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Dative and Double Object Structures in Standard Arabic (SA) and English: A Minimalist Approach

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Abstract: Dealing with dative and double object structures is one of the problems that has faced government and Binding theory (GB). Although a few solutions have been proposed, a fully-fledged scenario of the analysis of the dative and double object structures has not been outlined yet. This paper outlines the advantages of the Minimalist approach and how a plausible solution to the problem is attainable. A brief discussion of GB's major solution for the problem (Larson (1988)) will be presented. The major discussion will include examples from SA and English.

1. Double Object Asymmetry:

Barss and Lasnik (1986) observed that in double object constructions, such as the one in (1) below, the direct object (DO) (a letter) is always in the domain of the indirect object (IO) (Mary). That is, NP1 (IO) c-commands NP2 (DO) but not vice versa (since *a* is in the domain of *b*, then *a* is c-commanded by *b*). The same condition exists in SA as in (2):

1. a. John gave Mary a letter.
 NP1 NP2
 *b. John gave a letter Mary.
 NP2 NP1

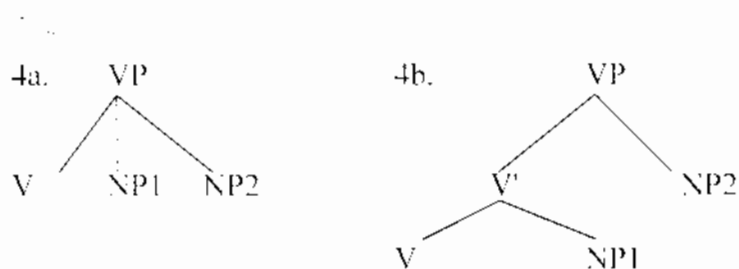
2. a. Ali-un ʔaʕta: Ahmed-an risa:lat-an
 Ali-Nom gave Ahmed-Acc (NP1) letter-Acc (NP2)
 "Ali gave Ahmed a letter "

*b. Ali--un	ʔaʕta:	riʕa:lat-an	Ahmed-an
Ali-Nom	gave	letter-Acc (NP2)	Ahmed-Acc (NP1)

This asymmetric relationship is clear in double object structures with anaphors, where anaphors must be c-commanded by their antecedents in both SA and English:

3. a. I showed Mary herself.
 *b. I showed herself Mary.
- c. ʔaray-t-u Ali-an nafsah.
 Showed-I-Nom Ali-Acc himself.
 "I showed Ali himself"
- *d. ʔaray-t-u nafsah Ali-an.
 Showed-I-Nom himself Ali-Acc.

Oehrle (1976) and Chomsky (1981) proposed the structures in (4a) and (4b) respectively:

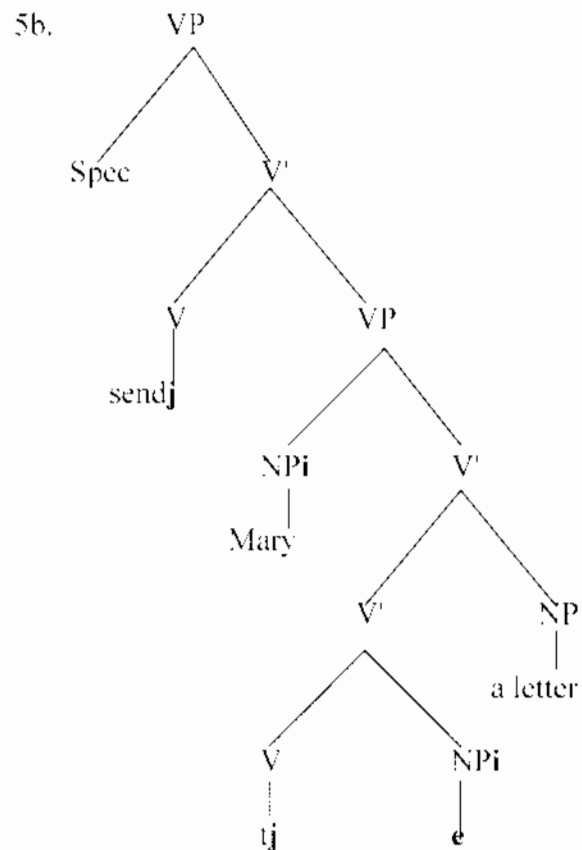
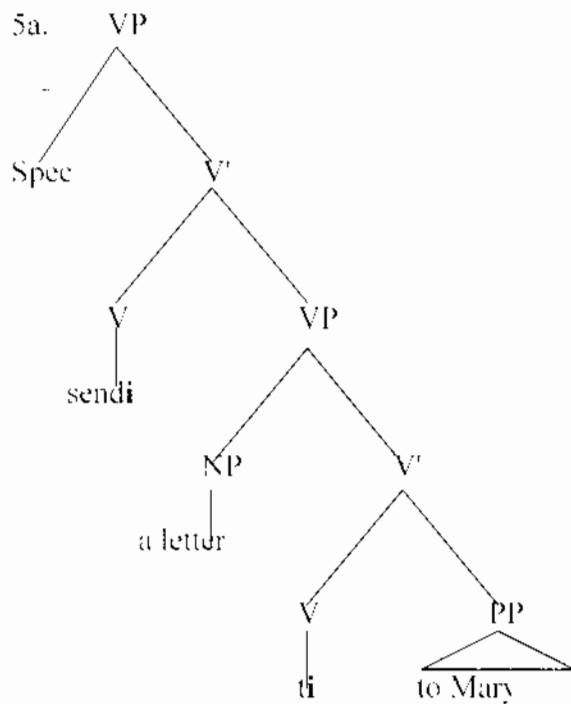


