

ON MOVE AND AGREE: EVIDENCE FOR IN-SITU AGREEMENT^[*]

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Abstract: The verb in Standard Arabic agrees with its subject in all Φ -features in the SV order; however, in VS order, the verb surfaces with a singular number regardless of the number value on the subject. This paper argues that feature-specification on a designated inflectional head triggers the different agreement asymmetries found in many languages. In this respect, a feature-driven analysis is proposed to account for subject-verb agreement asymmetry and word-order alternation in Standard Arabic and Sana'ani Arabic in terms of Φ -completeness on the inflectional head T. I argue that the head T is considered Φ -complete only when all the uninterpretable features available to that head enter the derivation unvalued and then assigned values in the syntax. Crucially, only Φ -complete T can have EPP feature to trigger subject movement (Chomsky, 2001); however, nominative Case can be assigned to DPs by Φ -incomplete probes in-situ, lending support to the minimalist assumption that divorces movement from formal feature valuation (Chomsky, 2000, 2001, 2005). In addition, the paper provides a comparative study of preverbal DPs in Standard Arabic and Sana'ani Arabic and concludes that while preverbal DPs in Standard Arabic can be subjects or topics, the subject in Sana'ani Arabic is uniformly postverbal and preverbal DPs are usually dislocated topics.

Keywords: agreement, subjects, topics, A-movement, nominative Case, word order, Standard Arabic

1. Introduction

This paper provides a new analysis of agreement morphology on the verb, from a minimalist perspective. For quite some time, Corbett (2006) notes, agreement morphology was used merely as a diagnostic test for other syntactic phenomena. For example, verbal agreement was a diagnostic test for subjecthood which helped in working on subject raising. Later, researchers concluded that agreement is such a poorly understood phenomenon in itself to be used as a diagnostic test for other phenomena. Currently, the recent advancements in linguistic research made it possible to at least understand the richness of the agreement systems in world's languages, making agreement a major topic in the current theories of syntax. Agreement morphology on the verb has been viewed syntactically as uninterpretable features that need to be valued for successful convergence of the derivation; and semantically as redundant information that does not give new information, but instead repeats the same information expressed in the subject. Verbal agreement, Corbett (2006) observes, is seen to be an instance of 'displaced grammatical meaning' or 'information in the wrong place' in the sense that the verb can carry the grammatical meaning relevant to another word, i.e., the

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subject; hence, it is redundant and adds no extra information. However, agreement still stands as a crucial paradigm in natural languages that affects different components of the grammar.

The paper is divided as follows: in the second section, I describe the agreement facts in Standard Arabic in different contexts. In the third section, I propose two conditions that regulate instances of A-movement and nominative Case assignment. In the fourth section, I revisit the phenomenon of subject-verb agreement asymmetry and provide a new feature-driven analysis to account for this asymmetry with nominal DPs as well as the absence of this asymmetry with pronominal DPs. In the last section, I summarise the main findings of the paper.

2. Subject-verb agreement facts in Standard Arabic

In Standard Arabic, partial agreement in person and gender holds between the verb and the subject in VS order as in (1a). Full verbal agreement in VS order yields the ungrammatical sentence in (1b). In SV order, full agreement in person, number, and gender holds between the subject and the verb as in (2a). The sentence in (2b) is ungrammatical since the verb displays partial agreement in SV order. In other words, when the subject is postverbal, the number feature on the subject does not agree with the number feature on the verb and the latter shows a default singular value:

- (1) a. ḥaDar-a T-Tullaab-u n-nadwat-a
attended-3.s.m the-students-nom the-seminar-acc
'The students attended the seminar'
b. *ḥaDar-uu T-Tullaab-u n-nadwat-a
attended-3.p.m the-students-nom the-seminar-acc
'The students attended the seminar'
- (2) a. ?aT-Tullaab-u ḥaDar-uu n-nadwat-a
the-students-nom attended-3.p.m the-seminar-acc
'The students attended the seminar'
b. *?aT-Tullaab-u ḥaDar-a n-nadwat-a
the-students-nom attended-3.s.m the-seminar-acc
'The students attended the seminar'

When the subject is pronominal, it usually gets dropped in the course of computation, since Standard Arabic is a null subject language. Nonetheless, the verb always shows full agreement:

- (3) ḥaDar-uu n-nadwat-a
attended-3.p.m the-seminar-acc
'(They-m) attended the seminar'
- (4) ḥaDar-na n-nadwat-a
attended-3.p.f the-seminar-acc
'(They-f) attended the seminar'

However, when the pronominal subject chooses to surface, it occurs only in a preverbal position with full agreement on the verb:

- (5) a. *ħaDar-uu hum an-nadwat-a
attended-3.p.m they-m the-seminar-acc
'They attended the seminar'
- b. *ħaDar-a hum an-nadwat-a
attended-3.s.m they-m the-seminar-acc
'They attended the seminar'
- c. hum ħaDar-uu n-nadwat-a
they-m attended-3.p.m the-seminar-acc
'They attended the seminar'
- d. *hum ħaDar-a n-nadwat-a
they-m attended-3.s.m the-seminar-acc
'They attended the seminar'

By contrast, many spoken varieties of Arabic (dialectal Arabic, henceforth) do not show any subject-verb agreement asymmetry. The examples from Moroccan Arabic and Lebanese Arabic below are taken from Aoun et al. (1994, p. 196–197):

- (6) a. ragad-uu al-jahaal (Sana'ani Arabic)
slept-3.p.m the-children
'The children slept'
- b. ?al-jahaal ragad-uu
the-children slept-3.p.m
'The children slept'
- (7) a. la-wlaad naʕs-uu (Moroccan Arabic)
the-children slept-3.p
'The children slept'
- b. naas-uu la-wlaad.
slept-3.p the-children
'The children slept'
- (8) a. la-wlaad niim-uu (Lebanese Arabic)
the-children slept-3.p
'The children slept'
- b. niim-uu la-wlaad.
slept-3.p the-children
'The children slept'

In these dialects, the verb always establishes full agreement with its subject, whether the latter is preverbal or postverbal.

