

Agreement Asymmetries and the PF Interface

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1. Introduction

In this paper, I discuss agreement in the VSO and SVO orders in Standard Arabic. These two constructions exhibit an important asymmetry. The number feature which is present on the verb in the SVO order may be absent in the VSO order (see Ayoub 1981, Mohammad 1989, Benmamoun 1992, Bahloul and Harbert 1993, Ennaji 1993, Fassi Fehri 1993, Ouhalla 1994, Doron 1996, Roberts and Shlonsky 1996, among many others). Previous accounts for this asymmetry have relied on purely syntactic conditions but as I will show none has been empirically adequate. In this paper, I shall argue that assuming minimalist assumptions, particularly the lexicalist assumption that lexical items enter the syntactic derivation with features fully specified (Chomsky 1995) together with the assumption that Merge can take place post-syntactically in the so-called postsyntactic morphological component to merge the members of the VS sequence will help account for this agreement asymmetry. Specifically, I will argue that the merger of the verb and the subject amounts to spelling out the number feature, making the presence of the number affix redundant. Several arguments will be given to show that this merger is neither lexical nor syntactic. Rather, it will be suggested that this merger takes place in the PF interface. To the extent that this analysis is successful it provides strong evidence for morphological processes that manipulate the output of syntax and highlights some aspects of the workings of the PF interface.

2. Subject Verb Agreement in Arabic

As is well known, in Standard Arabic, if the subject follows the verb (the VSO order) they agree in gender and person agreement only (1):

- (1) a. ʔakal-at T-Taalibaat-u
ate-3FS the-students.FP-Nom
'The students ate'
- b. * ʔakal-na T-Taalibaat-u
ate-3FP the-student.FP-Nom

On the other hand, if the subject precedes the verb, they agree in number in addition to gender and person (2):

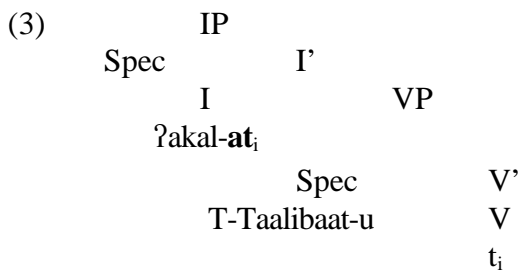
- (2) a. T-Taalibaat-u ʔakal-na
the-student.FP-Nom ate-3FP
'The student came'

b.*T-Taalibaat-u ?akal-at
 the-student.FP-Nom came-3FS

There have been two major competing analyses for the above facts. The first analysis takes partial agreement as the only manifestation of an agreement relation between the verb and the subject. Full agreement, by contrast, involves the incorporation of a pronominal. Let us call this the Incorporation analysis. The second approach takes both partial and full agreement as an agreement relation between the lexical NP or a null pronominal and the verb. The agreement asymmetry that arises in the VSO and SVO order is then attributed to the structural conditions on the agreement relation or the point in the derivation (Pre-Spell-Out/Post-Spell-Out) where agreement checking takes place. Let us call this the Agreement analysis. We will show that neither analysis accounts adequately for the above asymmetry. Then, we will provide an alternative analysis that attributes the agreement asymmetry to PF merger of the verb and the subject which obviates the presence of the number affix.

2.2. Incorporation

Within an incorporation analysis full agreement entails generating a pronominal within the position of the subject and incorporating it into the verb¹. The attractive part of the incorporation analysis is that it derives the complementary distribution between full agreement and a postverbal lexical NP. As far as the preverbal NP in (2a) is concerned, the only plausible assumption is that it is a topic or left-dislocated NP related to an incorporated pronominal. To see how the incorporation analysis works, let us assume with Baker (1988) that for an element to be incorporated it has to be governed by the host². Thus, suppose that the VSO order is derived by generating the subject in the Spec of VP and moving the verb to I (1989, Benmamoun 1992, Fassi Fehri 1993)

