

Verb Agreement Features in Standard Arabic (SA): A Minimalist Approach

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Abstract

The present study investigates the features of the verb agreement in Standard Arabic (SA). The investigation is conducted within the framework of the principles of Chomsky's Minimalist Program (MP). The main objective of the study is to survey the applicability of the principles of MP on the derivation of SV order and VO order in SA. The study shows that the principles of MP cannot account for the feature of agreement asymmetry either in SV order or VS order. The study concludes that principles of MP needs to be modified to justify the asymmetry in agreement features of the verb in both SV and VS orders in SA.

Keywords: agreement, minimalism, minimalist program, Arabic word-order

1. Introduction

The purpose of the present study is to discuss the feature of the verb-subject agreement in Standard Arabic (SA) within the framework of Chomsky's Minimalist Program (MP). SA reflects two different word orders : Subject – Verb (SV) order and Verb – Subject (VS) order. In both cases, the verb shows different agreement features with its subject. In VS order, the verb agrees with its subject only in gender, whereas in SV order, the verb agrees with its subject in number, person and gender. The following study seeks to provide an account for this feature of agreement asymmetry between the verb and its subject within the framework of the minimalist program as outlined by Chomsky (1995, 1999, 2000, , 2004, 2005, , 2008). The main purpose is to investigate the applicability of the principles of Chomsky's MP on both word orders in SA to account for the agreement in SA. The study discusses how far the principles of MP can provide an explanation for the agreement asymmetry of the two word-orders in SA.

2. Problem of the study

There are two different word-orders in SA: SV word order and VS word order. When the subject is preverbal, the verb agrees with its subject in number, gender and person. However, when the subject is postverbal, the verb agrees with it in gender only. The study discusses the problem of agreement asymmetry in these two different word-orders within the framework of MP as suggested by Chomsky (1995) and developed in his subsequent works (1999, 2000, 2004, 2005, 2008). The study aims to prove whether the principles of MP are valid or invalid in providing a principled explanation for the features of agreement in SA.

The investigation of the features of agreement in this study is limited to a variety of Arabic, which is known as standard Arabic. This variety of Arabic is usually used in formal speeches, letters, writing newspapers articles and books.

The investigation conducted in this study focuses on examining the applicability of MP principles on the feature of agreement asymmetry in SA. The main objective of the study is to examine the universality of these principles and how far they can provide a justifiable account for the asymmetry of agreement in the word-order in SA.

The discussion set in this study aims to provide answers for the following questions:

- 1) Do the MP principles provide a systematic analysis for the agreement features of verb-subject in SV word order in SA?
- 2) Do the MP principles provide a systematic analysis for the agreement features of verb-subject in VS word order in SA?

3) Can the MP principles be considered as a model that provides systematic explanations for the asymmetrical agreement in the two word orders in SA?

3. Minimalist program

Agreement, as defined by Wickens (1980 : 46) is a term used "commonly to cover the relationship between verbs, nouns ... pronouns and adjectives". The feature of "agreement" was first regarded as a specifier – head relationship. Later on, it has been analyzed as a probe – goal relationship (Chomsky 1995, Radford 1997a, 1997b, 2004).

The present study, as referred to above, is conducted within the framework of the MP. The basic hypothesis that underlies the MP is that language is economically designed and that linguistic theory should reflect that economical design. Therefore, minimalist approach to syntax attempts to reduce the theory to minimal number of principles and to eliminate many of the earlier principles such as D-structure, S-structure, Move Alpha and X-bar theory. (Radford 2004, 2008, Hornstein, et al 2005, Lasnik 2003, Boeckx 2006).