3. Conditions on formal feature valuation

In the recent theories of minimalist syntax (Chomsky, 2000, 2001, 2005), it is assumed that features can motivate various syntactic operations: External Merge is motivated by the EPP feature on T as in the case of expletive-insertion, Internal Merge, i.e., Move, is also motivated by the EPP feature on T and Agree is motivated by the need to value formal features.

Under minimalist assumptions, uninterpretable features on a designated head are matched and valued via sending a probe to the nearest DP goal in a c-command local domain. For example, the uninterpretable Φ -features on the head T can be valued against those of the subject DP and then get deleted to enable the derivation to converge; and as a reflex of the operation Agree, the Case of the DP gets assigned. Under this discussion, Φ -features on T and Case on DPs can actually be valued in-situ without appealing to movement.

This leaves us with the task of identifying the mechanism of satisfying the EPP feature. It is argued that heads with EPP feature can have an extra specifier (Chomsky, 2000, p. 102). Spec-vP can host a shifted object in some languages, or act as an intermediate position for wh-movement. Spec-TP serves as a landing site for the subject and spec-CP accommodates the moved wh-phrase.

Chomsky argues that the EPP feature on T is satisfied either by External Merge, as in the case of expletive-insertion, or by Internal Merge which involves the movement of the agreeing DP to spec-TP. In both cases, the head T projects a specifier to host an element.

The inventory of features on the head T is central to our discussion. It is important here to distinguish between the EPP feature and the Φ -features. While the EPP feature is satisfied via merging an element in the specifier of T, Φ -features require valuation by means of matching and then deletion. It is argued that “uninterpretable features, and only these, enter the derivation without values...their values are determined by Agree” (Chomsky, 2001, p. 5). A major assumption in minimalist syntax is that movement is dissociated from formal feature valuation “Note that Case assignment is divorced from movement and reflects standard properties of the probes, indicating that it is a reflex of Agree holding of (probe, goal); the EPP-raising complex is a separate matter” (Chomsky, 2001, p. 17); hence the EPP feature is satisfied differently from Φ -features and Case.

At this point, we need to answer the question: does the head T always have an EPP feature? For SVO languages, e.g., English, Chomsky argues that the head T always has an EPP feature, in finite as well as non-finite contexts. However, in VSO languages, e.g., Standard Arabic, it is clear that the subject can surface postverbally, suggesting that T need not always have an EPP feature. Hence, the task here is to regulate the presence vs. absence of the EPP feature on T or, in other words, to answer the question: what triggers the EPP feature on T? I argue that Φ -completeness of the head T can trigger the EPP feature (Chomsky, 2001). The head T is Φ -complete only when all the uninterpretable features available to that head enter the derivation unvalued and then assigned values in the syntax. To regulate the presence of the EPP feature on the head T in Standard Arabic, I introduce the following condition:

- (9) EPP condition:
Only Φ -complete T can have EPP feature.

Thus, when the head T is Φ -complete, i.e., when the complete set of uninterpretable features available to that head enters the derivation unvalued and then assigned values in the syntax, it can have an EPP feature. It is important to note that the complete set of features should enter the derivation unvalued. Thus, a default value, which does not need to be valued, will render the set of features incomplete. I argue that the condition above can successfully account for A-movement of the subject in Standard Arabic.

Moreover, Chomsky argues that the Case of the agreeing DP, here the nominative Case of the subject, is assigned as a reflex of establishing agreement with T. He assumes that “Case itself is not matched, but deletes under matching of Φ -features” (Chomsky, 2001, p. 6).

It is tempting to consider the stipulation that Φ -completeness can be a prerequisite to trigger the EPP feature and also to assign structural Case. However, cross-linguistic variation in terms of agreement features makes it difficult to adopt such a stipulation. In fact, the stipulation above can be challenged by the facts of formal feature valuation in Standard Arabic. The assumption that only a Φ -complete T can assign nominative Case on the subject can be challenged by the fact that in VS sentences in Standard Arabic, the subject surfaces with a nominative Case which is assigned by a Φ -incomplete probe:

- (10) qaraʔ-a T-Tullaab-u l-qaSiidat-a
 read-3.s.m the-students-nom the-poem-acc
 ‘The students read the poem’

Formal feature valuation in defective domains is not a peculiar phenomenon of Standard Arabic alone. This phenomenon occurs in other languages as well; and interestingly all these languages share one common property: they are all null subject languages. In these languages, nominative Case on the overt subject can be assigned in-situ by a defective (Φ -incomplete) probe that need not match the number feature on the DP:

- (11) katab-a l-ʔawlaad-u d-dars-a (Standard Arabic)
 wrote-3.s the-boys-nom the-lesson-acc
 ‘The boys wrote the lesson’
- (12) chegou as cadeiras (Colloquial Portuguese; Costa, 2001, p. 8)
 arrived-3.s the chairs- nom
 ‘The chairs arrived’
- (13) gwel-odd/*gwel-son y cathod yr aderyn (Welsh; Tallerman, 1998, p. 113)
 saw-3.s/saw-3.p the cats-nom the bird
 ‘The cats saw the bird’

The examples above show that a Φ -incomplete probe can assign structural nominative Case on the subject DP under partial agreement.