(4a) is problematic if we want to depend solely on a 'dominance-based' solution for the problem. A linear ternary structure is not the optimal structure although it has been proposed as a solution for the problem (e.g. Barss and Lasnik (1986) and Jackendoff (1990)). In fact, a structure like (4a) is not favored because it is considered as a 'deviation' from the binary based branching of GB. In (4b) the IO is placed in an adjunct location by treating it as a sister to V', which is also considered as a deviation from GB. Adjunct positions are supposed to be caseless positions, and so NP2 in (4b) can not receive case. Consequently, (4b) is not the optimal solution for the

problem. Next section reviews Larson's analysis of double object structures. It also focuses on the main weaknesses in his analysis.

2. Larsonian approach:

Larson (1988) proposed a solution for double object asymmetries by introducing new structures through which he wanted to validate that the asymmetries of binding domains in double object structures can be accounted for through asymmetrical e-command. Larson proposed the following for the dative and double object structures, respectively:



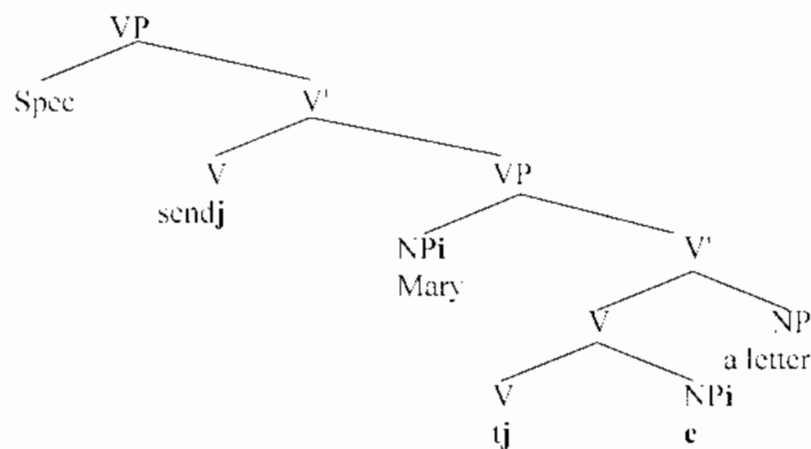
In (5a) Larson treats the DO 'a letter' as an adjunct by adjoining it to the lower V'. To obtain the S-structure, the verb 'send' raises to the empty V-position in the upper VP. In the double object structure 'Mary' raises to the specifier (Spec) of the lower VP, and 'send' raises to the empty V-position in the higher VP. To justify his structures, Larson compares the derivation of (5b) to the derivation of the passive where the external argument (agent) is 'demoted' to an adjunct position (by-phrase), and the object loses its case. This eventually triggers the movement of the object in search of case. Larson argues that after the verb and the IO move to their positions in the higher and lower VPs, the verb assigns an objective case to the IO. To account for case assignment to the DO, Larson introduces the concept of 'V' Reanalysis' (1988: 348):

5. V' Reanalysis:

Let α be a phrase [V' ...] whose θ -grid contains one discharged internal θ -role. Then α may be reanalyzed as [V ...].