The main function of language is to combine both sound and meaning together, for this reason, the minimalist syntax reduces the levels of language representation to two conceptual levels. The first level is known as the "Phonetic Form"(PF) and the second level is known as "Logical Form" (LF). These two levels are termed as the "interfaces". Accordingly, to build a structure, the first step to take is to select the lexical items which constitute the numeration of language. These lexical items carry features that fit either to syntax, phonology or semantics. On one hand, these features are either interpretable or uninterpretable. Interpretable features are those features which are relevant to the interfaces and can be interpreted by them. On the other hand, uninterpretable features are those that should be eliminated during the course of the derivation before the structure is sent to the interfaces. For example, the person and number features on nouns are interpretable; these features are relevant for the semantic interpretation of the structure, and therefore they do not need to be eliminated before Spell Out.

One basic operation in the syntactic component in the MP is the concept of Merge. Merge takes two items and merges them together, creating a set. Chomsky (2004) defines two types of Merge: External Merge and Internal Merge. The External Merge is the operation where a lexical item is taken by the computational system from the Numeration and is merged to the structure. In Internal Merge, one of the merged items comes from within the structure and is merged in a new slot within the structure. In other words, an item that was merged in a previous operation is re-merged in a new different place (Chomsky,1995). This operation of re-merge is described by Chomsky (1995) as "copying" since the re-merged item leaves a copy in its original place. However, the condition posed on this copy is to form a chain with its moved original item and is c-commanded by it.

Another basic operation in the computational system is Agree. Agree is a relationship that exists between a probe and a goal where the probe c-commands the goal (Chomsky 1995, Radford, 2004, 2009). The probe has always an unvalued feature which needs to be valued and checked by a matching valued feature. As a result, the probe selects a goal, which it c-commands, with a matching feature from within the structure. As a result of Agree operation, the features on the probe are valued and deleted, and the goal remains in situ.

In some cases, the probe has an EPP feature (Extended projection principle), which requires an element to be merged to the edge of the probe (Chomsky, 2000, Lasnik 2003, Radford, 2004, 2009). When a given probe has a feature to be checked against a goal and, at the same time, it has EPP feature, the goal would move (or be copied) from a position where it is in the complement of the probe to its new position in the Specifier. It is that both the probe and the goal need to be active in order for them to be in a feature-checking relation (Chomsky1995). As a condition, the probe and the goal which it c-commands, should have some features which need to be valued or checked against each other.

As the required syntactic operations take place, the structure resulted is transferred to the interface levels. This is achieved via an operation which is termed Spell Out. In this operation, the phonological features of the structure are stripped and sent to PF, where the structure takes its physical pronunciation form. The remaining features, which are the semantic ones would be interpreted by LF. Whenever the structure is interpretable on the levels of LF and PF the derivation is said to converge. However, if the structure does not conform to the principles of one or both of the interface levels, the derivation is said to crash.

Chomsky (1995) proposes that both PF and LF are not interacted. In other words, any operation which takes place in either level does not affect the other. For example, if the structure is spelled out with an uninterpretable feature at LF, it cannot be checked at a PF operation and then send that information to LF.

Chomsky (1999, 2000) proposes that the operation of Spell Out takes place in phases.

In other words, the derivation is built at different stages and each stage, when it is complete, it is sent to the

interfaces, but does not wait until the whole structure is complete. This derivation by "phase", as Chomsky called (1999, 2000) states that the derivation is subject to the Phase Impenetrability Condition (Chomsky 2000:108).

Once a phase is sent to the interfaces, the internal structure of the phase is not to be accessible to any other operation in the higher phase. Nevertheless, the head and the edge of the phase can still be accessed by the immediately higher phase. The edge of the phase is the specifier of that phase, and it constitutes an "escape hatch" where elements which need to be accessed by the higher phase are placed.

The Phase Impenetrability Condition ensures the fact that derivations are cyclic; once a phase is completed, its internal structure can no longer be accessed by syntax, ensuring that derivation only moves upwards. In other words, when a certain phrase (Phase 1) is spelled out, everything in that phase, except for the head and the edge, is handed over to the interfaces and is no longer accessible to any other syntactic operations. When the immediately higher phase (Phase 2) is spelled out, the head and edge of the lower phase (Phase 1) are sent to the interfaces together with everything in the higher phase (Phase 2) except for the head and the edge of that phase.