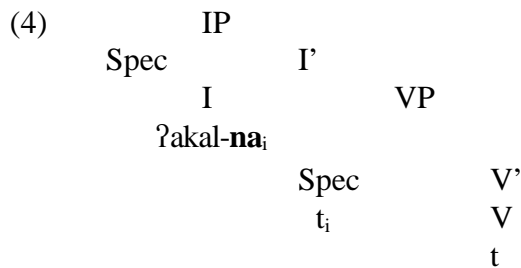


Given the above representation if the subject is a pronominal it can incorporate into the

¹ Fassi Fehri (1993, 106-135) posits pronominal incorporation only when the subject is not overt both in Standard Arabic and Moroccan Arabic. When the subject is overt he assumes that full agreement is a genuine agreement relation. This basically amounts to saying that there are no null pronominal subjects in Standard Arabic and Moroccan Arabic.

² Actually, given that government has been dispensed with within minimalism (Chomsky 1995), the generalizations captured by the government condition must be accounted for differently.

governing verb in I³:



In addition to deriving the complementary distribution between full agreement and the postverbal subject, the incorporation analysis relies on independently motivated principles of the theory of Incorporation developed by Baker (1988). Given that there is independent motivation for placing the subject in a position governed by the verb, the incorporation analysis relies on a relatively well attested generalization that incorporation takes place under government.⁴

2.2.1. Problems with the Incorporation Account

However, there are many empirical problems with the incorporation analysis. First, the incorporation analysis faces problems with agreement in the context of auxiliary sentences where the subject is located between the auxiliary and the verb. The auxiliary carries person and gender agreement and the verb carries full agreement as shown in (5a).

(5) a. kaanat T-Taalibaat-u **ya-ʔkul-na**
 be.Past.3FS the-students.FP-Nom 3-eat-FP
 'The students were eating'

b. T-Taalibaat-u kun-**na** **ya-ʔkul-na**
 the-students.FP-Nom be.Past.3FP 3-eat-FP
 'The students were eating'

(6) a. *kun-**na** T-Taalibaat-u **ya-drus-na**
 be.Past.3FP the-students.FP-Nom 3-study.FP
 'The students were studying'

b. *T-Taalibaat-u kaan-**at** **ya-drus-na**
 the-students.FP-Nom be.Past-3FS 3-study-FP
 'The students were studying'

³ More accurately, if the pronominal features occupy the head position of DP, incorporation would involve adjunction of D to V (Hale 1990).

⁴ However, notice that this incorporation takes place in an ECM configuration (the verb in I governs into the Spec of VP). As far as I know similar cases have not so far been attested in the context of Noun Incorporation.

Within an incorporation analysis the NP following the auxiliary in (5a) is a real subject and the full agreement on the lexical verb corresponds to an incorporated pronominal. It is not clear how this representation circumvents a violation of principle B of the Binding Theory and the thematic criterion given the rather well known fact that the presumably incorporated pronominal behaves like a full-fledged pronoun in that it gets a thematic role and enters into binding relations:

- (7) ʔiʕtamada ʕalaa nafsih
 relied.3MS on himself
 ‘He relied on himself’

Second, given that incorporation requires a government configuration it is not clear how it actually takes place to derive (5a) if we make the assumption that the subject is in the Spec of VP headed by the lexical verb (see Hale 1990).

Third, as pointed out in Benmamoun (1992, 1995), when the subject is a pronominal both the auxiliary verb and the main verb must carry full agreement:

- (8) a. **kun-na** **ya-ʔkul-na**
 be.Past.3FP 3-seat-FP
 ‘They were eating’
 b. ***kaan-at** **ya-ʔkul-na**
 be.Past.3FS 3-eat.FP

According to the incorporation analysis (8a) must have two pronominals. As in (5a) this incorrectly predicts a principle B violation (assuming that both are in an A-position). Moreover, under the incorporation analysis, (8b) is a complete mystery. In particular, it is not clear why the auxiliary must carry full agreement. In other words, it is not entirely clear why the pronominal which is supposed to have incorporated into the main verb cannot trigger poor agreement on the auxiliary verb on a par with lexical subjects.