After reanalysis, the DO becomes a sister to a complex transitive verb, which Larson argues will allow the DO to receive an inherent case (via the complex transitive verb):

6.



One of the problems that face Larson's analysis of the double object structure is the non-uniformity of the D-structures for both dative and double object sentences. Since double object structures are presumably derived from dative structures and the predicate in both structures has the same arguments, we expect both structures to have similar D-structures. According to UTAH (Baker (1985). 'Identical thematic relationships are represented by identical structural relations between the items at the level of D-structure'. In the dative structure, the DO is in Spec of the lower VP, whereas it is a sister to the lower V' in the double object structure where it is treated as an adjunct.

Case assignment is another problem Larson had to deal with. Larson had to justify how case is assigned to the DO while it is in an adjunct position, i.e., caseless position. He argues that the IO gets the structural objective case directly from the verb after the movement of the verb and the IO; the DO receives inherent objective case through the complex transitive verb that results from 'V' reanalysis'. The idea of comparing the passive to double object structures is an attractive one, but lacks solid evidence. It has been severely criticized by Jackendoff (1990) who points out that we do not need to complicate the theory and add extra structure to account for double object asymmetry. It has been clear that Jackendoff prefers a solution that utilizes a linear structure for double object sentences as Barss and Lasnik (1986) proposed. The adoption of a linear structure means that both objects are in case positions. However, this also means that we are abandoning the dominance-based solution for the problem.

In fact, SA raises serious problems to Larson's analysis. Case assignment in SA is slightly different from English and SVO languages in general. NPs in SA are assigned case whenever a case assignor (governor) is available, otherwise a default nominative case is assigned to them (Ouhalla (1994)):

- 7a. Ali-un muhandis-un
 Ali-Nom engineer-Nom
 'Ali is an engineer.'
- b. Ali-un ka:na muhandis-an
 Ali-Nom was engineer-Acc
 'Ali was an engineer.'
- c. ?inna Ali-an muhandis-un
 Comp Ali-Acc engineer-Nom
 'Ali is an engineer.'
- d. Ahmed-un ?arsala hadiyyat-un li-Ali-in.
 Ahmed-Nom sent gift-Acc to-Ali-Gen
 'Ahmed sent a gift to Ali.'

In (7a) both NPs are assigned nominative case (by default). However, 'muhandis-an' is assigned accusative case in (7b), simply because the verb 'ka:na' assigns accusative case to the NP that follows it. Similarly, 'Ali-an' is assigned accusative case by '?inna'. However, in dative structures the IO carries a genitive case (assigned by the preposition), whereas the DO carries an accusative case (7d). In double object structures, both objects are assigned accusative case as in (2a). In fact, the examples cited above indicate that accusative case can not be assigned without a case assignor, which makes clear to us that the accusative case in double object structures is assigned by the verb.

An acceptable solution to the problem should take into consideration a number of issues. First, we expect the dative and double object structures to have similar D-structures: i.e., the arguments of the verb should have the same positions in the tree structure. Second, case assignment should be accounted for. Finally, the issue of dominance should be respected in any proposed structure.

In the next section, I will argue for a Minimalist solution for the problem. We will see how we can account for the points mentioned above easily if we adopt a Minimalist solution for the problem.

