SYNTACTIC DEPENDENCIES AND PHASE EXTENSION: VERB MOVEMENT IN STANDARD ARABIC

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ABSTRACT

This paper examines verb movement in Standard Arabic and provides a new analysis to account for this obligatory movement in terms of C/T-v syntactic dependencies. I recast the proposal put forth by Biberauer and Roberts (2010) where they claim that verb movement is an instance of a reprojective movement (See also Koenemean 2000; Surányi 2005; Donati 2006; among others). However, I provide a different motivation for this movement in terms of locality and last resort. This approach is coupled with Gallego's (2010) analysis of phase extension where he argues that verb movement is triggered by the need to minimize the search domain of the C probe. I adopt the same mechanism, but differ with Gallego in the type of feature the head C needs to check. I argue that the feature in question is finiteness [Fin], an interpretable unvalued feature on C, which has a valued instance on v. Therefore, v moves to the left of T, as a last resort, in order to circumvent the intervention effect caused by the head T and to be in the local domain of C; thus, preserving the locality of the probe and extending the vP phase boundary.

Key words: Phase extension, syntactic dependency, finiteness, locality, verb movement

1. INTRODUCTION

The classical instance of verb movement that has received extensive research in the literature is the verb-second phenomenon in German. In this paper, however, I examine verb movement in Standard Arabic and provide a new analysis that can account for this type of movement, taking into consideration the recent claims that syntactic operations proceed within phases.

Verb movement is an instance of move-alpha where alpha is an X° category. The X here is the verb and the target of movement is a position in the functional structure. Under GB grammar, this type of movement has to adhere to the standard conditions on movement such as locality, structure preservation, and c-commanding traces (Roberts 2011). The main condition on locality is the head movement constraint, proposed in the literature (Gallego 2010), which, informally, bans the direct movement of a head X to another head Y, when there is an intervening head Z. Obviously, this constraint on head movement ensures that the head/verb will move in successive cycles. Structure preservation will ensure that the movement will not jeopardize the already established relations between the members of the structure; consequently the target position of the movement should be another head. In this regard, Chomsky (1986:4) posits two general conditions on movement: "only X° can move to a head position" and "only a maximal projection can move to a specifier position". Finally, traces should be well-formed, in the sense that the chains should be c-commanded by their antecedents, and this means that verb movement, which is an instance of head movement, should not violate this c-command relation (Roberts 2011).

In early minimalism, most of these conditions were retained and with the introduction of the checking theory, verb movement was a standard movement where the verb can climb up the tree and left-adjoin other functional heads like AgroP, AgrsP and TP. However, the English/French verb distinction forced Chomsky to alter positions a bit and adopt the copy theory. In later work, Chomsky (2001) has adopted a totally different stand on head movement, where he assumes that such movement may not actually be part of narrow syntax, and if it does exist, it must be relegated to the PF component. This standpoint is motivated

by the same structural and technical problems associated with head movement.

In the second section of this paper, I will be looking at the different technical and structural problems associated with verb movement, which led Chomsky to take an extreme move and abandon this operation from narrow syntax. In the third section, I briefly discuss the phenomenon of verb movement and word order alternation in Standard Arabic. In the fourth section, I provide a brief sketch of some of the well-established diagnostic tests for verb movement in Standard Arabic, to the effect that such movement does actually exist in this language. In the fifth section, I briefly examine some of the major accounts proposed in the literature to handle verb movement. In the sixth section, I provide a new analysis of verb movement that is based on syntactic dependencies between C and v. In the seventh section, I look at the effect of verb movement on the clausal structure, in the light of the recent observations on phase extension. In the eighth section, I revisit the phenomenon of verb movement in Standard Arabic and apply the proposed analysis to the Arabic data. In the last section, I summarize the main claims argued for in the paper.

2. WHY IS VERB MOVEMENT A PROBLEM?

Opponents of verb movement/head movement have pointed out several problems associated with this operation (Platzack 2013). The first technical problem is that verb movement violates the extension condition. It is argued in the literature that instances of movement should ideally start from the root of the derivation to target the top most category and extend it further (Chomsky 1995).

(1) Extension condition:
Merge should be effected at the root.

Chomsky (1995) argues that head movement violates the extension condition, and it is just an adjunction process of one head to the next higher head. Also, it is noticed that the moved head does not c-command

its copy, thus violating the c-command restriction on movement. Although head movement has problems like these, still Chomsky could not do away with head movement altogether. Instead, he assumed that head movement can be relegated to the PF component and treated as a non-syntactic operation.

The second problem with head movement is locality. Heads cannot be extracted or moved out of their maximal projections. However, some phrasal movement operations are allowed to cross the border of their maximal projections and can be considered an instance of A-bar movement.

The third problem is the relativized minimality effect associated with head movement. This might arise when a verb is preceded by an auxiliary. If one assumes the auxiliary to be an X^0 category, then movement of the verb into a higher position will be blocked by the auxiliary head, due to relativized minimality.

The fourth problem is that allowing heads to move and adjoin other heads without any restriction will produce complex types of verbs on which many categories are attached and merged. This in turn raises another problem which concerns the ban on merged items extraction. It means that the moved head along with the target head cannot undergo selective extraction of either of them (Platzack 2013).

Further, it has been pointed out in the literature that head movement does not have any semantic content or effect. Movement of lexical items incur changes in meaning or different readings of the same item. However, movement of the verb into a higher head does not actually contribute to the semantics of the structure.

Despite all the technical problems associated with head movement, no one has ventured to claim that such movement does not exist. It does exist, but without a conclusive analysis that can fathom and explain its technicality. The latest trend in the literature (Chomsky 2001) treats head movement as a PF operation. Still, "very few attempts to formalize head movement as a PF operation have been offered" (Anonymous reviewer).

Nonetheless, no one can deny the fact that head movement has a structural effect reflected in the linear word order whereby syntactic heads change positions by way of climbing the tree and left-adjoining other heads. Regardless of the semantic effect of verb movement, it is

clear that such movement exists, and I will show in the next section the extent and pervasiveness of head movement in the clause structure.

3. VERB MOVEMENT & WORD-ORDER IN STANDARD AR ABIC

Standard Arabic has two main word orders where the subject can either precede or follow the verb:

(2) katab-a   l-awlaad-u   r-risaalat-a   (VSO)
     wrote-sg the-boys-nom the-letter-acc
     'The boys wrote the letter.'

(3) al-awalaad-u   katab-uu r-risaalat-a   (SVO)
     the-boys-nom wrote-pl   the-letter-acc
     'The boys wrote the letter.'

My point of departure here is to examine these two word orders and identify the unmarked word order in this language. One point in order that should be taken into consideration is the fact that while the verb fully agrees with its subject in person, number and gender in SVO word order, it actually fails to agree in number with a plural subject in VSO word order and instead shows a default singular value. Let's start by asking the following questions: which element actually moves in these two word orders? Is it the verb or the subject? And what motivates either movement?

Under minimalist assumptions, the subject is uniformly generated inside the vP shell, specifically in the external specifier of vP (Koopman and Sportiche 1991). This amounts to saying that SV can be considered the unmarked word order, keeping the position of object aside. This order does not entail any movement of any element and is minimally more economic (Kayne 1994; Chomsky 2000). The fact that Standard Arabic does actually employ this order might denote that it is the unmarked word order. In fact, other morpho-syntactic operations like case/tense/formal features can all be checked/valued in a straightforward

manner, whether one adopts the early minimalist spec-head configuration or the newly-devised Agree mechanism.

Apparently, arguing in favour of the SVO to be the unmarked word order in this language seems tempting, since this order can be obtained in-situ, without appealing to movement. Following Chomsky's (2000, 2001) theory of formal feature valuation, one can assume that the inflectional head T in SVO order values its formal features against the vP-internal DP and, as a reflex, assigns the Case of the subject DP in-situ. However, how can we derive the alternative VSO order? A possible answer would be to assume that the verb may not need to move at all in VSO order if the subject can undergo a rightward movement. However, some technical problems might arise because of this movement. First, it is not clear what can actually motivate the movement of the subject. Its Case is already assigned, hence frozen in place (Chomsky 2001). In addition, what will be the target position of this movement? We have to assume that there is a specifier position between the verb and the object in which the subject can be tucked in. Rightward movement of the subject can be suggested to account for word orders like VOS or OVS, but it is difficult to apply for VSO.