4. Review of literature

SA reflects two word orders. The first word order is VS and the other is SV. In the following examples:

1- kataba	?aTTalib-u	XiTab-an
wrote-3sg mas	the-student-Nom	a letter-Acc
2- kataba-t	?a-TTaliba-tu	XiTab-an
wrote 3sg fem	the-girl student-Nom	a letter-Acc

in the above examples, the agreement features of person, number and gender are reflected on both the verb and its subject. However, the case is different in the following examples:

3- kataba	?aTTalib-an	XiTab-an
wrote 3sg mas	the-two students-dual-Nom	a letter-Acc
4- wrote	?a-TTulab-u	XiTab-an
wrote 3sg mas	the-students-Nom	a letter-Acc
5- * katab -uu	?a-TTulab-u	XiTab-an
wrote 3 pl mas	the-boys-Nom	a letter-Acc
6- kataba -t	?aTtaliba-tan	XiTab-an
- kataba 3sg fem	the-two girl students-dual-Nom	a letter-Acc
7- kataba -t	?a-TTlibat-u	XiTab-an
wrote 3 sg fem	the-girl students-Nom	a letter-Acc
8- * katab -an	?a-TTalibat-u	XiTab-an
wrote 3 pl fem	the-girl students-Nom letter-Acc	a letter-Acc

As can be observed, both the verb and its subject in examples (3), (4), (6) and (7) reflect only the feature of gender. Meanwhile, examples (5) and (8) are ungrammatical, though the verb has agreement in person, number and gender (full agreement) with its subject. These examples show that full agreement is not possible in VS word order.

However, in the following examples, agreement in number, person and gender in SV is complete as shown below:

9- ?a-TTulab-u	kataba -uu	XiTab-an
the-student-Nom	wrote 3 pl mas-Nom	a letter-Acc
10-?aTtalibatan	kataba-na	XiTab-an
the-girl students-Nom	wrote 3 pl fem	a letter-Acc

To summarize, SVO order shows full agreement between subject and verb in all phi-features (gender, person, and number). VS order, by contrast, shows only partial agreement, mainly in gender features. In other words, The VS order involves only gender agreement with the postverbal subject. On the other hand, the SV order reflects full agreement of the phi features between the verb and its preverbal subject.

4.1 Previous Studies

The study of the agreement features in SA has been the main topic of many studies. These studies such as Mohammed (1990, 2000), Soltan (2001, 2004, 2007), Ouhalla (1994) and Aoun, et.al, (1994) have endeavored to provide analyses for the agreement asymmetry in SA word order. On the one hand, Mohammed (1990, 2001), Ouhalla (1994) and Soltan (2001) have come to the conclusion that the specifier – head relationship is the main source of full agreement in SV word order as well as the partial agreement in VS order in Arabic. The relationship that exists between the lexical subject and its tense head results in subject – verb full agreement. Meanwhile, the partial agreement in VS is a result of the relationship between the null expletive, which acts as the specifier, and its tense head.

On the other hand, Aoun, et al. (1994) adopts the view that in both word orders in SA there is full agreement, but the agreement disappears in VS order which is a result of further operations such as verb raising.

However, Soltan (2007) argues that both approaches are inadequate to explain the asymmetry in subject-verb phi agreement features in SA. Instead, he pursues the idea of positing a base-generated pro in the VP internal subject-position to explain the agreement features in both word orders in SA.

