position, according to the Case Realization Principle AGR and verb preposing do not apply since we can not have case conflict. The clitic is then obligatory in order to identify the features of pro as well as absorb the Case assigned by 'anna' (54)a. Without the clitic, the derivation is ungrammatical since the features of pro are not identified and the Case that 'anna' assigns is not

realized (54)b.

Further evidence to support the claim that the clitic in fact absorbs Case is provided from examples where the clitic appears in 'anna' clauses together with verb movement as in:

(55)a.

a'refu [anna- hu[akala l-walad -u t-tufāhat-a]]

know- I that-it ate(3sg.m)the boy-nom the apple-acc

'I know that the boy ate the apple'

(55)b.

* a'refu [anna-hu [l-walad- akala t-tufāhat-a]]

If the clitic appears as is (55)a., it absorbs the Case assigned by 'anna'. If verb movement does not apply to assign Case to the subject of the embedded clause, the derivation is ungrammatical as it is in violation of the Case filter as in (55)b. Therefore verb movement is obligatory in the embedded clause in order to assign Case to its subject as in (55)a.

In summary, the pro-drop phenomena and cliticization are related. In fact, both deal with empty pronominal positions filled with pro. The features of pro must be identified under government. However, the identification of pro in subject position differs from when pro is in a complement position. Pro is permitted in subject position only if the AGR element is rich enough to identify its features. In complement position however, a clitic must appear to identify its features. Thus cross linguistically,

there are two options to identify pro, either by rich agreement or by a clitic. Furthermore, the clitic has an additional function, it absorbs the Case assigned by the head. This is well supported by instances when the clitic appears as a 'spell out' of the Case of the 'anna' complementizer. In such a case INFL preposing as well as verb movement must apply to ensure that Case is assigned to the lexical subject of the embedded clause.

V. WH-EXTRACTION.

In this final Section, we will discuss the extraction of NP's from both matrix and embedded clauses. After illustrating the problem in SA, we will show how the distribution of clitics and empty categories falls out from the proposed analysis, given the ECP and several supported assumptions.

A. THE PROBLEM

Extraction of noun phrases from matrix sentences in SA applies freely, obeying the Subjacency condition discussed in Section II. To illustrate:

(56)

man$_i$ kataba t_i d-dars- a

who wrote(3sg.m) the lesson-acc

'Who wrote the lesson?'

(57)

māða$_i$ kataba l-walad- u t_i

what wrote(3sg.m) the boy -nom

'What did the boy write?'

Extraction of noun phrases from object position, ie. from post verbal position in embedded clauses, also applies freely:

(58)

$māða_i$ arāda l-mudarres-u $[_{\bar{s}}$ an $[_s$ yaktub-a t-elmīð - u $t_i]]$

what wanted the teacher-nom that write-subj the student-nom

'What did the teacher want the student to write?'

(59)

$māða_i$ arāda l-mudarres -u [anna [t-elmīð -a

whatiwanted theteacher-nom that —thestudent-acc

yaktubu- t_i]]

write-indic.

'What did the teacher want the student to write?'

Extraction of the subject from embedded clauses differs depending on the complementizer that introduces the embedded clause. Extraction of the subject of an 'an' clause applies freely:

(60)

man_i arāda l-lmudarrese-u $[_{\bar{s}}$ an $[_s$ yaktub-a t_i d-dars -a]]

who wanted theteacher-nom that write-subj thelesson-acc

'Who did the teacher want to write the lesson?'

Extraction of the subject from an 'anna' clause, on the other hand, requires an obligatory clitic to appear in place of the moved subject NP. If no clitic appears, the derivation is ungrammatical. (61) illustrates this:

(61)a.

man arāda l-mudarres - u [$_{\bar{s}}$anna-hu [$_{s}$yaktub-u

who wanted theteacher-nomthat-he write-indic.

d-dars-a]]

the lesson-acc

'Who did the teacher want to write the lesson?'

(61)b.

* man arāda l-mudarres-u[$_{\bar{s}}$anna [$_{s}$yaktub-u d-dars-a]]

B. THE SOLUTION

To explain this distinct behavior of the extraction of the subject of an 'anna' clause, we will rely on the proposed analyses of word order and clitics as well as the Empty Category Principle (ECP).

The ECP requires that every trace must be properly governed. A trace is either a variable or an NP trace. Roughly speaking, an empty category is properly governed if 1) it is a complement of a head such as V, N, P, or 2) it is coindexed with a local antecedent. Proper government is formally defined by Chomsky (1981:250) as:

(62)

α properly governsβ if and only ifα governs $\beta$and

[α≠AGR]

ECP : [α e] must be properly governed.

In GB, an empty category is a variable if and only if it is

Case marked and bound by an operator in COMP position,i.e. it is $\bar{A}$-bound. An NP-trace, on the other hand, is bound by an argument, ie. A-bound. Since SA does not have raising verbs such as verb the 'seem' which allow the trace to be bound by an argument, our discussion of traces will be limited to variables only. To illustrate:

(63)

man$_i$ qara'a t$_i$

'who read?'