Another argument against subject rightward movement in VSO is the fact that whenever the object is pronominal in Standard Arabic, it has to be encliticized into the verb. Under this configuration, there is not a vacant position for the moved subject[1]:

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[1] An anonymous reviewer pointed out that a viable alternative rightward movement would be to assume that VSO is derived from the right projection of the subject along with the rightward movement of the object, illustrated below:

(i) [[VO] S] -> [[[V ti] S] Oi]

It is clear that this analysis is neat and can easily circumvent many technical problems associated with other types of rightward movement, accounting at once for the apparent word order alternation between the subject and the verb. However, the main problem with this analysis is the difficulty to motivate this movement and, at the same time, show that it is a better alternative to a leftward movement. Besides, there are other technical issues that might arise because of this movement. First, the rightward movement of the subject over the object will cause intervention effect related issues. Second, we have issues related to the minimality condition since the object can move to satisfy any feature instead of subject movement. Third, we will have serious issues of unbounded traces,

(4) hum akaluu-ha   (SVO)
    they ate-it
    'They ate it.'

(5) *akaluu hum ha   (VSO)
    ate   they it
    'They ate it.'

Another valid option to account for the VSO order is to assume that the verb is raised into a higher head, presumably the head T. Two problematic issues will arise at this juncture. The first issue has to do with the motivation for verb movement. If formal features, tense, and Case can all be valued via Agree in-situ in the SVO order, what else can motivate verb movement in VSO order? The second issue is the subject-verb agreement asymmetry. The verb loses its plural number morphology when it moves over the subject in VSO order (see examples 2 and 3 above). There has been no satisfactory explanation for these two issues which pose a problem for the claim that SVO is the unmarked word-order in Standard Arabic. In addition, in sentences where the subject is followed by an adverb in S-Adv-V-O order it is clear that the subject is raised to spec-TP, given the minimalist assumption that adverbs project above vP. Under this configuration, deriving the VSO order is untenable. Verb movement to T will only generate an SVO order.Moreover, if one adopts the minimalist assumption that subjects move to spec-TP to satisfy the EPP feature on T (Chomsky 2000, 2001), movement of the verb to T in Standard Arabic will not generate the desired VSO order, since the resulting order will still be SVO:

(6) $[_{TP} \text{subject}_i \ \text{verb}_y{+}T \ [_{vP} \ t_i \ \ t_y \ \text{object}]]$

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unless one adopts a version of minimalist syntax where traces are completely done with. Fourth, the rightward movement of the object will cause the same technical problems mentioned above about subject movement over the object, i.e., intervention effect and minimality condition. Finally, if one adopts a rigid version of the extension condition, this analysis seems to violate this condition.

In such a scenario, we will have to assume that the verb moves to C (Mohammad 1990), so that we get the desired VSO order. However, Fassi Fehri (1993:26) argues that in the example below many categories precede the verb; however, the complementizer precedes all these categories:

(7) zaam-a an qad laa yat-ii Zayd-un   (Standard Arabic)
    claimed-3.s.m that may not come-3.s.m Zayd-nom
    'He claimed that Zayd may not come.'

He argues that the embedded C is followed by both the modal and the negation particles which can head their own projections. The modal and negation particles are not bound morphemes and there is no motivation to assume that the verb will move to both projections in order to reach C.Another argument against verb movement to C is the fact that in this language finite complementizers must always be followed by the subject, not the verb (Fassi Fehri 1993):

(8) qala anna l-fataata naamat
    said that the-girl slept
    'He said that the girl slept.'

(9) *qala anna naamat al-fataatu
    said that slept   the-girl
    'He said that the girl slept.'

In fact, the real problem that this account faces is the unexplained optionality in verb movement. In SVO, the verb does not move; however, it moves in VSO. This optionality in verb movement is very problematic, considering the absence of any valid motivation/explanation. It is argued that Standard Arabic is a morphologically rich language where the verb encodes information of more than one paradigm at the same time (Fassi Fehri 1993). This morphological richness explains the fact that the verb in this language needs to move into higher heads like tense, agreement, aspect, mood, etc. (Fassi Fehr 1993; Ouhalla 1994). However, assuming that the verb moves outside the vP shell only in VSO word order is

36

dubious at best. If the verb moves past the subject in VSO order in order to license its rich morphology, how does the verb license its morphological features in SVO?

This has actually led modern Arab linguists to assume that the unmarked word order in Standard Arabic is VSO and the alternative order SVO is derived via subject movement; hence verb movement in Standard Arabic is not optional since the verb has to move in both word orders (Fassi Fehri1993; Ouhalla 1994; Shlonsky1997; Benmamoun 2000; among others). Therefore, the optionality is actually in subject movement, i.e., whether the subject stays in-situ in spec-vP or moves to spec-TP. In an unpublished manuscript, I tackle this optionality in terms of formal feature availability on the functional head T, whether ϕ-complete or ϕ-defective, and the motivation for the EPP feature. The proposed analysis accounts for both subject movement as well as subject-verb agreement asymmetry at once.

It is argued in the literature (Fassi Fehri1993) that languages employ the unmarked word-order more often and empirical data show that the VSO order is the most commonly used word-order in Standard Arabic. This order is used in root and embedded clauses, and transitive and intransitive constructions. It is the word-order used in classical and modern prose, poetry, sermons, proverbs, etc. Moreover, VSO is the order that can be used in discourse-initial sentences where instances of topicalization cannot arise; and it is also used in response to questions that require a full sentence answer to supply information in "what happened?" contexts where instances of focus do not arise (Fassi Fehri 1993).

Benmamoun (2000:52) argues that VSO is the unmarked word order in Standard Arabic where the verb is obligatorily raised to T. He claims that the head T in Standard Arabic has a feature that needs to be valued. The feature in question is [+V] which can be valued through the movement of the verb to T. To this effect, the example below shows that the verb must merge with negation before moving into a higher head:

(10)   Ahmad ma-katab-sh ar-risaaleh   (Yemeni Arabic)
        Ahmad neg-wrote-neg the-letter
        'Ahmed did not write the letter.'

Benmamoun argues that negation is located between the verb and the TP head. Thus, on its way to T, the verb is forced to merge with Neg, due to relativized minimality effects. Fassi Fehri (1993:19) argues that VSO is the unmarked word order in Standard Arabic and states that "surface word-order is derived by head moving V to I. This operation is an adjunction of a head to another head, and is subject to general principles of head movement". Moreover, Shlonsky (1997:7) argues that "Standard Arabic clauses are unmarkedly VS. I take VS order to essentially involve raising of the verb over the subject". There have been attempts to account for this obligatory movement of the verb in Standard Arabic. All accounts try to answer the following two questions: What motivates this obligatory movement of the verb? And where does the verb move to?

The first account is the traditional head movement where a head is left adjoined to a higher head. Therefore, it is claimed that the verb in Standard Arabic is adjoined to T, forming the complex v+T. Moreover, it is argued that the verb moves to T in order to license the latter's [+V] feature (Fassi Fehri 1993; Ouhalla 1994; Shlonsky 1997; Benmamoun 2000). The main problems with this account is the apparent violation of the extension condition, locality, and relativized minimality effects when there is an intervening head like Aux or Mod, and the production of complex heads.

One way to eliminate the problems of head movement, and still account for all empirical facts is to adopt Kayne's (1994, 1998) VP-remnant movement, where the VP, containing the verb and traces of the moved subject and object DPs, undergoes movement to some specifier position. This type of movement is argued to be triggered when the VP projection is vacated of its arguments by means of moving the subject and the object outside VP. It is argued that a functional head FP is created above VP in order to host the moved arguments. At this point, the VP-remnant undergoes movement to some specifier position in order to get the VSO order. After that, the subject DP undergoes a second movement to a specifier position higher than the VP-remnant position so that we get the SVO order. Actually, VP-remnant movement might escape the problem of moving an X^0 element and can account for verb movement and word-order alternation in many languages, but it still has

some problems. First, VP-remnant movement seems to be vacuous and hardly has any semantic effect. The second problem is that it is not clear what triggers this movement.' If it is assumed that the VP-remnant moves as a result of DPs moving out of its specifier and complement positions, then the real question will be: what is the motivation for subject and object movements outside the VP? The third problem is the creation of functional heads, by sheer stipulation, which have no semantic or phonetic value.