Therefore, I assume that Φ -completeness on the head T can be a condition to have EPP feature, but is not a condition to assign nominative Case on the subject. I claim that nominative Case on the subject DP, at least in Standard Arabic, is assigned under agreement, irrespective of the probe’s Φ -completeness. Considering the minimalist assumption that the inflectional head T encodes two paradigms, i.e., agreement and tense, I assume that a Φ -in-

complete probe in Standard Arabic has the ability to value formal features by virtue of agreement. However, in English-type languages, formal feature valuation seems to be instantiated by tense. I introduce a generalization on structural nominative Case assignment in Standard Arabic along the following terms:

(14) Nominative case condition (NCC):

Nominative Case on the subject is assigned under agreement with T irrespective of Φ -completeness.

Therefore, I argue that Φ -completeness is not a condition for assigning nominative Case. Rather, a defective T can assign nominative Case on the subject as a reflex of establishing agreement.

Moreover, I argue that in Standard Arabic the head T will have an EPP feature to trigger the movement of the subject to its specifier only when it is Φ -complete. Therefore, Φ -completeness always triggers the EPP feature in Standard Arabic, consequently the unacceptability of sentences with full subject-verb agreement in VS sentences:

- (15) a. *katab-uu l-?awlaad-u d-dars-a
wrote-3.p.m the-boys-nom the-lesson-acc
'The boys wrote the lesson'
b. ?al-?awlaad-u katab-uu d-dars-a
the-boys-nom wrote-3.p.m the-lesson-acc
'The boys wrote the lesson'

Therefore, I assume that Φ -completeness is a necessary and sufficient condition to trigger the EPP feature in Standard Arabic, and subjects must move into a preverbal position when the head T is Φ -complete.

Alternatively, Φ -incomplete heads in Standard Arabic cannot have an EPP feature. However, defective probes can assign nominative Case on the subject. I argue that in this language when the head T lacks the EPP feature, the subject remains in-situ in its internal position in spec-vP, yielding VS order; however, when the head T has an EPP feature, the subject moves from its internal position in spec-vP to spec-TP to satisfy this feature on T, yielding SV order. Thus, a feature-driven analysis to formal feature valuation can successfully account for A-movement and the phenomenon of subject-verb agreement asymmetry in Standard Arabic.

However, the different spoken varieties of Arabic display a uniform pattern of subject-verb agreement. In these dialects, the verb always agrees with a postverbal subject in person, number, and gender. There is no partial subject-verb agreement in VS order in dialectal Arabic. Still, these dialects employ another word order, i.e. SV, with full subject-verb agreement, too. Unlike Standard Arabic, the movement of the postverbal subject to a preverbal position in dialectal Arabic is not triggered by full agreement, since the subject in these dialects can stay in-situ in a postverbal position with full agreement morphology on the verb. Thus, in Standard Arabic, it is obligatory to move the postverbal subject to a preverbal position if there is full agreement, whereas in dialectal Arabic this movement is optional:

- (16) $\text{ʔal-ʔaTfaal-u naam-uu}$ (Standard Arabic)
 the-children-nom slept-3.p.m
 ‘The children slept’
- (17) $*\text{naam-uu l-ʔaTfaal-u}$
 slept-3.p.m the-children-nom
 ‘The children slept’
- (18) $\text{ragad-uu al-jahaal}$ (Sana’ani Arabic)
 slept-3.p.m the-children
 ‘The children slept’
- (19) $\text{ʔal-jahaal ragad-uu}$
 the-children slept-3.p.m
 ‘The children slept’

A possible account would be to assume that these dialects may not have an EPP feature on the head T. The EPP condition argued for earlier states that the EPP feature on the head T is triggered only by Φ -completeness, but it is clear that in dialectal Arabic Φ -completeness does not trigger the EPP feature. Thus, given the assumption that dialects of Arabic may not have an EPP feature on the head T, then, maybe, movement of a postverbal DP to a preverbal position in these dialects is an A-bar movement that is triggered by the optional availability of a head above TP. I take this head to be Topic (Top) and assume that preverbal DPs in dialectal Arabic are topics:

- (20) $[\text{TopDP}_i \text{Top} [\text{TPV}_j + \text{T}(\Phi\text{-complete})[\text{vpt}_i \text{t}_j [\text{VP obj}]]]]$

One of the common properties of topics is definiteness; therefore, a topicalised DP in Standard Arabic as well as dialectal Arabic must be definite. It is to be noticed that in Standard Arabic as well as dialectal Arabic, a postverbal subject can be definite or indefinite. However, while preverbal subjects in Standard Arabic can be definite or indefinite (Fassi Fehri, 1993), a preverbal DP in Sana’ani Arabic must be definite:

- (21) $\text{jaasuus-un ʔaqbal-a ʕalay-naa}$ (Standard Arabic)
 spy-nom appeared-3.s.m on-us
 ‘A spy appeared to us’
- (22) $\text{ʔal-jaasuus-u ʔaqbal-a ʕalay-naa}$
 the-spy-nom appeared-3.s.m on-us
 ‘The spy appeared to us’
- (23) $*\text{jasuus bada ʕalay-naa}$ (Sana’ani Arabic)
 spy appeared-3.s.m on-us
 ‘A spy appeared to us’
- (24) $\text{ʔal-jasuus bada ʕalay-naa}$
 the-spy appeared-3.s.m on-us
 ‘The spy appeared to us’

It is obvious that Φ -completeness is a sufficient condition to have a preverbal definite or indefinite subject in Standard Arabic. However, a preverbal DP in Sana’ani Arabic must be

definite, a common property of topics in this language, suggesting that this DP might be a topic. If the preverbal DP in Sana'ani Arabic is a subject, the ungrammaticality of (23) above is difficult to explain, given the fact that subjects can be indefinite.