Fourth, the incorporation analysis does not carry over to the modern Arabic dialects where full agreement obtains regardless of whether the subject is preverbal or postverbal as shown in (9) from Moroccan Arabic:

- (9) a. **kla-w** **lə-wlad**
 ate-3P the-children
 ‘The children ate’
 b. **lə-wlad** **kla-w**
 the-children ate-3P

Absence of number agreement with the postverbal subject results in ungrammaticality.

- (10) *kla lə-wlad
ate.3S the-children
'The children ate'

For the incorporation analysis the difference between Moroccan Arabic and Standard Arabic is that the later has an incorporation rule while the former does not.

To sum up, the above arguments have shown that the incorporation analysis cannot account for the agreement asymmetry in Standard Arabic. Moreover, it does not really account for the complementary distribution between agreement and the lexical subject. It only accounts for the complementary distribution between number agreement and the postverbal lexical subject. For the incorporation analysis partial and full agreement designate two completely different relations between the subject and the verb. Partial agreement signals a genuine agreement relation, though it is not clear it obtains structurally, and full agreement signals the incorporation of a pronominal. Given the empirical inadequacies of the incorporation analysis we need to find a different alternative analysis of the complementary distribution between the postverbal subject and number agreement on the verb.

2.3. The Agreement analysis

2.3.1. Government/Spec-head Analysis

In Benmamoun (1992), the preverbal NP in (2b) is considered to be a real subject with full agreement as an instantiation of a Spec-head relation between the verb and the subject⁵. That is, both partial agreement and full agreement reflect an agreement relation between the subject and the verb. It is further argued that person and gender agreement can take place either under government or Spec-head agreement. Number agreement, by contrast, must take place exclusively in a Spec-head configuration. In Moroccan Arabic, by contrast, agreement in all features takes place either in government configuration or a Spec-head configuration:

Standard Arabic

- (11) a. Person agreement takes place under government or Spec-head Agreement
b. Number agreement takes place exclusively in a Spec-head configuration

Moroccan Arabic

- (12) Agreement takes place in either a government configuration or a Spec-head configuration.

⁵ See Doron (1996) for strong arguments that the preverbal NP in (2a) is a subject.

Notice that this analysis does not face the same problems as the incorporation analysis. For example, the fact that both the auxiliary verb and the lexical verb must fully agree when the subject is a pronominal (5a) can follow from the assumption that the pronominal cannot remain within the Spec of VP. However, this analysis is not conceptually consistent with the minimalist assumption that government should be dispensed with as a configuration for computing relations such as Case and agreement. Moreover, as pointed out in Aoun, Benmamoun and Sportiche (1994), in the VSO order the verb and the subject are in a Spec-head configuration at some point in the derivation (at least prior to the movement of the verb) which meets the structural requirement for number agreement. Therefore, absence of number agreement in the VSO order remains problematic (see below).

2.3.2. Minimalist Analysis

Let us next consider how we can account for the alternation between partial and full agreement using minimalist assumptions. Assuming that lexical items are generated with their features fully specified, those features can be checked either overtly or covertly depending on the strength of the features involved (Chomsky 1995). With respect to the agreement facts in Arabic, suppose that partial features do not require overt checking while full agreement features do (Doron 1996, Roberts and Shlonsky 1996):

- (13) a. Partial Agreement is checked at LF (due to Procrastinate)
- b. Full Agreement is checked overtly (Full Agreement is strong)

Given this set of assumptions, it follows that the subject must be in a Spec-head relation overtly when the verb carries full agreement. This derives the SVO order. If the verb carries partial agreement features, subject raising is delayed until after Spell-out (LF), in which case we get the VSO order with the subject remaining in the Spec of VP. Lack of subject raising when the verb carries partial agreement could be due to Procrastinate which requires that, if possible, covert movement should be favored over overt movement.