3. A Minimalist Approach:

The asymmetries of the double object constructions can be accounted for more efficiently through the Minimalist program outlined by Chomsky (1993, 1995). In fact this Minimalist program accounts for all of the issues and problems discussed in the previous section. The first important issue to solve is the thematic hierarchy in the dative and double object constructions, i.e., which argument should be 'closer' to the verb and in what manner these arguments should be structured. Larson's analysis is based on the following thematic hierarchy in the sentence:

Thematic hierarchy:

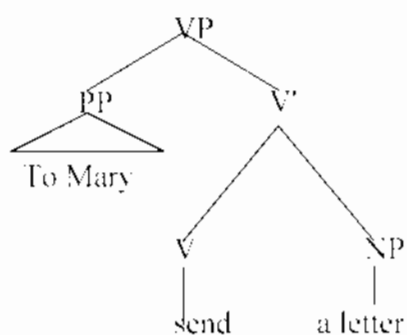
AGENT > THEME > GOAL > OBLIQUE

According to this thematic hierarchy, the theme argument is higher in the tree than the goal argument. Larson argues that the goal argument should be the closer argument to the verb, i.e., the goal argument should be placed next to the verb as its complement as in (5a, b) above. This is our first departure from Larson's approach. Grimshaw (1990) presents solid evidence from Japanese and English showing that goal arguments should be higher in the tree and theme arguments are closer to the verb (See chapters one and two). One of the crucial assumptions she makes is that argument structure represents prominence relations among arguments (1990). Thematic hierarchy plays a role in the prominence relations in the argument structure. Here we will adopt Grimshaw's thematic hierarchy which can be represented as the following:

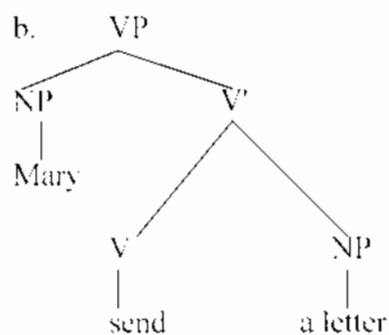
AGENT > GOAL / OBLIQUE > THEME

The assumption here is that goal arguments are higher in the structure of the sentence than theme arguments. Consequently, we can assume the following internal dative and double object structures, respectively:

8a.



b.



One advantage of proposing these structures is that arguments occupy the same positions in dative and double object structures (UTAH). In both structures the IO (goal/oblique) is in the

Spec of VP, while the DO (theme) is the complement of the verb. We will return to the issues of thematic hierarchy and prominence relations among arguments later in the discussion.

As it was obvious in the previous section, SA raises serious questions concerning case assignment. We have seen that nominative case is assigned to NPs that have no case assignor (7a,b, and c). One of the major assumptions of the Minimalist program is that lexical items enter the syntax inflected (Chomsky (1993)). That is, we do not have to worry about case assignors. According to the minimalist approach all arguments must check case by moving to the Spec of a functional head that has the same features (the Checking principle). The verb raises to 'I' and eventually to 'Agr' to check its features (agreement, case,...). We will see later in the discussion how the Checking principle accounts for the serious problems raised by SA.

Since lexical items enter the syntax inflected, we no longer need a level of D-structure. Two syntactic levels are identified in Minimalism: Spell-out and LF. As we mentioned earlier, arguments move up in the tree structure to check features. Is this movement before Spell-out or at LF? Khym (1999) argues for overt object movement in English. He builds on the assumption that adverbs that are licensed by the verb are adjoined to either the left or right of V' (Bowers (1995)) or VP (Radford (1997)). A sentence like (8), Khym argues, can be accounted for only by assuming the overt object movement. To obtain the structure in a sentence like (8a), we must assume that object movement occurs before Spell-out in English:

9a. I told the story immediately to Mary.