However, Soltan analysis suffers more than one problem, for instance, with regard to his pro concept which he adopts from Rizzi (1997) and the phenomenon of "Clitic Left Dislocation" constructions, as surveyed in (Holmberg, 2005, 2008, Horais, 2009). For instance, the Left Dislocation constructions is usually characterized by the presence of a lexical DP in a clause-initial position that is related to a resumptive pronoun incorporated into the verb, as can be noticed in many languages (see Cinque (1977) for Italian, Escobar (1997) for Spanish, Aoun & Benmamoun (1998) for Lebanese Arabic. The same construction can be observed in SA, as the following examples show:

- | | | | |
|--------------------------------------|--------------|-------------|-------------|
| 11- a. ?al-?awlad-u | ?u- Hibu-hum | | |
| the-boys-Nom | 1s-like-them | | |
| "The boys, I like them." | | | |
| b.* ?al-?awlad-u | *?u-Hibu | | |
| the boys-Nom | 1s-like | | |
| the boys I like. | | | |
| 12- a. ?a-Talib-u | qaddam-tu | la-hu | hadiat-an |
| the-student-Nom | gave- 1-s | to him | present-Acc |
| "The student, I gave him a present." | | | |
| b.* a. ?a-Talib-u | qaddam-tu | la- | hadiat-an |
| the-student-Nom | gave- 1s | to | present-Acc |
| "The student, I gave a present." | | | |
| 13- ?ahmad | saraq | l-walad-u | siarata-hu |
| Ahmed-Nom | stole.3ms | the-boy-Nom | car –his |
| "Ahmed, the boy stole his car." | | | |
| b.* ?ahmad | saraq | l-walad-u | siarata-ø |
| Ahmed-Nom | stole.3ms | the-boy-Nom | car |

As it can be observed in the examples above, the pronominal clitic related to the left dislocated element can have many different syntactic functions. In (11), it is a direct object clitic. It is a complement of PP in (12) and an NP in (13). However, the deletion of this resumptive pronoun leads to ill-formed structures.

Benmamoun (2000) provides a different explanation that is based on the concept of "merger". In SV word order, there exists an operation of merger between the subject and its following verb. In VS word order, on the other hand, no such an operation exists.

Following the same argument, Mohammad (1990, 2000) attempts to provide an explanation for the problem of asymmetrical agreement in (SA) by proposing what he calls 'Null Expletive analysis'. The partial agreement in VS order can be justified by the relationship that exists between the node I and the null expletive that exists in its Specifier.

However, the problem with this analysis is its failure to account for either the overt expletives in SA or the nominative case that is assigned to these expletives. To accept that an empty expletive in the Spec position of IP is coindexed with the subject in VS order leads to accept that there are two subject positions, one is in the Spec of IP and the other is in the Spec of VP. The empty expletive then can check its nominative case by agreement with INFL, but there no explanation of how the subject in VS gets its nominative Case as positioned in VP.

Safir (1985), Chomsky (1981) and others have provided an explanation for expletives in English. They suggested that coindexing helps to transmit the nominative case of the expletive pronoun to the postverbal subject. Ouhalla (1994) draws this conclusion on Arabic suggesting that the nominative Case assigned to the null expletive by the agreement in spec IP is transferred to postverbal subject. However, Coopmans (1994) suggests that this conclusion is not practical as the preverbal expletive can be assigned accusative Case by the "?anna", as the following example shows:

- 14- a. jaa?a ?a-Sadiq-u
 came.3ms the friend-Nom
 "The friend came."
- b. ?idda?a mohamed-un ?anna-hu jaa?a ?a-Sadiq-u.
 claimed.3ms mohamed-Nom that-it came.3ms the-friend-Nom
 "Mohamed claimed that the friend came."

The above examples show that there is no transmission for case. The null expletive subject is assigned an accusative case, whereas the postverbal subject ?a-Sadiq-u is assigned a nominative case.