2.3.2. Problems with the Minimalist Account

Like the incorporation analysis, this analysis suffers from empirical problems. First, it cannot easily handle the fact that when the subject is a pronominal both the auxiliary verb and the lexical verb must carry full agreement (5a). Notice that this cannot be attributed to the identification condition on *pro* since the lexical verb carries all the agreement features necessary to identify the null pronominal. Moreover, traces of Wh-subjects also require full agreement:

- (14) a. $\check{z}aa\text{?}a$ l- $\text{?}awlaadu$ lladiina nazafuu
 came.3MS the-children that passed.3MP
 ‘The children who passed came’

- b. *ʒaaʔa l-ʔawlaadu lladiina nazʔafia
 came.3MS the-children that passed.3MS
 ‘The children who passed came’

Under the minimalist type analysis adopting the weak/strong dichotomy one would have to argue that variables and null pronominals have strong agreement features that must be checked against strong agreement features on the lexical head. However, as such, this analysis is in effect just a description of the problem because it is not at all clear what makes the features on these two elements strong.

Now notice that both elements (pro and the trace) are null (they do not have a phonological matrix) but within a purely syntactic analysis it is not easy to see how that should have an effect on the syntactic derivation. We will show below that this descriptive generalization is crucial and can be easily captured if the presence of the number affix is attributed to how agreement is spelled-out in PF. In PF it is expected that whether an element has a phonological matrix or not will play a role in how it interacts with other element.

The minimalist type analysis suffers from another serious problem. The weak/strong dichotomy that is used to characterize partial and full agreement and that is central to the analysis does not seem to be motivated on lexical and morphological grounds. Recall that the minimalist type analysis is forced to posit two agreement paradigms, a weak paradigm and a strong paradigm. However, this distinction does not seem to be well motivated. In fact, both partial agreement and full agreement draw on the same morphological paradigm. For example, in the context of a plural subject a verb with partial agreement (from the weak paradigm) has the same morphological realization (15a and 16a) as a verb with a singular preverbal subject (from the strong paradigm) (15b and 16b)

15. Imperfective:

- a. **ta-ʔkulu** T-Taalibaat-u
3FS-eat the-students.F-Nom
 ‘The students are eating’
- b. T-Taalibat-u **ta-ʔkulu**
 the-student.F.Nom **3FS**-eat
 ‘The student is eating’

16. Perfective:

- a. ʔakal-**at** T-Taalibaat-u
 ate-**3FS** the-students-Nom
 ‘The students ate’

- b. T-Taalibat-u ?akal-at
 the-student.F.Nom ate-3FS
 'The student ate'

These facts show clearly that the weak and strong distinction used to describe partial and full agreement is not morphologically motivated. In fact, the morphology of the two agreement patterns clearly suggests that we are dealing with the same paradigm. What is sensitive to word order is the choice of the cell in the paradigm. If the subject is preverbal, the cell with number agreement is chosen. If on the other hand, the subject is postverbal the cell with no number agreement is chosen^{6,7}.

A further puzzle for the government analysis and the minimalist analysis is the fact that even in the VSO order the verb and the subject are in a Spec-head configuration (within the VP) prior to verb raising to the head of IP/TP in which case it is not clear why the verb cannot check its full agreement features prior to raising to T.

3. Analysis

Now suppose that we accept the above line of argumentation that at some point in the overt derivation the subject and the verb in (1) are in a Spec-head configuration where full agreement can be checked overtly. What is peculiar about the VSO order is that when the verb moves higher the number agreement affix may not be retained/spelled-out. This is the analysis advanced in Aoun et al. (1994). However, I would like to argue that the reason why number agreement is not spelled-out by an affix is due to the merger (in the sense of Marantz 1988) of the subject and the verb when the later precedes the former. Assuming that the same situation obtains in the VSO order in Arabic, the questions that arise then are:

⁶ One way to morphologically characterize this distinction is not to specify singular cells in the paradigm for number. The feature [singular or -plural] would be specified by default.