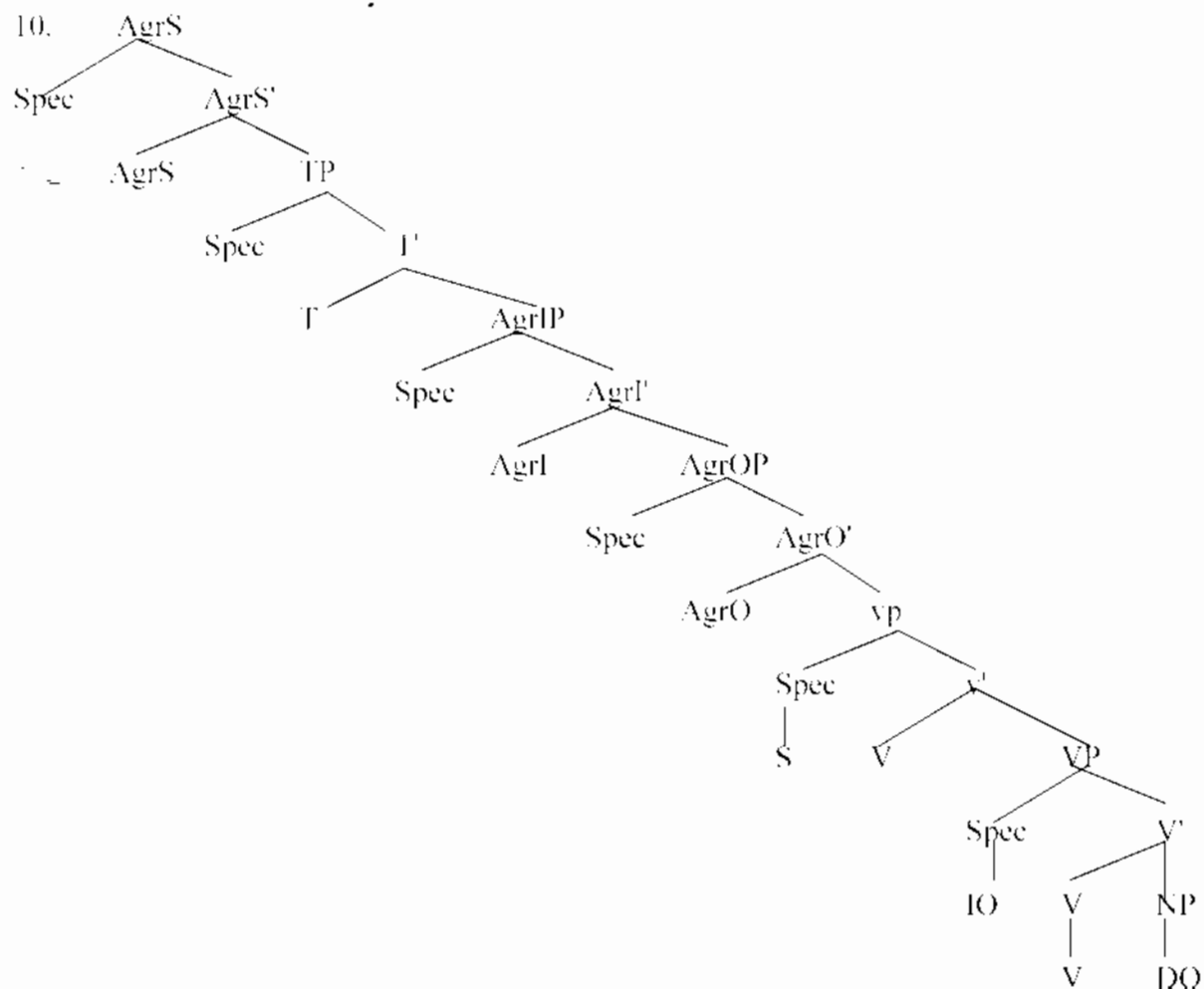
*b. I told immediately the story to Mary.

c. {VP immediately [V' to Mary [V' told a story]}.

d. [VP told a story [VP immediately [V' to Mary].

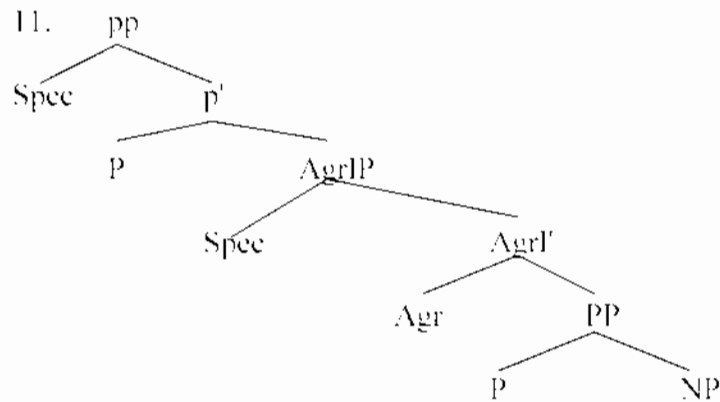
Consequently, the verb and the DO move to higher positions in the tree to check case, yielding the desired result as in (8a, d) above.