Moreover, preverbal subjects in Standard Arabic differ from preverbal DPs in Sana'ani Arabic in their structural position. Preverbal subjects in Standard Arabic are within the TP domain and pattern like fronted objects (Fassi Fehri, 1993):

- (25) jaasuus-un ʔaqbal-a ʕalay-naa (Standard Arabic)
 spy-nom appeared-3.s.m on-us
 'A spy appeared to us'
- (26) baqart-an shaahad-tu
 cow-acc saw-1.s
 'A cow, I saw'
- (27) dajaajat-an thabaḥ-tu
 hen-acc cut throat-1.s
 'A hen, I cut its throat'

On the other hand, preverbal DPs in Sana'ani Arabic are outside the TP domain, thus the impossibility of fronting an indefinite DP:

- (28) *jasuus bada ʕalay-naa (Sana'ani Arabic)
 spy appeared-3.s.m on-us
 'A spy appeared to us'
- (29) *bagarih ibsar-t
 cow saw-1.s
 'A cow, I saw'
- (30) *bagarih ibsar-t-ha
 cow saw-1.s-it
 'A cow, I saw it'
- (31) *dijaajih thabaḥ-t
 hen cut throat-1.s
 'A hen, I cut its throat'
- (32) *dijaajih thabaḥ-t-ha
 hen cut throat-1.s-it
 'A hen, I cut its throat'

The ungrammaticality of the Sana'ani Arabic examples above can be improved if the indefinite preverbal DPs are replaced with definite DPs, suggesting that these DPs might be topics positioned outside the TP domain:

- (33) ʔal-jasuus bada ʕalay-naa
 the-spy appeared-3.s.m on-us
 'The spy appeared to us'
- (34) ʔal-bagarih ibsar-t-ha
 the-cow saw-1.s-it
 'The cow, I saw it'

- (35) ʔad-dijaajih thabaḥ-t-ha
 the-hen cut throat-1.s-it
 ‘The hen, I cut its throat’

One might wonder if the matter in hand is just about definiteness of preverbal DPs, and that Sana’ani Arabic, for some reasons, does not allow indefinite DPs to surface sentence initially. However, this assumption can be challenged by the ungrammatical sentences below where the preverbal DPs are definite:

- (36) *ʔal-bagarih ibsar-t
 the-cow saw-1.s
 ‘The cow, I saw’
 (37) *ʔad-dijaajih thabaḥ-t
 the-hen cut throat-1.s
 ‘The hen, I cut its throat’

It is clear from the examples above that definiteness is not the only requirement to have a preverbal DP in Sana’ani Arabic. The ungrammaticality of the sentences above arises due to the absence of a pronominal clitic in the original position of the left-dislocated topic. The preverbal DPs in the sentences above might be topics, since topics in these dialects leave a pronominal clitic. However, since the left-dislocated DPs did not leave any pronominal clitic in their original position, the sentences are rendered ungrammatical.

Furthermore, it is argued that sentential negation in Standard Arabic selects a TP in which verbs, preverbal subjects or fronted objects can follow the negation marker (Fassi Fehri, 1993). The examples below show the negation marker *maa* ‘not’ followed by a fronted indefinite object:

- (38) maa dajaajat-an thabaḥ-tu (Standard Arabic)
 not hen-acc cut throat-1.s
 ‘Not a hen I cut its throat’
 (39) maa baqarat-an shaahad-tu
 not cow-acc saw-1.s
 ‘Not a cow I saw’

It is clear from the examples above that the indefinite DPs are fronted to a TP-internal position, and this operation does not trigger a pronominal clitic in the base-position of the fronted DPs, suggesting that the fronted objects that follow the sentential negation marker are not topics. In Standard Arabic, topics cannot follow sentential negation markers:

- (40) *maa d-dajaajat-u thabaḥ-tu-ha
 not the-hen-nom cut throat-1.s-it
 ‘The hen, I did not cut its throat’
 (41) *maa l-baqarat-u shaahad-tu-ha
 not the-cow-nom saw-1.s-it
 ‘The cow, I did not see it’

Unlike Standard Arabic, indefinite DPs cannot follow a negation marker in Sana'ani Arabic. It is to be noticed that It is common in the dialects of Arabic to have double negation markers where negation is indicated, beside the sentence initial negation marker, by the suffix *-sh* on verbs:

- (42) *maa dijaajih thabaḥ-t-sh
not hen cut throat-1.s-neg
'Not a hen I cut its throat'
- (43) *maa bagarih ibsar-t-sh
not cow saw-1.s-neg
'Not a cow I saw'

Given the fact that the fronted DPs in the examples above are not topics, since they are indefinite and have no pronominal clitics in their original position, it is difficult to explain their ungrammaticality. The sentences above can be improved if the indefinite object stays in-situ postverbally or if it is topicalised:

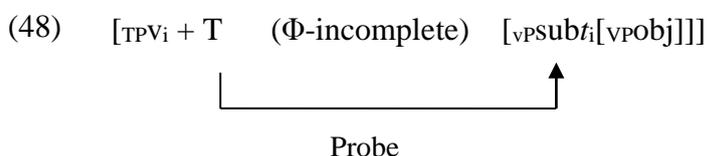
- (44) maa thabaḥ-t-sh dijaajih
not cut throat-1.s-neg hen
'I did not cut a hen's throat'
- (45) maa bsar-t-sh bagarih
not saw-1.s-neg cow
'I did not see a cow'
- (46) ?ad-dijaajih maa thabaḥ-t-ha-sh
the-hen not cut throat-1.s-it-neg
'The hen, I did not cut its throat'
- (47) ?al-bagarih maa bsar-t-ha-sh
the-cow not saw-1.s-it-neg
'The cow, I did not see it'

A comparison between Standard Arabic examples and Sana'ani Arabic examples shows that while Standard Arabic can have a TP-internal indefinite DP following the negation marker, Sana'ani Arabic does not have this option. It seems that Sana'ani Arabic does not have an EPP feature on the head T to create a position to host a preverbal DP within the TP domain. Instead, preverbal DPs in Sana'ani Arabic are topics positioned in a topic phrase above TP.