⁷ One could avoid the movement analysis that relies on the Weak vs Strong dichotomy and its pre-spell-out vs post-spell-out machinery by introducing expletives into the structure. Thus, in the VSO order in Standard Arabic, the expletive would be located in the preverbal position and specified for gender and person only. In the modern dialects, by contrast, the expletive would be specified for all the features and particularly number. Unfortunately, this alternative is also problematic because expletives in Standard Arabic and Moroccan seem to be similar in that they are specified for third masculine singular as shown by the following examples:

- (i) ya-?ibu ?an yafiDuruu (Standard Arabic)
 3MS- must that (they) come
 'They must come'
- (ii) ta-y-Dhər bəlli kanu hna (Moroccan Arabic)
 Asp-3MS-seems that (they) were here
 'It seems that they were here'

See Mohammad (1989) and Fassi Fehri (1993) for a discussion of expletive subjects in Arabic.

- (17) a. Why should this merger lead to the failure to spell out number agreement by an affix?
 b. Why is Person agreement spelled-out by an affix in the VSO order?
 c. Where does this merger take place?

3.1. Number is Not Spelled-out due to PF Merger of the Verb and the Subject

Starting with question (17a) first, the failure to spell out number agreement by an affix follows if we assume that the merger of the subject and the verb results in the formation of one single unit. Since number is an interpretable and intrinsic feature of the noun (Chomsky 1995) the merger of the subject and the verb amounts to endowing the verb with number features. This in turn precludes spelling out the number feature on the verb by an affix, otherwise number would be spelled-out twice which is redundant⁸. Thus, (1b) is ill-formed on morphological grounds rather than syntactic grounds, the number feature on the verb is spelled-out by the both the number suffix and the merged lexical NP⁹. As far as agreement in the modern Arabic dialects, such as Moroccan Arabic, is concerned I would like to propose that the difference

⁸ Notice that this does not seem to be a phonologically driven property with both the number suffix and the lexical subject competing for the same slot. The number suffix always precedes accusative clitics while the subject always follows them:

- (i) a. katab-uu-hu
 wrote-3MP-it
 'They wrote it'
- b. kataba-hu T-Tullab-u
 wrote.3MS-it the-students-Nom
 'The students wrote it'

⁹ As far as sentences such as (i) from Fassi Fehri (1988, 109) are concerned I will assume that the overt pronoun is not the real subject. The real subject is a null pronominal focused by the overt pronouns.

- (i) ja:ʔ-u: hum la: ʔixwatu-hum
 came-3MP they not brothers-their
 'They came, not their brothers'

This assumption seems to be confirmed by the fact that the overt pronoun, so-called nominative, can also focus accusative and genitive clitics (Fassi Fehri 1988):

- (ii) a. raʔaytu-hu huwa
 saw.1S-him he
 'I saw HIM'
- b. kitaabu-hu huwa
 book-his he
 'HIS book'

between Moroccan Arabic and Standard Arabic is that the latter does not have a process that merges the subject and the verb. Therefore, number agreement on the verb is spelled-out even when the latter precedes and is adjacent to the subject. In short, the main difference between Standard Arabic and Moroccan Arabic is that the former has a rule that merges the verb and the subject in PF. Indeed, this is what we should expect if language variation is to be reduced as much as possible to lexical and morphological properties.