To check their case, subjects raise to Spec of AgrSP while direct and indirect objects raise to Spec of AgrOP and Spec of AgrIP, respectively. It has been argued that 'VP' has a complex structure of an inner VP and outer vp shell¹. Some arguments originate within the outer vp shell, while others originate inside the VP core, i.e., the inner one (Radford 1997):



The structure in (10) solves the problems that GB faced when dealing with double object structure. The dominance problem is solved simply by putting NP1 (IO) higher in the tree making NP2 (DO) in the domain of NP1, and, therefore, c-commanded by NP1. Case problem is solved by the overt movement of all arguments to check their features higher in the tree². We do not have to worry about how case is assigned to the arguments. We also notice that in both dative and double structures the DO and the IO occupy argument positions, i.e., case positions.

In the derivation of dative structures, we notice that AgrIP has to be located below AgrOP if we want to capture the surface order of arguments in SA and English. Concerning the location of AgrIP, two possible options are worth discussing here. First, we can argue that prepositions check features as verbs and NPs do. Radford (1997) proposes a pp shell where prepositions check features. We can argue here that AgrIP is located under this pp shell. This means that both the preposition and the IO have to raise to check features (1):



Our second option is to argue that the existence of the preposition delays feature checking for the oblique object until after Spell-out. Consequently, the positions of AgrIP and AgrOP will be the same for both dative and double object structures. The only difference is that the oblique object checks case covertly (at LF) (10a). We will examine the role played by the preposition in oblique objects later in the discussion.

The last point we might need to focus on is the relationship between thematic hierarchy and prominence relations among arguments. The examples from SA and English show that in double object structures AgrIP is always higher in the tree than AgrOP. In fact this hierarchical prominence of the functional heads (AgrIP and AgrOP) respects the thematic hierarchy of the arguments. In double object structures, the IO (goal argument) is always higher in the tree than the DO (theme argument), even in passive constructions:

12. a. Mary was sent a letter.

*b. A letter was sent Mary.

13. a. Ahmed-un ʔuʕtiyah risa:lat-an
 Ahmed-Nom (NP1) was given letter-Acc (NP2)
 "Ahmed was given a letter "

*b. risa:lat-un ʔuʕtiyat Ahmed-an
 letter-Nom (NP2) was given Ahmed-Acc (NP1)
 "A letter was given Ahmed."

14 a. [AgrSP Mary_i] [TP was sent_k [AgrOP a letter_j] [VP t_j |V' t_k t_i]

*b. [AgrSP A letter_i] [TP was sent_k [AgrOP Mary_j] [VP t_i |V' t_k t_j]

The fact that hierarchical prominence is violated justifies the ungrammaticality of (12b, 13b). In (14a) 'Mary' (the goal argument) moves to the highest position in the tree (Spec of AgrSP), whereas 'a letter' (the theme argument) moves to a lower position in the tree (Spec of AgrOP). In (14b) 'Mary' moves to Spec of AgrOP which is lower than the position occupied by 'a letter' (Spec of AgrSP). And since the the DO (the theme argument) occupies a higher position in the tree than the IO (goal argument), the hierarchical prominence among the arguments is violated, which renders the sentence ungrammatical.

However, it seems that the presence of the preposition in oblique goal arguments blocks the effect of hierarchical prominence:

15a. John sent a letter to Mary.

b. John sent to Mary a letter.

16a. Ahmed-un ʔaʕta: risa:lat-an li-Ali-in
 Ahmed-Nom gave letter-Acc to-Ali-Gen
 'Ahmed gave a letter to Ali.'

b. Ahmed-un ʔaʕta: li-Ali-in risa:lat-an
 Ahmed-Nom gave to-Ali-Gen letter-Acc
 'Ahmed gave to Ali a letter.'

It is obvious that the existence of the preposition in oblique objects has to do with the type of case that the NP carries. The Arabic examples (16a, b) show that the IO has to carry genitive case. This means that the existence of the preposition is somewhat connected to the genitive case that the IO carries. The preposition is also connected to the semantic role the IO plays in dative structures in both languages, where the two prepositions, 'to' and 'li', must be

followed by goal arguments. We may assume that since the preposition is syntactically (case) and semantically (thematic role) connected to the IO, the position of the IO is no longer 'tied' to the position of the verb. That is, the position of the IO does not need to be fixed with respect to the position of the verb as in double object structures in which hierarchical prominence among the arguments must be respected. We may also assume that the semantic and syntactic roles played by the preposition in dative structures require the IO to be directly connected to the preposition rather than the verb. Consequently, the hierarchical prominence among the arguments is no longer required in dative structures, simply because the IO is not directly connected to the verb.