4. Subject-verb agreement asymmetry in Standard Arabic revisited

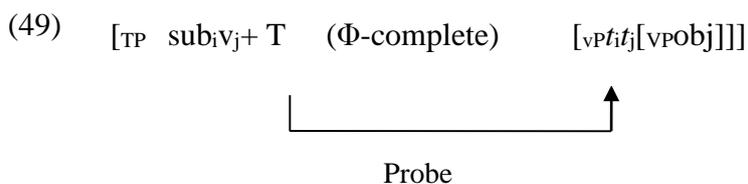
Under minimalist assumptions, I assume that agreement is established by the syntactic operation Agree, which values features at a distance, within a c-command local domain. I argue that agreement in Standard Arabic is established when the head T sends a probe to target the vP-internal subject. The head T in Standard Arabic can have the following inventory of uninterpretable features: i) Φ -features, and ii) the EPP feature. When T is Φ -complete, it must have an EPP feature; however, when T is Φ -incomplete, it cannot have an EPP feature.

On the basis of the arguments mentioned above, I introduce a structural representation for agreement in Standard Arabic, showing how the inventory of uninterpretable features on the head T decides agreement patterns and word-order in this language. I start with the unmarked word-order in Standard Arabic (VS) and show how agreement is established:



In this structure, T is Φ-incomplete, namely the number feature on T comes with a default singular value. The head T sends a probe to the vP-internal subject and the uninterpretable person and gender features on the head T are matched and valued against the interpretable features of the subject, and the nominative Case of the subject is assigned as a reflex of the operation Agree. However, since T is Φ-incomplete, it follows then that it does not have the EPP feature in its inventory; consequently the subject remains in-situ. Thus, we get the VS order with partial agreement showing on the verb, and the subject having a nominative Case as a reflex.

Similarly, I present the following structural representation for the SV clauses:



In this structure, T is Φ-complete and its probe targets the vP-internal subject. The uninterpretable features on T are matched and valued against the interpretable features of the subject, and the nominative Case of the subject is assigned as a reflex of establishing agreement; and since T is Φ-complete, it must then have the EPP feature. As a result, the subject is raised to spec-TP to satisfy the EPP feature on T. Thus, the SV order is derived with full agreement showing on the verb, and the nominative Case of the subject is assigned as a reflex, in a systematic and straightforward way.

4.1 Verbal agreement with nominal subjects

In Standard Arabic, the verb agrees with its subject in all Φ-features when the subject precedes the verb. However, when the subject follows the verb, the latter shows partial agreement with its subject in person and gender features. Partial agreement in VS sentences arises when the number feature on the verb is set to a default singular value, irrespective of the number feature of the subject; be it singular, dual, or plural:

- (50) a. sharib-a l-ʔawlaad-u l-ħaliib-a
 drank-3.s.m the-boys-nom the-milk-acc
 'The boys drank the milk'

- b. *sharib-uu l-ʔawlaad-u l-ħaliib-a
drank-3.p.m the-boys-nom the-milk-acc
'The boys drank the milk'
- c. ʔal-ʔawlaad-u sharib-uu l-ħaliib-a
the-boys-nom drank-3.p.m the-milk-acc
'The boys drank the milk'
- d. *ʔal-ʔawlaad-u sharib-a l-ħaliib-a
the-boys-nom drank-3.s.m the-milk-acc
'The boys drank the milk'
- e. sharib-at il-fatayaat-u l-ħaliib-a
drank-3.s.f the-girls-nom the-milk-acc
'The girls drank the milk'
- f. *sharib-na l-fatayaat-u l-ħaliib-a
drank-3.p.f the-girls-nom the-milk-acc
'The girls drank the milk'
- g. ʔal-fatayaat-u sharib-na l-ħaliib-a
the-girls-nom drank-3.p.f the-milk-acc
'The girls drank the milk'
- h. *ʔal-fatayaat-u sharib-at il-ħaliib-a
the-girls-nom drank-3.s.f the-milk-acc
'The girls drank the milk'

As shown in the examples above, the sentences in (a & e) display partial agreement in VS order. Though the subject is plural, the verb surfaces with a default singular value. However, the examples in (b & f) are ungrammatical, as the verb shows full agreement with the subject in VS order. It is to be noticed that when the subject is a nominal DP and T is Φ -complete, it is obligatory to raise the subject to spec-TP. Absence of full agreement in VS sentences in Standard Arabic strongly supports my claim that Φ -completeness triggers the EPP feature. The ungrammaticality of (b & f) comes from the fact that the Φ -complete head T does have an EPP feature, but after agreement is established between T and the subject, through application of Agree, the EPP feature is not satisfied. The failure to satisfy the EPP feature on T, by means of raising the subject to spec-TP, causes the derivation to crash.

In (c & g), full agreement is established and the EPP feature is satisfied, obtaining SV order. However, the counterpart sentences (d & h) are ungrammatical. In fact, they are ruled out by the EPP condition. A Φ -incomplete head like the one in (d & h) cannot have an EPP feature; consequently spec-TP cannot be generated in the first place. Thus, movement of the subject to spec-TP is ruled out on two grounds: first, since the head T is Φ -incomplete and does not have EPP feature, a specifier cannot be created to serve as a landing site for the moved subject. Second, it is not clear what, if not EPP, triggers movement of the subject, since agreement and Case are valued in-situ, therefore it does not need to move any further. Similarly, in Colloquial Portuguese, it is shown that the verb can have partial agreement with a postverbal subject when the subject is nominal (Costa, 2001, p.8):

- (51) a. chegou as cadeiras (Colloquial Portuguese)
arrived-3.s the chairs-nom
'The chairs arrived'

- b. *as cadeiras chegou
 the chairs-nom arrived-3.s
 ‘The chairs arrived’

In fact, the examples above are self-explanatory and conform to the EPP and NCC conditions described in previous sections. Though the head T in (51a) is Φ -incomplete, it establishes partial agreement with its subject and assigns the latter’s Case. However, the head T here does not have an EPP feature to trigger the movement of the subject. On the other hand, the sentence in (51b) is ungrammatical because a Φ -incomplete head cannot have an EPP feature in order to create a specifier to host the moved subject.