(18) **Number Agreement spell-out in the Morphology**

MA	SA
V [α number]	V [α number]
V Affix[α number]	V Affix/NP[α number]

3.2. Person is Categorical but Number is Relational

As to why the person feature is spelled-out by an affix (17b) one possibility to consider is that person agreement carries the categorial feature of the verb. That is, person, unlike number, is a categorial feature. This seems plausible since in Arabic tense is either abstract (present and past) or a clitic (future) that requires a full-fledged word to attach to as argued in Benmamoun (1992). Thus, the main difference between the past and present form of the verb is due to the agreement pattern that each one displays. The past form is exclusively suffixal (19a) while the present form which is the default interpretation of the imperfective form of the verb is both prefixal and suffixal (19b). The future tense is realized by a clitic that attaches to the imperfective form of the verb (19c):

- (19) a. katab-na
wrote-3FP
'They wrote'
- b. ya-ktub-na
3-write-FP
'They write/are writing'
- c. sa-ya-ktub-na
Fut-3-write-FP
'They will write/are writing'

Further evidence that person agreement carries the categorial feature of the verb comes from the fact that in the imperfective form, person is realized as a prefix and

number as a suffix (Benmamoun 1992, 1993, Noyer 1992)¹⁰:

- (20) a. ta-ktub-uun
2-write-MP
'You write/are writing'
- b. ta-ktub-na
2-write-FP
'You write/are writing'

Interestingly, the same person position where the person prefix occurs hosts the nominal prefix while the vocalization remains intact (Benmamoun 1992)¹¹

- (21) a. yu-ʕallim-uun
3-teach-MP
'They teach/are teaching'
- b. mu-ʕallim-uun
Nom-teach-MP
'Teachers'

Thus, if we assume that person is a categorial features which designates the category of its head it is not surprising that it is the feature that is always spelled-out by an affix regardless of whether the subject and the verb merge. Spell-out by merger would then be relevant to relational features only, such as number.

3.3. Verb/Subject Merger: Lexical, Syntactic or PF

Turning to question (17c), three possibilities present themselves: (i) the merger of the subject and the verb could be lexical; (ii) the merger could be syntactic; (iii) the merger could be post-syntactic (at PF).

Starting with (i), the merger of the verb and the subject cannot be lexical. This is supported by the fact that syntactically, the subject and the verb behave like independent syntactic elements; i.e., the complex made up of the verb and the subject does not form an anaphoric island. For example, the subject can bind anaphors, bound pronouns, and can be a negative polarity item.

¹⁰ The only exception is the first person plural in Standard Arabic where the prefix carries number and person.

¹¹ The nominal form is derived from the imperfective form of the verb. In Benmamoun (1992, 1996) it is argued that the indicative form is default from which other forms are derived.

- (22) a. ?iʔtamada T-Tullaabu ʔalaa ʔanfusihiim
 relied.3MS the-children on themselves
 ‘The students relied on themselves’
- b. qaraʔa kullu waladin kitaaba-hu
 read every boy book-his
 ‘Every boy read his book’
- c. lam yaʔtii ʔayyu Taalibin
 neg.Past came any student
 ‘No student came’

Similarly, the verb preceding the postverbal subject can be accessed to interpret the gapped verb in gapping constructions:

- (23) ʔakala l-ʔawlaadu tuffaafiattan wa l-banaatu burtuqaalatan
 ate.3MS the-boys apple and the-girls orange
 ‘The boys ate an apple and the girls an orange’

These facts wouldn’t be expected if the merger of the subject and the verb takes place lexically, at a point in the derivation or a component prior to where the relations in (22) and (23) are computed given the output of lexical merger is an anaphoric island.

Moreover, the merger in question can involve an auxiliary verb (24a) and negation (24b) on one hand and the subject on the other. This is usually not the case with instances of lexical merger such as compounding where the two elements usually enter into a thematic relation:

- (24) a. kaanat T-Taalibaat-u **ya-ʔkul-na**
 be.Past.3FS the-students.FP-Nom 3-eat-FP
 ‘The students were eating’
- b. laysa r-rizaal-u muʔallimiin
 neg.3MS the-men teachers
 ‘The men are not teachers’

As far as syntactic merger is concerned (scenario ii), there is strong evidence that this is not so either. First, in the VSO order (as in the SVO order) the subject carries all its features and particularly Case. This sharply contrasts with cases of syntactic Noun Incorporation discussed in Baker (1988) where the merged noun is usually bare.