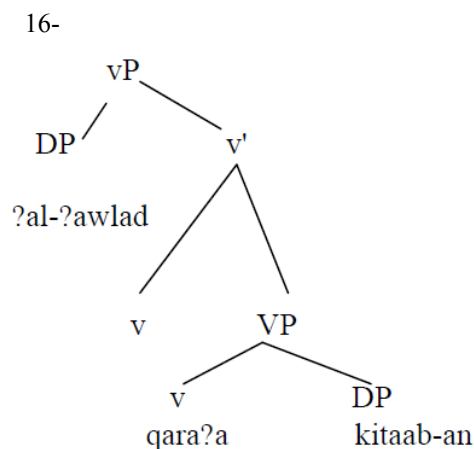
5. Agreement Asymmetry in SA

5.1 Subject-Verb Agreement in SA

This section shows how the phase-based model of Chomsky can explain the SV derivations in SA. Assuming the vP shell analysis (vP+VP), the following example is derived as follows:

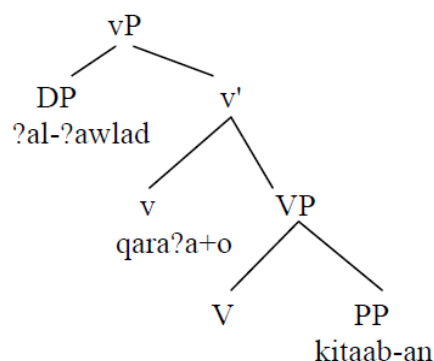
- 15- ?al - ?awlad-u qara?-uu kitaab -an
 The boys – Nom read 3 pl mas book– Acc

The agreement features of the verb "qara?a" are unvalued. Though the lexical noun "?al-?awlad" has its agreement features of person, number and gender valued, its case feature is still unvalued. Both the verb "qara?a" and the post lexical NP "kitaab-an" are merged together forming the node VP "qara?a kitaab-an". Subsequently, the resultant VP merges with small v forming v' that merges in turn with the lexical NP "?al-?awlad" to form the vP "?al-?awlad qara?a kitaab-an", as shown in (16)



As v is an accusative case assigner in Minimalist framework, it assigns the accusative case to its c-commanded DP "kitaab-an". Then the light accusative v attracts the verb "kataba" to produce a diagram as below:

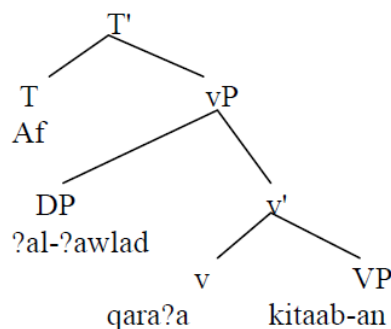
17-



As the resultant derivation is a phase, according to MP framework, it cannot be subjected to any further syntactic operations. Accordingly, it is shifted to the phonological and semantic components to acquire its phonetic and semantic form.

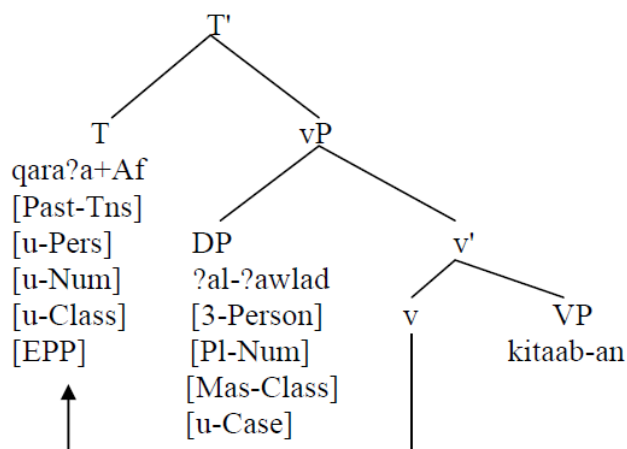
As the syntactic operation moves forward, the vP merges with T to form T', as shown in (18):

18-



Fassi assumes that T in SA is "a strong affix" (1993,19) as it can attract the verb to adjoin to it. As a result of adopting this view, the verb "qara?a" is raised to adjoin T, as in (19):