Interestingly, most of the modern varieties/dialects of Arabic do not exhibit the usual subject-verb agreement asymmetry found in Standard Arabic and usually do not have Case markers on DPs. For example, in Sana’ani Arabic the verb always agrees with the subject, in both word-orders, in all Φ -features:

- (52) ?al-?iyaal riji?u min al-madrasah (Sana’ani Arabic)(SV)
 the-boys returned-3.p.m from the-school
 ‘The boys returned from school’
- (53) ?al-?iyaal kasar-uu aT-Tagih
 the-boys broke-3.p.m the-window
 ‘The boys broke the window’
- (54) shirib-uu ?al-?iyaal al-?aSiir (VS)
 drank-3.p.m the-boys the-juice
 ‘The boys drank the juice’
- (55) ?akal-uu al-?iyaal aS-Sabuu?h
 ate-3.p.m the-boys the-breakfast
 ‘The boys had breakfast’
- (56) *harab-a s-sarag min al-?abs
 escaped-3.s.m the-thieves from the-prison
 ‘The thieves escaped from prison’
- (57) *ragad-a l-?iyaal mit?axiriin
 slept-3.s.m the-boys late
 ‘The boys slept late’

I assume that, in the examples above, the head T sends a probe and values its uninterpretable features against the interpretable features of the nearest DP in its local domain. It can be seen that in Sana’ani Arabic the head T always establishes full agreement, whether the subject is preverbal or postverbal. In this dialect, as well as in other dialects of Arabic, the typical subject-verb agreement asymmetry found in Standard Arabic does not exist. This dialect employs two different word-orders, but always with full subject-verb agreement.

In such contexts, it is difficult to assume that movement of the subject DP from its postverbal position to a sentence-initial position is triggered by the EPP feature on the head T. In this dialect, Φ -completeness does not seem to trigger the EPP feature; consequently, this dialect may not have an EPP feature on T. Therefore, I assume that movement of subject

DPs in Sana’ani Arabic to a preverbal position is an A-bar movement that is triggered when there is a topic head above TP which attracts such DPs to its specifier.

Similarly, in Moroccan Arabic and Lebanese Arabic, the verb agrees fully with the subject in VS and SV orders (Aoun et al., 1994, p. 196–197):

- (58) a. *naʕs la-wlaad. (Moroccan Arabic)
 slept.3.s the-children
 ‘The children slept’
 b. la-wlaad naʕs-uu.
 the-children slept-3.p
 ‘The children slept’
 c. naʕs-uu la-wlaad.
 slept-3.p the-children
 ‘The children slept’
 d. *la-wlaad naʕs.
 the-children slept-3.s
 ‘The children slept’
- (59) a. *niim la-wlaad. (Lebanese Arabic)
 slept-3.s the-children
 ‘The children slept’
 b. la-wlaad niim-uu
 the-children slept-3.p
 ‘The children slept’
 c. niim-uu la-wlaad.
 slept-3.p the-children
 ‘The children slept’
 d. *la-wlaad niim.
 the-children slept-3.s
 ‘The children slept’

The data from Moroccan Arabic and Lebanese Arabic are similar to those in Sana’ani Arabic where one can find full agreement between the verb and the subject in all Φ -features whether the subject is preverbal or postverbal. As argued earlier, when the subject is preverbal, one can assume that this DP got topicalised and raised to a Topic phrase above TP. In VS sentences in dialectal Arabic, the head T is Φ -complete, but it does not have an EPP feature uniformly, therefore formal features are valued in-situ.

Likewise, European Portuguese can have two word-orders: SV and VS. The subject and the verb agree independently of the position of the subject (Costa, 2001, p. 7):

- (60) a. os meninos comeram o bolo (European Portuguese)
 the children ate-3.p the cake
 ‘The children ate the cake’
 b. *os meninos comeu o bolo
 the children ate-3.s the cake
 ‘The children ate the cake’

- c. comeram os meninos o bolo
ate-3.p the children the cake
'The children ate the cake'
- d. *comeu os meninos o bolo
ate-3.s the children the cake
'The children ate the cake'

It is obvious that the verb in European Portuguese establishes full agreement with the subject in both word-orders. The sentence in (60a) is self-explanatory. In (60b), the sentence is ungrammatical because of partial subject-verb agreement which is not an option in this language. In (60c), the head T establishes full agreement with the subject, but the movement of this subject is not triggered due to the absence of the EPP feature.

4.2 Verbal agreement with pronominal subjects

Pronominal subjects are usually dropped in Standard Arabic. However, when they choose to surface, they must precede the verb. In this language, when the subject is pronominal, T is always Φ -complete:

- (61) a. ħaDar-uu l-muʔtamar-a
attended-3.p.m the-conference-acc
'(They-m) attended the conference'
- b. *ħaDar-uu hum al-muʔtamar-a
attended-3.p.m they-m the-conference-acc
'They attended the conference'
- c. hum ħaDar-uu l-muʔtamar-a
they-m attended-3.p.m the-conference-acc
'They attended the conference'
- (62) a. ħaDar-na l-muʔtamar-a
attended-3.p.f the-conference-acc
'(They-f) attended the conference'
- b. *ħaDar-na hunna l-muʔtamar-a
attended-3.p.f they-f the-conference-acc
'They attended the conference'
- c. hunna ħaDar-na l-muʔtamar-a
they-f attended-3.p.f the-conference-acc
'They attended the conference'