4. DIAGNOSTICS FOR VERB MOVEMENT IN STANDARD ARABIC

In this section, I provide some empirical evidence to show that the verb actually undergoes movement in Standard Arabic and that such movement occurs in narrow syntax. The diagnostic tests will prove that the verb in this language undergoes obligatory movement from its base-position in the vP shell into a higher functional head. The four diagnostic tests that will be briefly discussed are subject position, adverb position, floating quantifier position, and negation particle position.
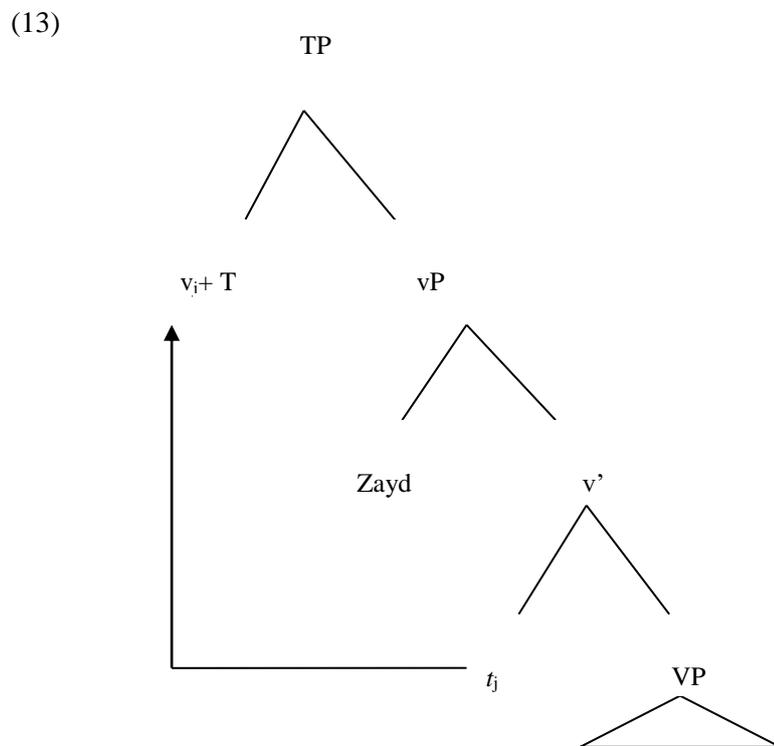
4.1 Subject Position

The strongest empirical argument for verb movement in Standard Arabic comes from the fact that it is difficult to derive the two word-order alternatives, i.e., VS and SV, without this movement (Roberts, 2011). In the literature on word order in this language, it has been argued that the unmarked word order is VS where the verb moves to T to check the [+V] feature (Fassi Fehri 1993; among others). However, if one follows Kayne's assumption (1994) that SV is a universal unmarked word order shared by all languages, then how can we account for the alternative VS order in Standard Arabic, without moving the verb?

(11)   Zayd-un qara-a kitaab-an
        Zayd-nom read-ind book-acc
        'Zayd read a book.'

(12) qara-a Zayd-un kitaab-an
      read-ind Zayd-nom book-acc
      'Zayd read a book.'

Obviously, the verb in the second example above must move from its base position and leave the vP shell towards a higher functional head:

(13)

TP

v_i+ T   vP

Zayd   v'

t_j VP

However, in any envisaged scenario to accommodate verb movement inside the vP shell, it is still difficult to account for the movement of the verb in the following two examples, without resorting to head movement:

(14)   Zayd-un katab-a-ha
          Zayd-nom wrote-ind-it
          'Zayd wrote it.'

(15)   katab-a-ha Zayd-un
          wrote-ind-it Zayd-nom
          'Zayd wrote it.'

In Standard Arabic, when the object is pronominal, it must be encliticised onto the verb whether it is an SV or VS word order. In this scenario, both the verb and pronominal object undergo movement to the left of the subject 'Zayd'.
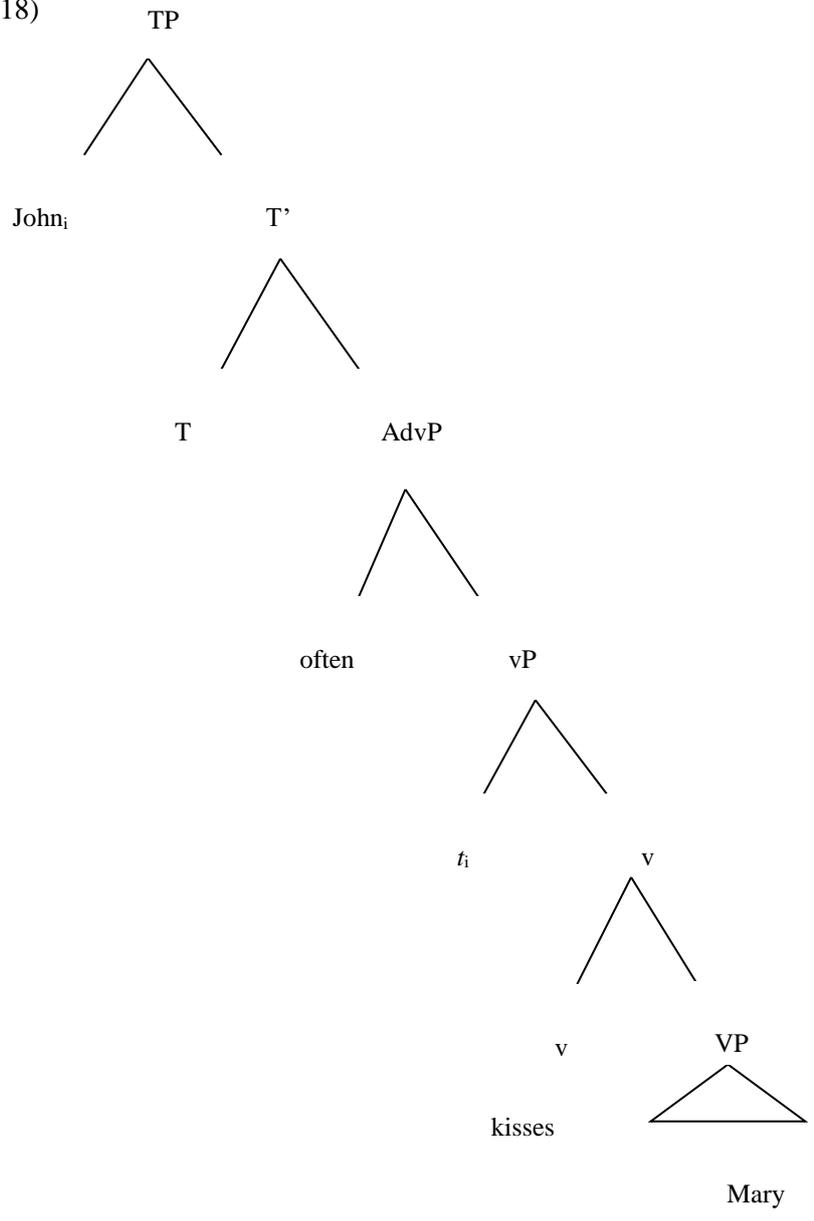
4.2 Adverb Position

Under minimalist assumptions, lower adverbs are usually positioned above vPs. This assumption was the main diagnostic test implemented by Pollock (1989) in his seminal work on the difference between English and French, with regard to head movement:

(16)   John often kisses Mary.

(17)   *John kisses often Mary.