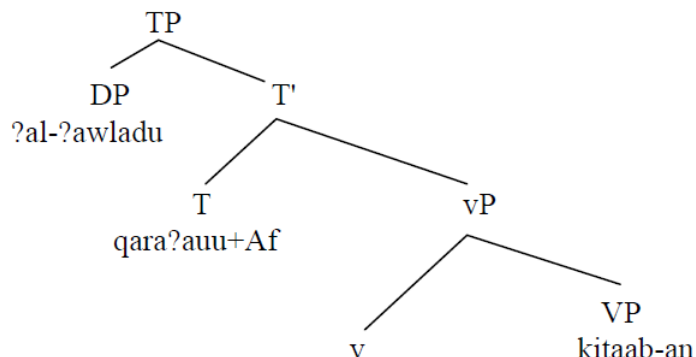
19-



As the figure in (19) shows, T has features of person, number and class as unvalued that should be valued. In this way, it is an active probe and should look for a goal in its domain to value these unvalued features. The only candidate in its domain is the DP "?al-?awlad". The DP "?al-?awlad" can function as an active goal since it has the case feature unvalued. As a result, we have a probe – goal relationship where the DP "?al-?awlad" values the unvalued features of T (person, number, and class) and the verb "qara?a" is read as "qara?auu". At the same time,

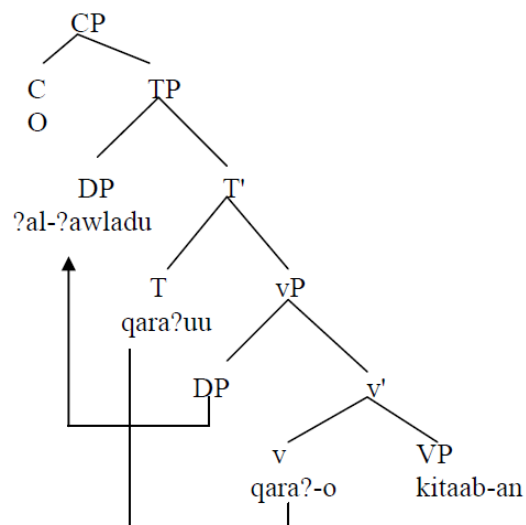
T values the unvalued feature of case of the DP to acquire the nominative case and to be read "?al-?awlad-u" As T still reflects the feature of EPP, the goal "?al-?awlad-u" should move leftward to be the specifier of T, as shown in (20) .

20-



As a result of merger operation between TP and C we have the CP with the following structure:

21-



Finally, we end up with the following derivation:

22- ?al-?awlad-u	qara?-uu	kitaab-an
The-boys-Nom	wrote 3 pl mas	book-Acc

The derivation in (22) confirms the fact that the MP of Chomsky is able to give legible explanation for the SV word order in SA.

However, the principles of MP suffers a problem when they are used to derive compound tense constructions. Benmamoun (2000) refers to this problem and shows that the MP principles cannot justify or give an account for the constructions with compound tense where the Phi-features of agreement are manifest on the auxiliary as well as the main verb in SV structures. This can be shown in the following examples:

23- ?al-?awlaad-u	kaan-uu	yalʕab-uuna	fii	?al-Hadiiqat-i
the-boys-NOM	were-3plmas	play-3plmas	in	the-garden-DAT

“The boys were playing in the garden.”

The example shows that the auxiliary verb "kaan" agrees with its subject in the agreement features of person, number and gender. At the same time, the same agreement features are reflected on the main verb, "Yalʕabuuna". According to the MP principles, the auxiliary verb kaan-uu is in the domain of the subject "?al-ʔawlaad-u, and is c-commanded by it. Accordingly, the probe-goal relationship exists and agreement features and case assignment are checked in both. Moreover, the main verb, "yalʕabuuna", also acts as a second goal for the probe "?al-ʔawlaad-uu" which c-commands it. Accordingly, we end up with a construction which has a probe with two goals; then, how the Phi-features and case assignment can be checked. Can we say that the Phi-features of both the auxiliary and the main verb are checked by one goal?. If this is true, then, which verb is checked first by the goal? and which verb is considered as the case-assigner for the probe? These questions are not justified within the MP and no explanation is provided for examples of these kind.