Thus, the pronominal subject in Standard Arabic does not follow the verb: "Pronoun subjects in Arabic typically cannot appear postverbally, but are subject to obligatory fronting." (Harbert & Bahloul, 2002, p. 49). Moreover, Fassi Fehri (1993, p. 132) argues that "a pronoun cannot occur as a postverbal subject". However, some linguists assume, incorrectly, that pronominal subjects can occur postverbally, building their assumption on the fact that a pronominal subject in Standard Arabic can appear postverbally in a conjunction phrase:

- (63) jaaʔ-at hiya wa Omar
 came-3.s.f she and Omar
 ‘Omar and she came’

In the example above, movement of the preverbal subject is constrained by the Coordinate Structure Constraint (Ross, 1967) and cannot be taken as evidence of the existence of post-verbal pronominal subjects.

Also, Fassi Fehri (1993) argues that the sentence below is ungrammatical when the pronominal subject follows the verb:

- (64) *jiʔ-na hunna
 came-3.p.f they-f
 ‘They/f came’

Data from Standard Arabic show that whenever there is a pronominal subject, it must be raised higher than the verb. I argue that since the head T is always Φ -complete with pronominal subjects, such subjects cannot follow the verb in Standard Arabic, because the Φ -complete head T always has the EPP feature. The fact that pronominal subjects cannot occur in VS order, coupled with the fact that nominal subjects never agree fully with the verb in VS order, strongly support the EPP condition stated earlier in which I argue that Φ -completeness triggers the EPP feature.

Having a Φ -complete head T with pronominal subjects is required for full interpretation of *pro* cross-linguistically. Standard Arabic is a null subject language in which the pronominal subject of the clause can be dropped optionally. Null subject languages are usually associated with rich morphology which can license the dropped subject:

An influential proposal concerning the conditions on *pro*-drop was put forward by Luigi Rizzi (see Rizzi, 1982, 1986). Rizzi suggested that *pro* is subject to two distinct types of licensing condition: the occurrence of an empty pronoun must be formally licensed, and the content of the empty element must be licensed. Formal licensing restricts the occurrence of *pro* to a particular syntactic position, or particular positions, in a language. According to Rizzi, there is an arbitrary list of heads in a language drawn from the inventory of heads such as C, I, V, P, . . . that license the occurrence of *pro* within their government domain. If *pro* is formally allowed to occur, its content must also be licensed, or recoverable, if it is to be usable. This can be achieved by rich inflection. (Ackema et al., 2006, p. 4–5)

Therefore, I assume that the fact that pronominal subjects in Standard Arabic do not occur in a VS order can be predicted by the assumption that pronominals come always with a Φ -complete head in order to license them, and consequently that head will always have an EPP feature which triggers the movement of the pronominal subject from spec-vP to spec-TP. However, the pronominal subject can be dropped in spec-TP. Thus, the agreement pattern with pronominal subjects can be accounted for by the EPP condition in which I propose that Φ -completeness of the head T triggers the EPP feature, but if T is Φ -incomplete, then there will be no EPP feature on the head T whatsoever.

In Sana’ani Arabic, the verb agrees with its pronominal subject whether that subject occurs preverbally or postverbally. While it is obligatory to raise the pronominal subject to a

preverbal position in Standard Arabic, the pronominal subject can optionally stay in-situ postverbally in Sana’ani Arabic. This empirical fact supports my claim that Sana’ani Arabic does not have EPP feature on the head T. Movement to a preverbal position in Sana’ani Arabic is an A-bar movement that is triggered by a topic phrase above TP:

- (65) a. daxal-uu hum
entered-3.p.m they-m
‘They entered’
b. *daxal hum
entered-3.s.m they-m
‘They entered’
c. hum daxal-uu
they-m entered-3.p.m
‘They entered’
d. *hum daxal
they-m entered-3.s.m
‘They entered’

However, the pronominal subject can be dropped in this language:

- (66) ?akal-uu salteh
ate-3.p.m salteh
‘(They-m) ate salteh’
(67) ?akal-ayn shfuut
ate-3.p.f shfuut
‘(They-f) ate shfuut’

The head T in this language is always specified for full Φ -features, consequently the absence of the phenomenon of subject-verb agreement asymmetry found in Standard Arabic. The head T in Sana’ani Arabic always establishes full agreement with the subject whether that subject is pronominal or nominal and whether the sentence has an SV or VS order. As argued earlier, this can be accounted for by assuming that this dialect may not have an EPP feature on T. The motivation for raising the subject DP to a preverbal position might be the existence of a Topic phrase above TP which attracts the DP to its specifier.

In European Portuguese, too, there is always full agreement between the verb and the subject if the latter is pronominal. It is argued that “... in preverbal position, nominative pronouns obligatorily agree with the verb...in postverbal position, full agreement is also obligatory” (Costa, 2001, p. 11–12). The following data from European Portuguese show that in both word-orders in this language, the verb agrees in all Φ -features with the pronominal subject (Costa, 2001, p. 12):

- (68) a. eles chegaram. (European Portuguese)
they arrived.3.p
‘They arrived’
b. *eles chegou.
they arrived.3.s
‘They arrived’

- c. chegaram eles.
arrived.3.p they
'They arrived'
- d. *chegou eles.
arrived.3.s they
'They arrived'

The examples above show that in European Portuguese, as well as in Sana'ani Arabic, when the subject of a clause is pronominal, full agreement is established between the verb and the pronominal subject, regardless of the word-order of that clause. This shows that Φ -completeness does not actually trigger the EPP feature in these languages and maybe such languages do not have an EPP feature on T.