Pollock argues that in English the verb does not undergo head movement, hence the ungrammaticality of the second sentence above. The structure of the grammatical sentence is represented below:

(18)

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                    TP
                   /  \
                  /    \
              Johnᵢ    T'
                      /  \
                     /    \
                    T     AdvP
                         /  \
                        /    \
                     often    vP
                             /  \
                            /    \
                          tᵢ      v
                                 /  \
                                /    \
                               v     VP
                                    /__\
                             kisses
                                    Mary
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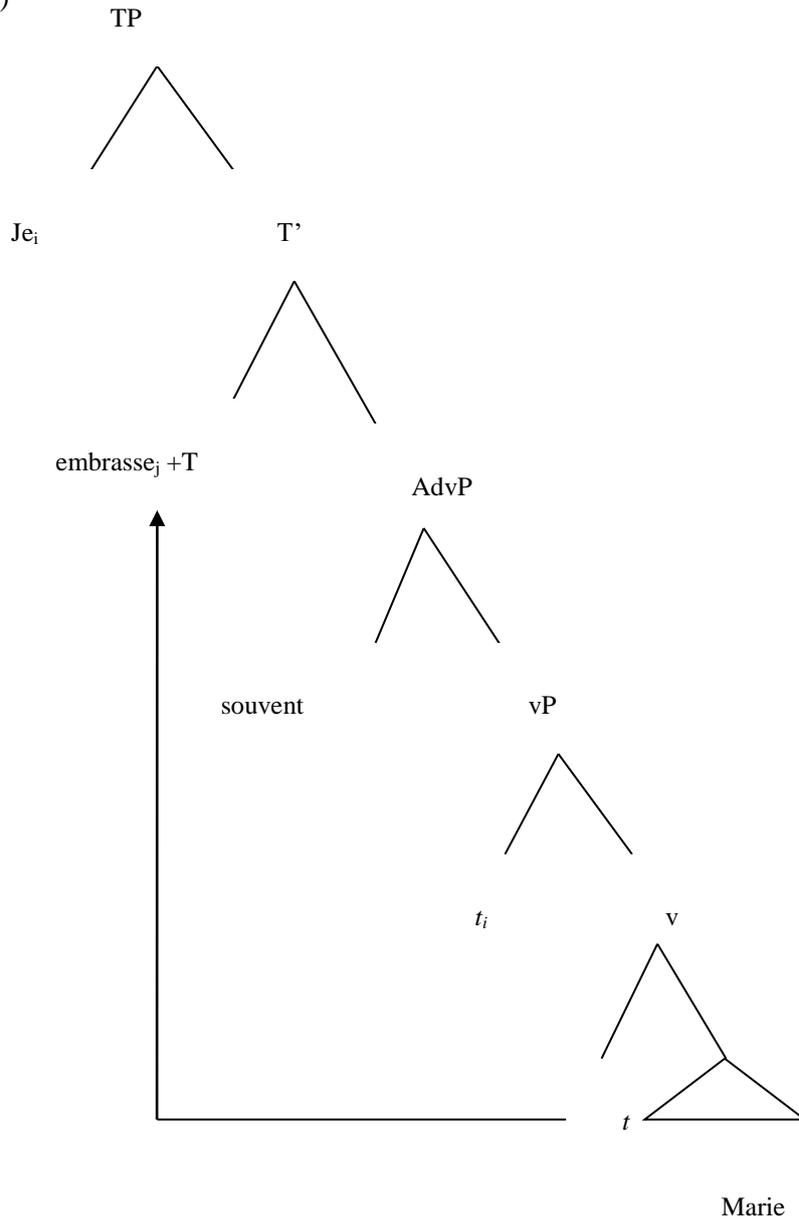
Pollock notes that in French, unlike English, a finite verb cannot follow an adverb:

(19)   J'embrasse   souvent Marie.
        I kiss   often   Mary.
        'I often kiss Mary.'

(20)   *Je souvent embrasse Marie.
        I   often   kiss   Mary
        'I often kiss Mary.'

Pollock argues that since adverbs of the 'often' type usually occupy a position above vP, the verb must bypass the adverb position and climb up the tree to adjoin the next higher functional head:

(21)

TP

Je_i T'

embrasse_j +T

AdvP

souvent vP

t_i v

t

Marie

Apparently, Standard Arabic does not have the rigid subject-verb word order manifested in either English or French, but the verb usually precedes the 'often' type adverbs in this language in both word orders SV and VS:

In SV sentences:

(22)   *Zaydun ghaliban yanamu mubakiran
        Zayd   often   sleeps   early
        'Zayd often sleeps early.'

(23)   Zaydun yanamu ghaliban mubakiran
        Zayd   sleeps   often   early
        'Zayd often sleeps early.'

In VS sentences:

(24)   *ghaliban yanamu Zaydun mubakiran
        often sleeps Zayd early
        'Zayd often sleeps early.'

(25)   yanamu ghaliban Zaydun mubakiran
        sleeps often Zayd early
        'Zayd often sleeps early.'

It is clear from the examples above that lower adverbs usually follow verbs in Standard Arabic. If the minimalist assumption that adverbs are usually above vP is on the right track, then the examples above show instances of verb movement where the verb in this language leaves the vP shell and left-adjoins a higher head.

4.3 Floating Quantifier Position

Following Pollock (1989), floating quantifiers seem to have some fixed positions in clause structure, whereby finite verbs in English must follow these quantifiers:

(26)   My friends all love Mary.

It is argued that moving the verb across the floating quantifier 'all' will render the sentence ungrammatical:

(27)   *My friends love all Mary.

By contrast, French, argues Pollock, has a structure in which finite verbs must follow the floating quantifier, otherwise the sentence stands ungrammatical:

(28)   mes amis aiment tous Marie.
        my   friends love all Mary
        'My friends all love Mary.'

(29)   *mes amis tous aiment Marie.
        my   friends all love Mary
        'My friends all love Mary.'

However, Standard Arabic allows the verb to precede the floating quantifier in both word orders, i.e., VS and SV:

(30)   yuhibu asdegaa-i kulluhum mariam
        love   friends-my   all Mary
        'My friends all love Mary.'

(31)   asdegaa-i yuhibuuna kulluhum mariam
        friends-my love   all Mary
        'My friends all love Mary.'

4.4 Negation Particle Position

Standard Arabic has negation particles that usually head the clause like 'ma', and some other particles that usually come before the verb like 'la', 'lam', and 'lan'. However, many spoken varieties of dialectal

Arabic show two negation particles simultaneously: a free marker and a clitic. The following examples are from Yemeni Arabic:

(32)   Zayd ma garaa-sh al-kitaab
        Zayd Neg read-Neg the-book
        'Zayd did not read the book.'

(33)   ma garaa-sh Zayd al-kitaab
        Neg read-Neg Zayd the-book
        'Zayd did not read the book.'

Benmamoun (2000) argues that the verb in dialectal Arabic must merge with negation. He argues that negation is located between the verb and the TP head. Thus, on its way to T, the verb is forced to merge with Neg, due to relativized minimality effects. This state of affairs denotes that the verb in this language does actually move out of its clause, passing other functional heads like AdvP, NegP, QP, and TP.

5. PREVIOUS ACCOUNTS OF VERB MOVEMENT

The Verb movement has received extensive research and discussion in generative grammar. However, there has not been an irrefutable alternative to this movement which can solve all the problems. In the GB framework, head movement was considered an instance of Move-α. The Split-INFL hypothesis (Pollock 1989), where I and AGR have distinct projections, rests on the assumption that the verb leaves the vP-shell and climbs into higher projections via head movement. Chomsky (1995) proposes that Tense in English is specified for two features, the [+V] feature and the [+D] feature. The [+V] feature determines the interaction between Tense and the verb, while the feature [+D] determines the Tense interaction with the subject.

However, it is argued that head movement has theoretical and empirical problems. Theoretically, it is argued that such movement violates the extension condition (Chomsky 1995). Empirically, it is noted that lexical verbs in a language like English do not move overtly, taking

adverb placement as a diagnostic test for this assumption. Therefore, Chomsky (1995) suggests that the [V] feature on the verb raises covertly to value the [+V] feature on the head T. Conversely, Roberts (1998) proposes that the [V] feature on the verb raises overtly while the lower verbal copy gets spelled-out. Bobaljik (1994) argues that merger of tense and the verb does not involve movement. He argues that this merger is obtained under adjacency when T and vP are adjacent.