Another argument that the merger does not take place in the syntax comes from the fact that the merged subject can be a maximal projection (XP) as is clearly the case with the simple definite subject in (1) and the complex subject in (25).

- (25) žaaʔa muʕallimuu T-Tullab-i
 came.3MS teachers.MP the-students
 ‘The students’ teachers came’

Focusing on (25), given that movement out of NPs is not allowed in Arabic¹², a syntactic derivation of (25) would have to involve movement of the whole NP and its incorporation into the verb rather than movement of the bare noun only. However, this movement is not structure preserving because it involves the movement of a maximal projection to a head (Chomsky 1995).

Thus, there is strong evidence that the component where the subject and verb merge can be neither lexical nor syntactic. The evidence points to a component that is postsyntactic such as the Morphological Structure of Halle and Marantz (1993). In the PF component the merger of the verb and the postverbal is essentially a process of rebracketing that does not involve movement at all. Thus, the complex made up of the verb and the subject is transparent because the two elements can be accessed independently in the syntax. Similarly, the merger does not violate structure preservation because there is no syntactic movement in the first place.

Notice that assuming PF merger we account straightforwardly for the fact that when the subject is a null pronominal both the auxiliary and the lexical verb carry full agreement (5a). Since a null pronominal cannot enter spell-out agreement features by definition, due to lack of a phonological matrix we correctly predict that number agreement will be spelled-out on both verbs.

The same analysis carries over to variables. Agreement in number is always realized when the subject undergoes movement:

- (26) T-Tullabu llađiina nažafi-uu fi l-imtifaani
 the-students who passed-3MP in the exam
 ‘The students who passed’

Since traces are phonologically null, they evidently cannot spell-out the agreement features on the verb.¹³

¹² This is obvious from the fact that Wh-movement of NPs is not possible (I)

- (i) * man žaaʔa muʕallimuu
 whose came teachers

¹³ The argument is tentative, however, given that Arabic is a Null Subject Language. If the the real subject in (26) is a null pronominal then the argument is moot. However, if it turns out that Standard Arabic is like Palestinian in that it obeys McCloskey’s highest subject restriction as shown in Shlonsky (1992) then the gap in (26) could be a trace.

To sum up, we have accepted that merger is what is responsible for the complementary distribution between number agreement and the postverbal lexical subject but in the present analysis it is the postverbal lexical subject that incorporates rather than a pronominal.

3.4. Merger and Adjacency

Let us turn to an issue that arises in the context of constructions where other constituents may intervene between the subject and the verb:

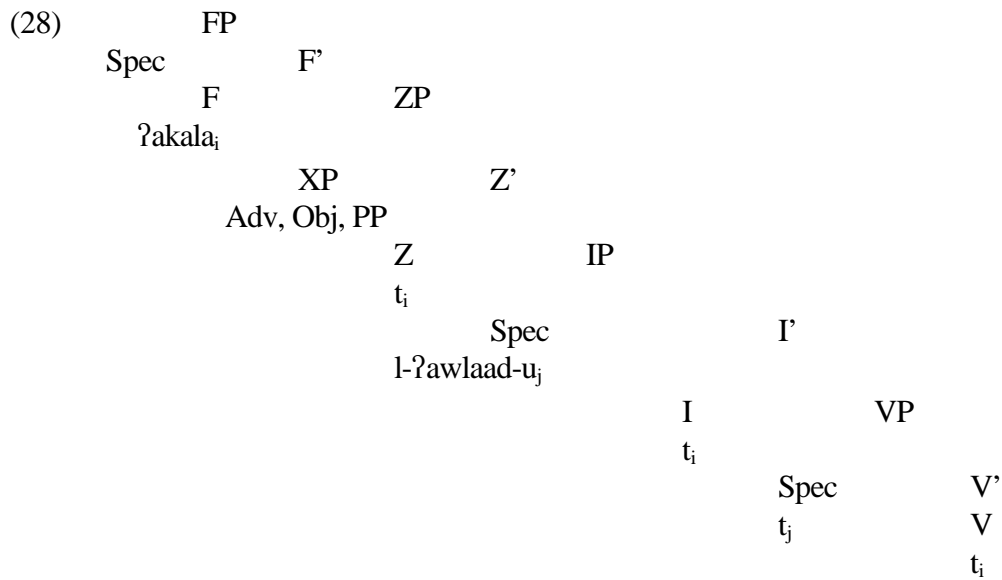
- (27) a. ?akala t-tuffaafiata l-?awlaadu
ate.3MS the-apple the-children
'The children ate the apple'
- b. ?iltaqaa bi-l-mu?allim-i T-Tullab-u
met with-the-teacher-Gen the-students-Nom
'The students met the teacher'