4. Conclusions:

This paper has been an attempt to study dative and double object structures in SA and English. The main argument is that the nature of double object asymmetries is better viewed and explained through the Minimalist program. Case assignment and non-uniformity of D-structures have been challenging problems that GB had to deal with. This study is meant to focus on the most aspiring solution for the problem within GB framework (Larson (1988)) by comparing it to a solution that can be provided by Minimalism.

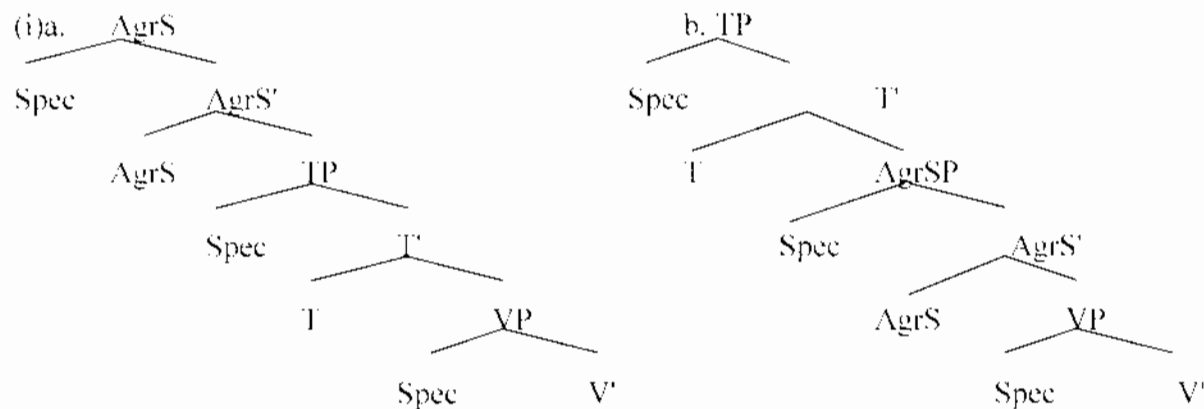
It has been clear that the Minimalist approach can provide a vital analysis of dative and double object structures in SA and English. The general outline of the Minimalist program accounts for all the problems that faced GB regarding double object asymmetries. The problem

with case has also been solved by the Checking principle. Thematic hierarchy and hierarchical prominence of arguments have been discussed. We have observed that thematic hierarchy and hierarchical prominence of arguments play an important role in explaining the ungrammaticality of sentences like (12b) and (13b) above.

Notes

1. Radford (1997) presents an interesting argument for vp shell. He argues that a theory that utilizes vp shells provides a better analysis of ditransitive, resultative, ergative, and three-place predicates.

2. SA still presents some challenges to the new program. How can we account for the two possible word orders (VSO and SVO) in SA? Chomsky (1991) and Belletti (1990) argued that AgrSP is higher in the tree than TP for English and Romance languages which typically have SVO word order ((i)a). Generally it can be argued that strong and weak verbal and nominal features of 'Agr' determine the level at which these features must be checked, i.e., before Spell-out or at LF. Since the verbal and nominal features of 'Agr' are weak in VSO structures ((ii)a), the verb and the subject do not have to raise to 'Agr' and Spec of AgrSP before Spell-out. That is, the subject remains in situ, resulting in the VSO word order. On the contrary, in SVO languages the verb and the subject have to raise to 'Agr' and Spec of AgrSP, respectively, because the verbal and nominal features of 'Agr' are strong ((ii)b) (for a detailed analysis see Bolotin (1995)).



- (ii)a. ḥadar ʔa-ʔawlad ʔila ʔal-madrasah.
 came the-boys to the-school
 "The boys came to school."
 b. ʔa-ʔawlad ḥadar-u: ʔila ʔal-madrasah.
 the-boys came-3P to the-school
 "The boys came to school."

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