A viable way to eliminate the problems of head movement, and still account for all empirical facts is to adopt VP-remnant movement (Kayne 1994, 1998; among others), where the VP, containing the verb and traces of the moved subject and object DPs, undergoes movement to some specifier position. This type of movement is argued to be triggered when the VP projection is vacated of its arguments by means of moving the subject and the object outside VP. It is argued that a functional head FP is created above VP in order to host the moved arguments. At this point, the VP-remnant undergoes movement to some specifier position in order to get the VSO order. After that, the subject DP undergoes a second movement to a specifier position higher than the VP-remnant position so that we get the SVO order. Actually, VP-remnant movement might escape the problem of moving an X^0 element and can account for verb movement and word-order alternation in many languages, but it still has some problems. First, VP-remnant movement seems to be vacuous and hardly has any semantic effect. The second problem is that it is not clear what triggers this movement. If it is assumed that the VP-remnant moves as a result of DPs moving out of its specifier and complement positions, then the real question will be: what is the motivation for subject and object movements outside the VP? The third problem is the creation of functional heads, by sheer stipulation, which have no semantic or phonetic value. Moreover, it has been pointed out (Platzack 2013) that remnant movement does not work for polysynthetic languages like the Bantu languages, where it is difficult to create a complex verb using this movement.

With the advent of the Agree-based syntax (Chomsky 2000), the operation Agree is assumed to value features on T at a distance via sending a probe to a corresponding goal. To solve the problems associated with head movement, it has been argued that this movement

has to be eliminated from the syntax and be treated instead as an operation of the PF interface (Chomsky 2001). While this might escape the theoretical problems mentioned above, and whether head movement is a syntax proper operation or a PF one, its effect on linear order in a language like Standard Arabic compels us to adopt such movement. However, there have been some recent attempts to circumvent these technical problems associated with head movement. Lasnik (1999, 2003) investigates the different accounts of verb movement in the literature and argues for a hybrid account whereby there are two types of V: inflected (French) and bare (English):

(34)   Inflected V vs. Bare V:
    a. French verbs are fully inflected in the Lexicon (possibly correlating with the fact that there are no bare forms; even the infinitive has an ending).
    b. *Have* and *be* are fully inflected in the Lexicon (possibly correlating with the fact that they are highly suppletive).
    c. All other English verbs are bare in the Lexicon. (from Gallego 2010:100).

Furthermore, Lasnik distinguishes two types of T: featural (French) and affixal (English):
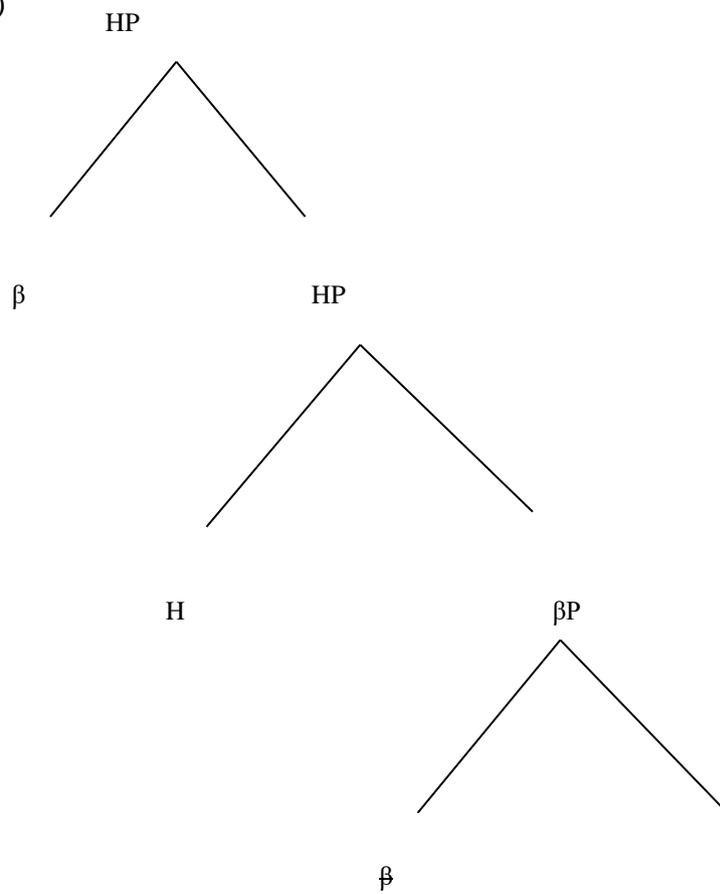
(35)   Affixal T vs. Featural T:
    a. T is freely an affix or a set of abstract features.
    b. Finite featural T is strong in both French and English.
    c. Affixal T must merge with V, a PF process (distinct from head movement) demanding adjacency. (from Gallego 2010:100).

The obvious problem with Lasnik's analysis is the adjacency condition. It is difficult to establish merge between v and the affixal T when sometimes an intervener like an adverbial or prepositional adjunct comes in between. Also, in a language like Standard Arabic, where there is no distinct morpheme for tense, the suggested operation might fail to accomplish the v-T merge in the proper way described in the aforementioned premises.
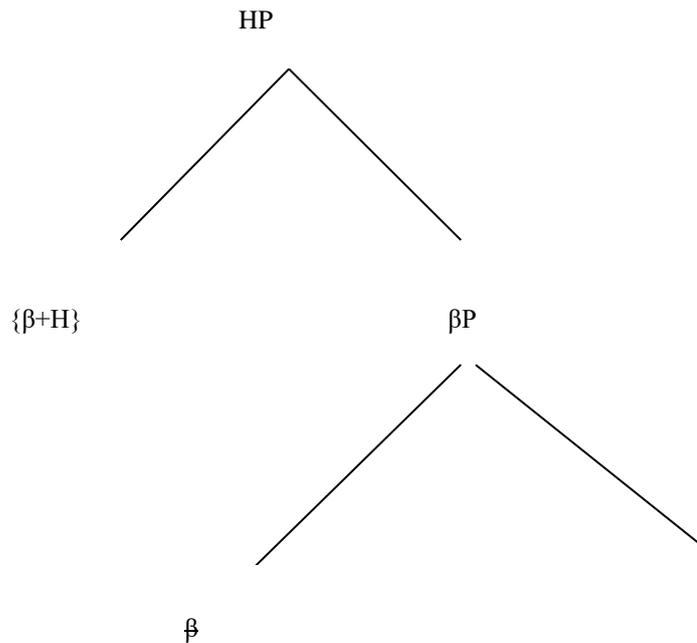
Another interesting account assumes that the moved head actually adjoins to the root of the structure (see 27 below) and a complex head is created by a second operation called M-Merger (see 28) (Matushansky 2006):

(36)

        HP
       / \
      /   \
     β   HP
           / \
          /   \
         H   βP
               / \
              /   \
             β

(37)

```
                        HP
                       /  \
                      /    \
                     /      \
                    /        \
                   /          \
                  /            \
              {β+H}            βP
                              /  \
                             /    \
                            /      \
                           /        \
                          /          \
                         β
```

Apparently, this mechanism circumvents the technical problem of violating the extension condition, but it does not have an independent motivation. However, "Matushansky provides some evidence that m-merger takes place in some contexts, e.g., in suppletion and intermediate wh-copies" (Anonymous reviewer).

Platzack (2013) examines head movement and argues for a new phonological analysis of this movement, claiming that his analysis does not have the technical problems of syntactic head movement. He actually assumes that in the so-called head movement operation there is no actual movement of the verb; instead, head movement is considered to be a spell-out of the extended projection chain of heads of a lexical item. According to him, the chain of heads include: C, T, MA (modal/aspectual), v, and V. Platzack proposes two spell-out principles that can replace syntactic head movement (2013:21):

(38)   Spell-out principle 1 (spell-out of π):
Phonological information, π, introduced in a head H that is part of the extended projection of a lexical item, can be spelled out in H or in any head within the extended projection that c-commands H and does not either introduce its own π, or is linearly separated from H by a head in the same extended projection with its own π (affixes are not marked π).