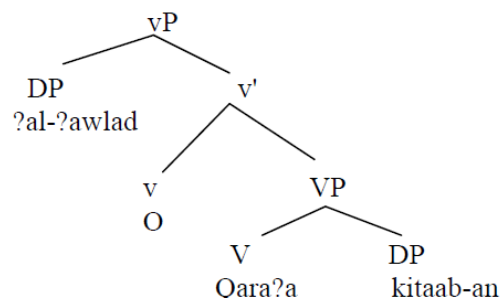
5.2 Verb-Subject Agreement in SA

This section shows how phase-based model of Chomsky can derive VS constructions in SA. In following example:

24- qaraʔa	ʔal-ʔawlad-u	kitaab-an
Wrote 3 sg mas	the boys – Nom	book–Acc

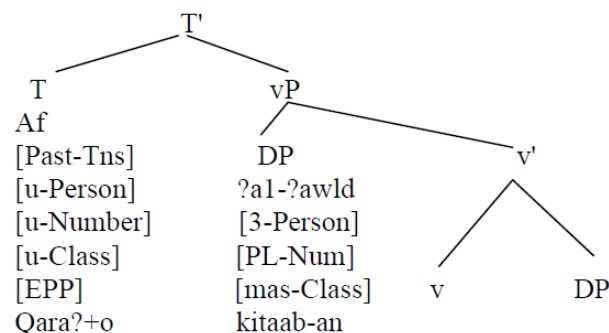
Adopting the concept of the vP shell analysis, the above example can have the following structure in:

25-



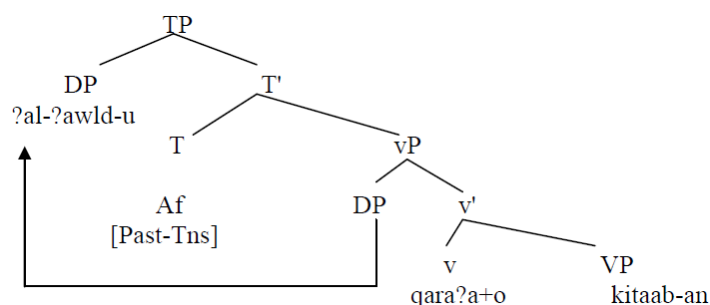
Here, the same steps used in deriving SV word order are followed. The DP "kitaab-an" is assigned accusative case by the light v, as it c-commands it. At the same time, it attracts the verb "qaraʔa" to join to it. As a result of merger operation between v' the DP "ʔal-ʔawlad", we have vP. Due to the fact that vP is a phase, VP is closed against any further syntactic operations. The merger operation proceeds to merge vP with T forming T', as shown below:

26-



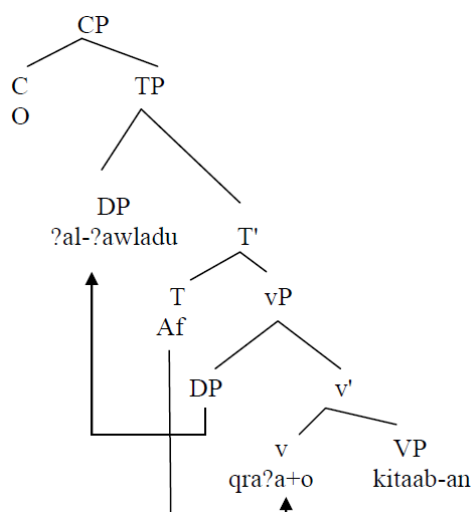
The T with its uninterpretable features of person, number and gender is still an active probe that is looking for a goal in its domain to value these features. The DP "ʔal-ʔawlad" is the only active goal as it values the unvalued features of person, number and class of its probe. Exchangeably, T values the unvalued case of the goal. As T has EPP, it has to give the projection TP where the DP "ʔal-ʔawlad-u" is moved to be the specifier of TP, as shown in (27).