(64)

al-walad-u qara'a t

$_i$ $_i$

'The boy read.'

The traces in (63) and (64) are A bound by the WH element and the Topic respectively. In both derivations, the trace is properly governed by the verb. Thus, the ECP is satisfied.

The ECP is formulated to apply to traces but not to PRO as PRO has features and thus is not an empty category. This allows derivations such as:

(65)

I dont't know [what [PRO to do t]]

$_i$ $_i$

In (65) the trace, t, is properly governed, but PRO is not. Thus the ECP as well as the binding conditions are satisfied.

On the other hand,an English sentence such as the following is ungrammatical:

(66)

* Bill was preferred [for [t to have seen Tom]]
i i

Since 'for' is not a proper governor, therfore the trace of the movement is not in a properly governed position and the derivation is ruled out by the ECP.

If we assume that the 'anna' complementizer in SA is like 'for' in English, ie. is not a proper governor, then the extraction of the subject of 'anna' clauses leaves a trace which is not properly governed, a violation of the ECP. Futhermore, if we assume that the clitic is a proper governor in SA (Borer (1984)) and below, it must appear when the subject of an 'anna' clause is extracted in order to properly govern the trace, as illustrated in (61)a.

The assumption that clitics are proper governors is supported by evidence of extractions from other structures. (67) and (68) are examples of the extraction of complements from prepositional phrases of construct state structures.

(67)a.

man$_i$ sallama l-mudarresu- u ʿalay-hi$_i$

who shook hands the teacher-nom with-him

'Whom did the teacher shake hands with?'

(67)b.

* man sallama l-mudarres- ʿala

(68)a.

man rama l-walad-u kitāba-hu

i i

who threw the boy-nom book-acc-his

'Whose book did the boy throw?'

(68)b.

* man rama l-walad-u kitāba

(67) and (68), show that prepostions as well as nouns can not function as proper governors. Only the availability of the clitic makes extraction possible (67)a. and (67)b. It must be the case, then, that the clitic functions to properly govern the trace. Since both preposition and noun stranding result in ungrammaticality (67)b. and (68)b., we conclude that prepostions and nouns are not proper governors as is also the case in Hebrew. Now consider the following examples:

(69) man ra'a t

i i

who saw(3sg.m.)

'Whom did he see?'

(70)

māða$_i$ kataba t$_i$
what wrote(3sg.m)

'What did he write?'

(69) and (70) do not require a clitic to appear in order to properly govern the trace. From this we can assume that only verbs, are proper governors in SA. (Since adjectives do not take bare NP complements, we can generalize this to the feature [+V]). Furthermore, since the appearance of the clitic regularizes the derivation as shown in (61)a., (67) and (68), we will assume that the clitic is coindexed with the empty position in order to properly govern it. To capture these facts we will adopt the definition of proper government proposed by Borer (1984:71):

(71)

α properly governs β iff α governs β and

(i) α is [+V] or

(ii) α is coindexed with β.

Now, with these assumptions we will illustrate how the proposed analysis accounts for the extraction of noun phrases from matrix and embedded clauses.

WH-extraction of objects from matrix sentences follows automatically from the previously stated assumptions. Since extraction of the object would leave the trace properly governed by the verb, the derivation will not violate the ECP, e.g. (57), (69), and (70).

For extraction of the subject, recall from Section III that AGR as well as verb preposing apply for the purpose of Case assignment of a lexical subject. Since variables are Case marked, we have to assume that extraction of the subject from matrix sentences applies from a post verbal position. Movement is permissible since the trace is properly governed by the verb as in (56) and (63).

Extraction of noun phrases from embedded clauses obeys Subjacency as discussed in Section II, and follows this analysis in the same manner as extraction from matrix sentences. Extraction of the object is permissible since the trace is properly governed by the verb of the embedded clause as is (58) and (59).

Extraction of the subject from an 'an' clause applies in the same mannner as extraction of the subject of matrix sentences. Since it applies from a post-verbal position, for reasons discussed above, the trace does not violate the ECP. It is governed by the verb of the embedded clause as illustrated by (60).

The extraction of the subject of an 'anna' clause, on the other hand, is treated differently. Recall that 'anna' is a Case assigner assigning accusative Case to the subject in its clause. This does not trigger AGR and verb preposing. Hence, extraction of the subject from an 'anna' clause must apply from a pre-verbal position. This leaves a trace not properly governed in violation of ECP. For subject extraction from an 'anna' clause to be grammatical,

then a clitic must appear to properly govern the trace left by movement as in (61)a. Otherwise the derivation is ungrammatical in violation of the ECP as in (61)b.