(39)   Spell-out principle 2 (spell-out of affixes 1 (spell out of π)):
a. An affix must be spelled out on the closest π that it c-commands.
b. Affixes are marked for suffix/prefix status; a suffix is attached to the right side of π (and eventual suffixes that have already been attached to π), and a prefix is attached to the left side of π (and eventual prefixes that have already been attached to π).
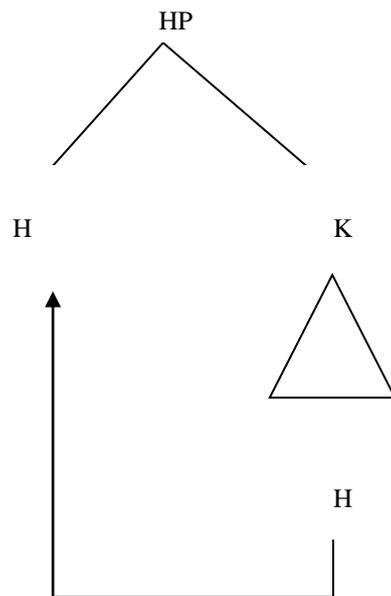
Platzack offers another PF-movement approach which promises to evade the technical problems of the syntactic head movement. Obviously, no one expects PF-movement to obey the extension condition or the c-command condition. In addition, we expect it to be triggered quite separately from syntactic XP-movement, to be subject to special locality constraints, and to lack LF effects (Roberts 2011). However, the system described here allows the phonological information to be spelled out randomly on any head. Also, the condition on the spell out of affix is too strict and requires adjacency, a problem for languages with free adjuncts and floating quantifiers.

Biberauer and Roberts (2010) examine head movement and provide a new account which, they claim, circumvents the usual problems associated with this movement. First, they argue that the old dichotomy of rich vs. poor morphology on the verb seems not to be the reason behind verb movement. Instead, they claim that verbs have two types of morphology: tense morphology and agreement morphology. While agreement morphology motivates the licensing of null subjects, tense morphology seems to trigger verb movement. In particular, Biberauer and Roberts argue that verbs in languages which have tense inflection tend to move, whereas verbs in languages which have poor tense morphology stay in-situ.

Moreover, they propose a new account of verb movement called the reprojection approach where the moving category gives its label to the new category formed by movement. The basic idea is to take head-movement to be syntactic movement, but to treat it as arising from a different set of conditions from XP-movement (Roberts 2011). The idea of reprojection is built on merging the verb twice: first with its complement and the second with T. They argue that tensed verbs are compound verbs with two combined elements: v-element and T-element. Therefore, the tensed verb has to merge first with a v-complement to satisfy the v-requirement and then remerge with T to satisfy the T-requirement. Therefore, verb movement is considered to be an instance of re-merge. The reprojective movement appears to be a valid alternative approach which avoids the general difficulties raised by Chomsky (2001). It certainly leads to an interesting syntactic account of verb-movement, without the need to relegate it to the PF-component.

The reprojection approach is definitely promising and neat (for a detailed discussion of the technicalities of the reprojective movement see Surányi (2005)), but the notion of poor and rich tense in Biberauer and Roberts (2010) is reminiscent of the old checking theory (Chomsky 1995), and the motivation for the movement of the verb is not clear.In fact, it is argued that the reprojective movement "retains the descriptively beneficial aspects of head movement, but at the same time does away with the unwanted complications. The alternative is to treat head movement as uniformly involving root (re-merger). In minimalist terms of generalised transformations, under the right conditions a head H can be moved out of the current root phrase marker K, merging H with K and projecting HP (the Root Merger Hypothesis, RMH). This movement can be referred to as 'substitution' instead of adjunction (in terms of a now anachronistic bi-partitioned typology of movements). Re-merge, just as with phrasal movement, is recursive, i.e. head movement in these terms can be successive cyclic." (Surányi 2005:8):

(40)

```
                    HP
                   /\
                  /  \
                 /    \
                /      \
               H        K
                        /\
                       /  \
                      /____\

                        H
```

　　　Some of the major premises of the reprojective movement include (Surányi 2005:8-14):

(i) The moved head evidently commands its trace position. No definitional problems arise.

(ii) The extension condition is also trivially satisfied: the moved head extends the root. Head movement is no longer exceptional.

(iii) The hidden disjunction in the negative definition of checking domain is also dispensed with: given that there is no head already existing prior to head movement, one of the two configurations of the local checking relation ceases to exist. Then, the checking configuration in principle can be defined directly.

(iv) The effect of the HMC, i.e. the strictly local nature of head movement, in principle can be derived on this account if it can be shown that once external merge of a new head N occurs, a lower head H cannot be re-merged with the root.

(v) Given that the moved head projects, the uniformity condition is conformed to. No movement occurs into a head, hence a non-uniform chain which is maximal upstairs and non-maximal downstairs cannot come about.

(vi) Merge is triggered by checking needs.

(vii) The checked element (probe) projects.

The approaches outlined here represent viable alternatives to head-movement. These approaches arise as a response to Chomsky's (2001) recent views on head movement. It is clear that none of the approaches mentioned here is entirely free of problems (for detailed discussion of these alternatives and their problems see (Roberts 2011)), and none can actually be a conclusive alternative. In the next section, I outline a new analysis of verb movement that might overcome some of the problems of previous approaches.

6. A NEW ANALYSIS OF VERB MOVEMENT

The first premise of this analysis is that head movement is a syntactic movement that can be obtained in a reprojective configuration, along lines discussed by Biberauer and Roberts (2010). The second premise is that the v-to-T movement does not necessarily denote any feature matching between the two heads. Under minimalist assumptions, both v and T have different sets of ϕ-features that are valued by two different DPs, the subject and the object; therefore, v and T cannot be matched (Gallego 2010).

Apparently, both heads can share a feature as in Pesetsky and Torrego's analysis (2001), but ϕ-features andT/Case features do not

seem to motivate verb movement here. Why? Because Agree can do the job remotely without the need to move anything anywhere. Hence, if the head T in Standard Arabic has a feature [V] which needs to be checked/valued, Agree can probe the corresponding valued instance of the same feature on v, in situ. What is more, if the head T in Standard Arabic has a T/Case feature that, somehow, requires checking against the verb, or alternatively can be checked by the verb if it is closer than the subject, then Agree can, again, probe the goal, as desired, without resorting to movement.

Thus, I propose, in the spirit of Biberauer and Roberts (2010), that verb movement in Standard Arabic undergoes a reprojective movement to T. Moreover, I claim that the motivation for verb movement in this language is the following: the C, T, and v heads all share the same feature, i.e., finiteness [Fin], where the instances of this feature are unvalued on C and T, but valued on v:

(41)   a. VS: $[_{CP}\ C_{[FIN]}\ [_{v\text{-}TP}\ v_{[FIN]i}+T_{[FIN]}\ [_{vP}\ \text{sub}_i\ ...]]]$

    b. SV: $[_{CP}\ C_{[FIN]}\ [_{v\text{-}TP}\ \text{sub}_j\ v_{[FIN]i}+T_{[FIN]}\ [_{vP}\ {}_{ji}\ ...]]]$

My proposal differs from Biberauer and Roberts (2010) with regard to the motivation for verb movement. Moreover, the proposal differs from Pesetsky and Torrego's as well as Gallego's in the type of feature that can bind C, T, and v together. While Pesetsky and Torrego assume it is an aspectual T/Case feature, Gallego assumes that it is real tense that is shared by these three heads. For a detailed discussion of the problems associated with Pesetsky and Torego's proposal see Gallego (2010).

However, I briefly examine Gallego's proposal that C, T, and v share a Tense feature which motivates verb movement. Gallego argues that C, T, and v can actually share one and the same feature, i.e., [Tense] which can surface in three values: past, present, and future. The reasoning he provides for choosing tense to be the feature that is shared by C, T, and v, is that "[Tense] is a deictic formative that affects the clause as a whole." (Gallego 2010:102). He also assumes that "The syntactic C-T-v dependency is established through [tense]" (Gallego 2010:103). To

demonstrate this dependency graphically, Gallego presents the following representation:

(42)   [$_{CP}$ C$_{[TENSE]}$ [$_{TP}$ T$_{[TENSE]}$ [$_{vP}$ EA v$_{[TENSE]}$...]]]

Apparently, Gallego's (2010) proposal that tense is a feature on C that gets valued through matching/checking with the verb has some theoretical problems. It has been argued that the head T actually carries a valued [Tense] feature, because it is T that encodes the tense interpretation of the clause (Biberauer and Roberts 2010). If this is true, then Gallego's assumption that the head C probes v to value its [Tense] feature is untenable. In addition, this assumption diminishes the role of the functional category TP and relegates it to a mere dummy element or a place holder of properties that belong to C. Therefore, vacating the head T of all other features leaves us with a vacuous functional head in the syntactic skeleton which is parasite on what is thrown out of C; a situation that should call for the elimination of this dummy head which cannot be a phase head, nor a holder of any type of features. Does tense truly belong to C, much like φ-features? Chomsky (2007) sketches two possible answers to this question:

What is true of agreement features appears to hold as well for Tense: in clear cases, T has this feature if and only if selected by C, though C never (to my knowledge) manifests Tense in the manner of φ-features in some languages. If that is basically accurate, then there are two possibilities. One is that Tense is a property of C, and is inherited by T. The other is that Tense is a property of T, but receives only some residual interpretation unless selected by C (or in other configurations, e.g., in English- like modal constructions). (Chomsky 2007:20).