27-



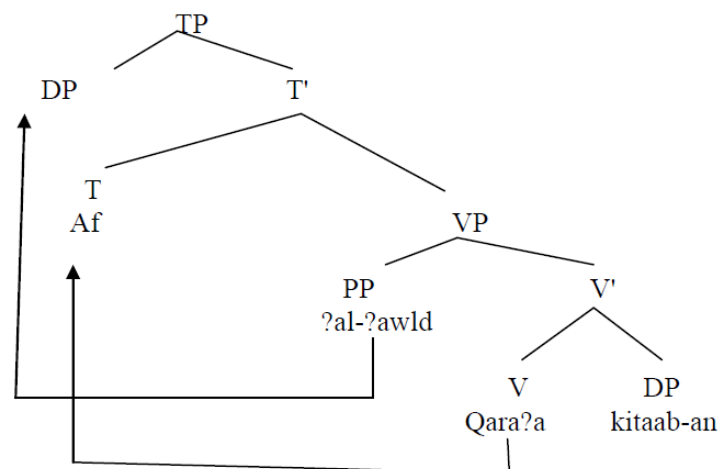
TP has to merge with C to give CP, which is considered a phase. TP, accordingly acquires its interpretation by being sent to the semantic component. However, the SV word order is resulted in, as (28) shows:

28-



To provide an alternative analysis for SV word order in SA let's suggest that SA reflects no vP structure, as in (29):

29-



The T affix is an active probe as having unvalued Phi-features and looks for a goal. We have in this construction two nominal goals ?al-?awlad and kitaab-an but as ?al-?awlad is closer to the probe, accordingly, it is assigned nominative case by T. However, when the verb moves to T and agrees with the DP "?al-?awlad-u", in the

phonological component, the verb has the plural form and is spelled out as "qara?-uu", not qara?a. Moreover, the DP "kitaab-an" has no case assigner to provide it with the accusative case. Moreover, according to EPP, the DP "?al-?awlad-u" must move to the specifier position of TP forming CP. As CP is a phase, TP should be sent to phonological and semantic components. But this operation is not allowed as we have a DP with an unvalued feature. Namely, the DP "kitaab-an" has no case. Accordingly, the derivation crashes.

The discussion introduced above shows the inadequacy of MP to provide a legible account for the derivation of VS word order in SA.

Sultan (2006) introduces another problem with MP. He remarks that when the verb in SA is followed by a pronoun, it agrees with this pronoun in number person and gender, even if this pronominal is overt or covert. This can be observed in the following example (Soltan 2006: 248):

30- a. qara?-uu	(hum)	d-dars-a.	SV+full agreement
read.3mp	(they)	the-lesson-Acc	

Though the verb is followed by the subject it agrees with it in person, number and gender. The MP principles, outlined above, do not provide an explanation for this asymmetry of full/partial agreement in SV structures. When the verb is followed by a lexical noun, whether singular or plural, it agrees only in gender. But when the verb is followed by a pronominal, all Phi –features are provided and reflected on the verb resulting in full agreement.

6. Conclusion

The study has surveyed the applicability of the principles of Chomsky's MP on the agreement asymmetries that are exposed in two word orders of SA. The study has shown that MP principles can account for the agreement features in SV word order. As shown in (8-1), the phi features of person, number and gender reflected on the verb agree with preverbal subject and can be justified within the framework of MP. However, the same framework of MP fails to account for compound tense constructions in SA. As shown in (23), the principles of MP cannot explain the how the subject is to be assigned the nominative case.

The same problem can be observed with VS constructions. Although the MP framework accounts for the partial agreement of gender between the verb and its postverbal subject, as in (8-2), it fails to provide an explanation for full agreement between the verb and its postverbal subject when it is a pronoun. The study concludes that the principles of MP could not account for the asymmetry in agreement features of the verb in both SV and VS word orders in SA.

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