5. Conclusion

In this paper, I argue for a feature-driven analysis for word-order and subject-verb agreement asymmetry in Standard Arabic and Sana'ani Arabic, under the Minimalist framework. The analysis is based on the recent theories of generative syntax (Chomsky, 2000, 2001, 2005) which assume that agreement is established under the application of the syntactic operation Agree, which establishes agreement at a distance. It is argued that preverbal DPs in SV order in Standard Arabic are actually subjects and not topics. Consequently, the alternation in word-order, SV vs. VS, in Standard Arabic is ascribed to the A-movement of the subject from its vP-internal position to spec-TP. This movement is conditioned by the presence of the EPP feature on the head T. Presence vs. absence of the EPP feature is argued to be associated with Φ -completeness and this proposal is stated in the form of a condition I call the 'EPP Condition'. Furthermore, another condition, viz., 'Nominative Case Condition' (NCC) is introduced to regulate nominative Case assignment on subject DPs. Additionally, absence of subject-verb agreement asymmetry in Sana'ani Arabic is ascribed to the fact that in this language the head T lacks the EPP feature. The occurrence of preverbal DPs in this language is argued to be an instance of Topicalisation.

References

- ACKEMA, P. – BRANDT, P. – SCHOORLEMMER, M. – WEERMAN, F. 2006. "The role of agreement in the expression of arguments". Ackema, P. – Brandt, P. – Schoorlemmer, M. – Weerman, F. (eds.), *Arguments and agreements*, 1–32. New York: Oxford University Press.
- AOUN, J. – BENMAMOUN, E. 1998. "Minimality, reconstruction and PF-movement". *Linguistic Inquiry* 29:569–597.
- AYGEN, G. 2006. "Finiteness and the relation between Agreement and Nominative Case". Boeckx, C. (ed.), *Agreement Systems*, 63–98. Amsterdam: John Benjamins.
- BENMAMOUN, E. 2000. *The Feature Structure of Functional Categories: A Comparative Study of Arabic Dialects*. Oxford: Oxford University Press.

- BOŠKOVIĆ, Ž. 2007. "On the locality and motivation of move and agree: An even more minimal theory". *Linguistic Inquiry* 38/4, 589–644.
- CHOMSKY, N. 2000. "Minimalist inquiries: The framework". Martin, R. – Michaels, D. – Uriagereka, J. (eds.), *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, 89–156. Cambridge, Mass.: MIT Press.
- . 2001. "Derivation by phase". Kenstowicz, M. (ed.), *Ken Hale: A Life in Language*, 1–52. Cambridge, Mass.: MIT Press.
- . 2005. *On Phases*. Ms., MIT.
- CORBETT, G. 2000. *Number*. Cambridge: Cambridge University Press.
- . 2006. *Agreement*. New York: Cambridge University Press.
- COSTA, J. 2001. "Postverbal subjects and agreement in Unaccusative contexts in European Portuguese". *The Linguistic Review* 18/1, 1–17.
- COSTA, J. – SILVA, M. 2006. "Nominal and verbal agreement in Portuguese. An argument for distributed morphology". Costa, J. – Silva, M. (eds.), *Studies on Agreement*, 25–46. Amsterdam: John Benjamins.
- CSIRMAZ, A. 2006. "Anti-agreement. Features and locality". Costa, J. – Silva, M. (eds.), *Studies on Agreement*, 75–98. Amsterdam: John Benjamins.
- FASSI FEHRI, A. 1993. *Issues in the Structure of Arabic Clauses and Words*. Dordrecht: Kluwer.
- HARBERT, W. – BAHLOUL, M. 2002. "Postverbal subjects in Arabic and the theory of agreement". Ouhalla, J. – Shlonsky, U. (eds.), *Themes in Arabic and Hebrew Syntax*, 45–70. Dordrecht: Kluwer.
- KAYNE, R. 2008. *Antisymmetry and the Lexicon*. Ms., New York University.
- KORNFILT, J. 2006. "Agreement: The (unique and local) syntactic and morphological licensor of subject case". Costa, J. – Silva, M. (eds.), *Studies on Agreement*, 141–171. Amsterdam: John Benjamins.
- MENSCHING, G. – REMBERGER, E. 2006. "Probes: Lack of agreement in Romance". Costa, J. – Silva, M. (eds.), *Studies on Agreement*, 173–201. Amsterdam: John Benjamins.
- OUHALLA, J. 1994. "Verb movement and word order in Arabic". Lightfoot, D. – Hornstein, N. (eds.), *Verb Movement*, 41–72. Cambridge: Cambridge University Press.
- RIZZI, L. 1982. *Issues in Italian Syntax*. Dordrecht: Foris.
- . 1986. "Null Objects in Italian and the Theory of Pro". *Linguistic Inquiry* 17, 501–557.
- . 1997. "The fine structure of the left periphery". Haegeman, L. (ed.), *Elements of Grammar: Handbook in Generative Syntax*, 281–337. Dordrecht: Kluwer.
- . 2004. *On Some Properties of Subjects and Topics*. Ms., University of Siene.
- ROSS, J. R. 1967. *Constraints on Variables in Syntax*. PhD dissertation. MIT.
- SHLONSKY, U. 1997. *Clause Structure and Word Order in Hebrew and Arabic: An Essay in Comparative Semitic Syntax*. Oxford: Oxford University Press.
- SITARIDOU, I. 2006. "The (dis)association of Tense, phi-features EPP and nominative Case: Case studies from Romance and Greek". Costa, J. – Silva, M. (eds.), *Studies on Agreement*, 243–260. Amsterdam: John Benjamins.
- TALLERMAN, M. 1998. *Understanding Syntax*. London: Edward Arnold.
- ZWART, J. 2006. "Local agreement". Boeckx, C. (ed.), *Agreement Systems*, 317–339. Amsterdam: John Benjamins.