In fact, Chomsky (2007) reports empirical and conceptual motivation in favour of the second option, noting that inheritance is not forced, since tense is interpretable. Therefore, I assume that C, T, and v share the feature finiteness [Fin], which is unvalued on C and T, but valued on v. In fact, it has been argued that the strong syntactic dependency between C/T and v can be expressed not only through the transfer and sharing of φ-features, but also finiteness features. It is argued that both φ-features and finiteness features can be spelled-out on C in the same manner they

are spelled-out on v. For example, ɸ-features can be spelled-out in C in West Flemish (Gallego 2010:91):

(43) a. Kpeinzen [CP C   dan-k (ik) morgen goan] (West Flemish)
          think-1.sg that-1.sg I morgen go-1.sg
          'I think that I'll go tomorrow.'

      b. Kpeinzen [CP C   da-j (gie) morgen goat] (West Flemish)
          think-1.sg that-2.sg you tomorrow go-2.sg
          'I think that you'll go tomorrow.'

Similarly, finiteness features can be spelled-out in C in the English examples below:

(44) a. John thinks [CP C that [TP Mary T   is fine]].

      b. John wants [CP C for [TP Mary T   to be fine]].

It is to be noted that the examples above show the syntactic dependency between the type of complementizer in C and the verbal form in the embedded sentence. While the complementizer 'that' selects a finite verb, the complementizer 'for' selects a nonfinite/infinitival verbal form.It is clear from the examples above that finiteness as a feature starts on C (cf. Rizzi 1997) and then gets transferred to T and shared with v. Platzack (2013:7) argues that "The functional head C comes with an interpretable but unvalued feature for finiteness, iF. Since this feature is unvalued, it probes its c-command domain for a valued finiteness feature, uF+".Coming back to our question of why the verb moves in Standard Arabic if it shares a feature with T and C, let's look at the syntactic configuration of our claim so far:

(45) [CP C [Fin] [TP T [Fin] [vP   sub   v [Fin...]]]

Under minimalist assumptions, the head C can share/transfer either all of its features or some of them to T. These features include ɸ-features, EPP, tense, and finiteness. Chomsky (2008) entertains the idea of feature

inheritance, whereby the head T inherits its features from C. However, this does not relegate the function of C or empty it from all features. The head C can keep copies of the same feature it transferred to T, as in the case of complementizer agreement, among other features.

In the present configuration, I assume that the [Fin] feature on T will be valued against the v's in-situ, considering its closeness to the verb. However, when the C probe attempts to target the goal v, the T head with its valued [Fin] feature intervenes; consequently the verb undergoes a reprojective movement, along lines discussed in Biberauer and Roberts (2010), to the left of T in order to minimize the search domain of the C probe, as a last resort movement to save the derivation. This is what v-to-T movement follows from.

7. VERB MOVEMENT AND PHASE EXTENSION

Chomsky (2000, 2001) proposes a theory of syntactic derivation with multiple spell-outs, whereby derivation is assumed to proceed in phases. A phase is a structure that is built from a distinct lexical array, in which the complement of the head of this structure can be transferred for convergence cyclically.Chomsky states that CP is a phase, whereas TP is not, and transitive vP is a phase, whereas passive and unaccusative VPs are not. He argues that phases are propositional; therefore, only vP and CP are phases, since vP houses theta-roles and CP includes tense and force. Chomsky (2000:108) assumes that the complement domain of the phase is 'impenetrable' after spell-out and he formulates this assumption in the following terms:

(46)   Phase-Impenetrability Condition (strong PIC1):
In a phase (α) with head H, the domain of H is not accessible to operations outside (α); only H and its edge are accessible to such operations.

Further, it is argued that once the head of a higher phase is introduced, the domain of the adjacent lower phase head is no longer accessible to syntactic operations at the higher phase, only the elements

on its extended edge are. PF and LF interpretation of a lower adjacent phase must be constructed no later than the completion of the higher phase. Chomsky (2001:14) modifies his definition of the PIC as follows:

(47)   Phase-Impenetrability Condition (weak PIC2):
    [Given structure [ZP Z … [HP α [H YP]]], with H and Z the heads of phases]:
    The domain of H is not accessible to operations at ZP; only H and its edge are accessible to such operations.

For the purposes of this paper, I adopt the weak version of the Phase-Impenetrability Condition (PIC2). The major consequence of adopting (PIC2) is that the head T shares its search space with v, not C. The search space of C and v never varies (Gallego 2010). By adopting (PIC2), spell-out will not ship the VP until the head of the next higher phase C is merged in the derivation. I adopt Gallego's (2010) assumption that when the head C is merged, two operations are triggered: verb movement to T and cyclic spell-out. Thus, I assume that the v-to-T movement bears on the notion of phase; particularly, I assume that verb movement actually extends the boundary of the vP phase, where the resulting structure will project v as the head of the phase (for a detailed discussion of the consequences of v-to-T movement on the phase theory see Gallego (2010)).

8.   VERB MOVEMENT IN STANDARD ARABIC REVISITED

The new analysis of verb movement in Standard Arabic has two components: i) proposing the reprojective movement of the verb instead of the traditional head movement, in order to do away with the technical problems associated with the latter type of movement; and ii) accounting for this obligatory movement in terms of C-v syntactic dependency, namely the Agree relation between these two heads to value the [Fin] feature on C. To empirically support my claim that the verb in Standard Arabic undergoes obligatory movement in both word orders, i.e., SVO &

VSO, I briefly examine one type of verbal inflection in this language which has not received adequate investigation.

Verb-endings in standard Arabic show an inexplicable type of inflection, which has two forms, traditionally known as the indicative and the subjunctive. These terms are merely cover labels for these two verbal forms and do not represent actual mood. These two verbal forms occur in tensed and non-tensed contexts as well as main and embedded clauses. Each form is characterized by the co-occurrence of particular Comp elements which dictate a specific form of inflection on the verb. There are complementizers in Standard Arabic that co-occur with the indicative form of the verb. These C-elements include the complementizers 'anna' and 'inna' which usually head a finite clause. It is to be noted that the verb with these complementizers is finite and this information is registered on the verb through the suffixal morpheme '-u':

(48)   inna-hu yanaam-u   katheeran
         Comp-he 3m.sleep-ind a lot
         '(Indeed), he sleeps a lot.'

(49)   adhun-u   anna-ha tanaam-u   katheeran
         1.think-ind Comp-she 3f.sleep-ind a lot
         'I think that she sleeps a lot.'

On the other hand, there are C-elements which co-occur with the subjunctive verbal form. These C-elements include 'an', 'li', 'kay', 'likay', 'hatta', and 'lan'. The clause that is headed by these elements has a verb that lacks tense. It is to be noticed that the non-finiteness of the verb is indicated by the suffixal morpheme '-a':

(50)   yureedu   an tanaam-a   al-fataat-u
         3m.wanted   to 3f.sleep-sub the-girl-nom
         'He wants the girl to sleep.'

(51)   yaeesh-u   li   yakul-a
         3m.live-ind in-order-to 3m.eat-sub
         'He lives to eat.'

I argue that the morphological markers on these two verbal forms in Standard Arabic are the manifestation of an Agree relation between C/T and v. I assume that the head C in this language has an interpretable unvalued finiteness feature [Fin] which probes an uninterpretable valued instance of the same feature on v, assuming C/T-v feature transfer and feature sharing (Pesetsky and Torrego 2007; Chomsky 2008). The valuation of the finiteness [Fin] feature is realized morphologically as '-u', or '-a'. The feature [Fin] is a formal feature that marks the syntactic dependency between C/T and v. This [Fin] feature is usually triggered on a Comp element; and the valuation of this feature against a valued counterpart on v is manifested in the two different verbal forms in this language. However, when the C probe attempts to target the goal v, the T head with its valued [Fin] feature intervenes; consequently the verb undergoes a reprojective movement to the left of T in order to minimize the search domain of the C probe, as a last resort movement to save the derivation.