The proposed analysis also predicts that the clitic must be associated with an empty category. To illustrate, consider the following examples:

(72)

*man arāda l-mudarres- u [$_{\bar{s}}$anna-hu [$_{s}$l-walad- yaktub-u
who wanted theteacher-nom that-he theboy write-indic.
d-darrsa-a]]
the lesson

(73)

*man arāda l-mudarres-u [$_{\bar{s}}$an [$_{s}$yaktuba-hu d-darrs]]
who wanted the teacher-nom that write-it the lesson

(74)

*maða arada almudarres-u [$_{\bar{s}}$an [$_{s}$yaktuba-hu alwalad-u]]

what wanted the teacher that write-it the boy-nom

If the clitic appears attached to a head of a phrase, it indicates that this head is associated with an empty category. Therefore, the ungrammaticality of (72) and (73) could be explained in the following manner. If the clitic appears as well a lexical category, the Projection Principle and the Θ- criterion will be violated since the empty

position, the trace and the lexical element are assigned one θ-role. Furthermore, since the the clitic absorbs the case assigned by the head, the lexical element will not be assigned Case in violation of the Case filter. (74) is also ungrammatical since the clitic appears in a properly governed position.

In summary, the proposed analysis correctly predicts the subject extraction possibilities from embedded clauses. Extraction of the subject from an 'an' clause does not require a clitic to appear. In fact if a clitic appears, it renders the sentence ungrammatical. On the other hand, extraction of the subject from an 'anna' clause requires a clitic to appear in order to properly govern the trace. Thus, this analysis accounts for the following paradigm:

(75) Subject extraction from an 'an' clause.

(a) *'an' without verb movement.
(b) *'an' without verb movement, with a clitic.
(c) *'an' with verb movement, with a clitic.
(d) 'an' with verb movement.

(76) Subject extraction from an 'anna' clause.

(a) *'anna' without verb movement.
(b) 'anna' without verb movement, with clitic.
(c) *'anna' with verb movement.

(d) 'anna' with verb movement, with clitic

If subject extraction takes place from a pre-verbal position as in (75)a. and (75)b., the variable will not be Case marked. The trace is also not properly governed and is in violation of ECP. Furthermore, the clitic in (75)b. can not appear attached to 'an' since 'an' is a mood assigner and must be followed by a verb. If the clitic however, appears attached to the verb it will be in no position to properly govern the trace. Therefore the derivation is in violation of the ECP.

In (75)c., extraction from a post-verbal postion leaves the trace properly governed. If the clitic also appears in a configuration of proper government, this results in the ungrammaticality of the derivation.

In (75)d. on the other hand, the extraction is from a properly governed position. The trace which is left is properly governed, obeying ECP and the derivation is grammatical.

In (76)a, extraction of the subject of the 'anna' clause leaves a trace that is not properly governed since 'anna' is not a proper governor. This violates the ECP. If extraction of the subject of the 'anna' clause takes place and the the clitic appears, it properly governs the trace, and the derivation is grammatical as in (76)b.

Extraction of the subject from an 'anna' clause, with verb movement, leaves a trace properly governed. However,

the Case assigned by 'anna' is not absorbed, hence, the derivation is ungrammatical as in (76)c. In (76)d., extraction of the subject, with verb movement, leaves the trace properly governed by the verb. Furthermore, the Case assigned by 'anna' is absorbed by the clitic. The derivation is grammatical.

CONCLUSION

It has been argued in this paper that Standard Arabic is an SVO language rather than a VSO. With this underlying word order grammatical relations are expressed by their constituent structure and Case assignment of the subjects of matrix sentences and embedded clauses is unified. VSO word order according to this analysis is derived by verb movement since government and Case assignment is assumed to apply only to the right, this forces agreement and verb preposing to apply. VSO surface word order is derived by Topicalization.

It has also been argued that clitics always appear with empty categories. They must appear to identify the features of this empty pronominal pro as well as absorb the Case assigned by the head. Furthermore, it has been argued that clitics may appear as a result of movement in order to properly govern the left trace violating ECP.

Now, the clitic appearing in the extraction of the subject of an 'anna' clause follow naturally from the proposed analysis. Since 'anna' is a Case assigner and it must assign its Case according to the Case Realization Principle, AGR and verb preposing may not apply so as not to have a conflict in the assignment of Case to the subject in the embedded clause. Thus, extraction of the subject leaves a trace not properly governed in violation of ECP. A clitic must then appear in order to properly govern the trace left by movement. The extraction of the subject from an 'an'

clause, on the other hand, apply from a properly governed position since AGR and verb preposing must apply in order for the subject to be assigned Case. This leaves a trace properly governed by the verb. The clitic does not appear since it is a properly governed configuration.

In conclusion, the adoption of the theoretical tools of the GB framework facilitates the analysis of various relevant features of Arabic syntax. This not only explains the distinct behavior in the extraction of the subject from embedded clauses in SA in a unified manner, but this distinction is in fact predicted by the proposed analysis.

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