In an unpublished manuscript, I look into the different contexts in which both types of verbal morphology appear and discuss the different properties of the two types of complementizers. However, the important point here is that this C-v dependency needs verb movement, where this movement is motivated by the need to value the [Fin] feature on C and to avoid minimality effects that might arise because of the intervention of the head T.

9. CONCLUSION

This paper looks at verb movement in Standard Arabic and provides a new analysis to account for this obligatory movement in terms of C/T-v syntactic dependencies. The current account adopts the reprojective approach to verb movement discussed in Biberauer and Roberts (2010). Moreover, it is argued that the motivation for v-to-T movement in Standard Arabic is the existence of an unvalued finiteness feature [Fin] on C which needs valuation against a valued instance of the same feature on v; therefore, the v moves to the left of T, in order to escape minimality effect and to minimize the search domain of the C probe. It is

interesting to ponder on the real motivation for Chomsky's assumption that the head C transfers its features to T. Why does the head C do it? As pointed out by Ouali (2008), the obvious motivation is to minimize the search domain for these features. Locality is an important factor when it comes to feature checking. The head T is closer to the subject than the head C, and features that need to be checked against the verb are better placed on neighbouring T. The other way round which I can see here is to bring the verb closer to C, if we cannot transfer the feature to T. This solution might not be viable for languages with poor morphology like English, but for a language like Standard Arabic with its rich morphology that reflects information of more than one paradigm, it is obvious that not all features on C can be transferred to T, an argument that can borrow support from some well-documented empirical data like the V-2 phenomenon; therefore, the verb is brought closer to C to minimize the search domain and localize the Agree relation. Apparently, verb movement is needed to circumvent minimality effects and, as a result, extend the structure further by broadening the domain of the vP phase. Moreover, I assume that this movement is not vacuous, but motivated, in part, by the need to value the finiteness feature on C.

REFERENCES

Benmamoun, E. 2000. *The Feature Structure of Functional Categories: A Comparative Study of Arabic Dialects*. Oxford: Oxford University Press.

Biberauer, T., and Roberts, I. 2010. Subjects, tense and verb-movement. In *Parametric Variation: Null Subjects in Minimalist Theory,* eds. by Theresa Biberauer et al., pp.263-302. Cambridge: Cambridge University Press.

Bobaljik, J. 1994. What does adjacency do? *MIT Working Papers in Linguistics* 22:1-32.

Chomsky, N. 1986. Barriers. Cambridge MA: The MIT Press.

Chomsky, N. 1995. *The Minimalist Program*. Cambridge MA: The MIT Press.

Chomsky, N. 2000. Minimalist inquiries: The framework. In *Step by Step. Essays on Minimalist Syntax in Honor of Howard Lasnik,* eds. by R. Martin et al., pp.89-155. Cambridge MA: The MIT Press.

Chomsky, N. 2001. Derivation by phase. In *Ken Hale: A Life in Language*, ed. by M. Kenstowicz, pp.1-52. Cambridge MA: The MIT Press.

Chomsky, N. 2007. Approaching UG from below. In *Interfaces + Recursion = Language? Chomsky's Minimalism and the View from Syntax-semantics*, eds. by U. Sauerland, and H-M. Gartner, pp.1-30. Berlin: Mouton de Gruyter.

Chomsky, N. 2008. On phases. In *Foundational Issues in Linguistic Theory. Essays in Honor of Jean-Roger Vergnaud*, eds. by C. Otero et al., pp.134-166. Cambridge MA: The MIT Press.

Donati, C. 2006. On wh-head movement. In *Wh-movement: Moving on*, eds. by L. Cheng, and N. Corver, pp.21-46. Cambridge MA: The MIT Press.

Fassi Fehri, A. 1993. *Issues in the Structure of Arabic Clauses and Words*. Dordrecht: Kluwer.

Gallego, A. J. 2010. *Phase Theory*. Amsterdam: John Benjamins.

Kayne, R. 1994. *The Antisymmetry of Syntax*. Cambridge, Mass.: MIT Press.

Kayne, R. 1998. Overt vs. covert movements. *Syntax* 1:128-191.

Koeneman, O. 2000. *The Flexible Nature of Verb Movement.* Utrecht: LOT Publications.

Koopman, H., and Sportiche, D. 1991. The position of subjects. *Lingua* 85:211-258.

Lasnik. 1999. *Minimalist Analysis*. Oxford: Blackwell.

Lasnik, H. 2003. *Minimalist Investigations in Linguistic Theory*. London: Routledge.

Matushansky, O. 2006. Head movement in linguistic theory. *Linguistic Inquiry* 37:69-110.

Mohammad, M. 1990. The problem of subject-verb agreement in Arabic: Towards a solution. In *Perspectives in Arabic linguistics I,* ed. by M. Eid, pp.95-125. Amsterdam: John Benjamins.

Ouali, H. 2008. On C-to-T ɸ-feature transfer. In *Agreement Restrictions*, eds. by R. D'Alessandro et al., pp.159-180. Berlin: Mouton de Gruyter.

Ouhalla, J. 1994. Verb movement and word order in Arabic. In *Verb movement,* eds. by D. Lightfoot, and N. Hornstein, pp.41-72. Cambridge: Cambridge University Press.

Pesetsky, D., and Torrego, E. 2001. T-to-C movement: Causes and consequences. In *Ken Hale: A Life in Language*, ed. by M. Kenstowicz, pp.355-426. Cambridge MA: The MIT Press.

Pesetsky, D., and Torrego, E. 2007. The syntax of valuation and the interpretability of features. In *Phrasal and Clausal Architecture. Syntactic Derivation and Interpretation*, eds. by S. Karimi et al., pp.262-294. Amsterdam: John Benjamins.

Platzack, C. 2013. Head movement as a phonological operation. In *Diagnosing Syntax*, eds by Lisa Cheng, and Norbert Corver, pp.21-43. Oxford: OUP.

Pollock, J.Y. 1989. Verb movement, universal grammar, and the structure of IP. *Linguistic Inquiry* 20:365-424.

Rizzi, L. 1997. The fine structure of the left periphery. In *Elements of grammar: Handbook in Generative Syntax,* ed. by L. Haegeman, pp.281-337. Dordrecht: Kluwer.

Roberts, I. 1998. Have/be raising, move F and procrastinate. *Linguistic Inquiry* 29:113-25.

Roberts, I. 2011. Head movement and the minimalist program. In *The Oxford Handbook of Linguistic Minimalism*, ed. by Cedric Boeckxx, pp.195-219. Oxford: OUP.

Shlonsky, U. 1997. *Clause Structure and Word Order in Hebrew and Arabic: An Essay in Comparative Semitic Syntax*. Oxford: Oxford University Press.

Surányi, B. 2005. Head movement and reprojection. *In Annales Universitatis Cientiarum Budapestinensis de Rolando Eötvös Nominatae. Sectio Linguistica. Tomus XXVI,* Budapest, pp.313-342.

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句法依存關係和語段延伸：阿拉伯語的動詞移動

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本文根據 C/T-v 句法依存關係來分析阿拉伯語動詞的必要移動現象。本文重新檢討 Biberauer 和 Roberts (2010) 所認定動詞移動是再次投射的概念（見 Koenemean 2000; Suranyi 2005; Donati 2006; among others）。對此移動動機，本文提出不同看法，以局部性(locality)與最後手段(last resort)來分析。此方法結合 Gallego (2010) 對語段延伸的分析，他認為縮短探針(probe) C 的搜尋範圍(search domain)驅動了動詞移動。本文雖採用同樣的機制，但對中心語 C 需查核(check)的特徵(feature)與 Gallego 假設不同。我認為所討論的特徵為 finiteness [Fin]，C 上面的可譯未給值特徵(interpretable unvalue feature)，其值位於輕動詞 v 上。為了避免中心語 T 所造成的干涉效應(intervention effect)，而且可位於 C 的局部範圍(local domain)，維持探針(probe)的局部性(locality)，同時延伸輕動詞 vP 的語段範圍，因此，輕動詞 v 移到 T 的左邊，作為最後手段。

關鍵字：語段延伸句、法依存關係、限定性、局部性、動詞移動