The problem with these examples is that the putative merger between the verb and the subject seems to take place across an intervening constituent which directly contradicts the claim that merger takes place under adjacency.

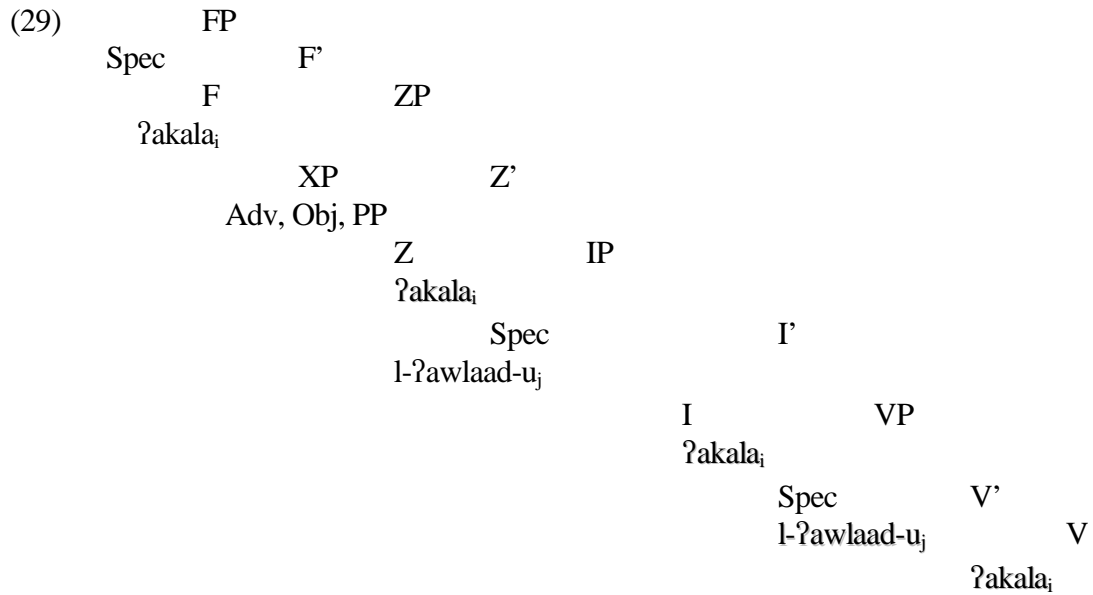
One possible solution is that the verb and the subject merge in PF and then the verb excorporates (in the sense of Roberts 1991) and moves higher. If excorporation is a valid grammatical operation, this analysis is plausible given Aoun and Benmamoun (forthcoming)'s theory that movement takes place in PF to derive some types of Clitic Left Dislocation. Then excorporation and movement of the verb would then be another case of PF movement which effects the verb in this instance.

An alternative solution is suggested in Aoun and Benmamoun (1997). According to Aoun and Benmamoun, the problem with sentences such as (27) does not arise if we assume that the overt subject merges with the copy of the verb that precedes it. Consider the following representation for the sentence in (28). I will assume that the object in (27a) and the PP in (27b) are located in a projection between FP and IP (ZP)¹⁴.

¹⁴ FP could be a focus projection (Ouhalla 1992) and ZP a Topic projection. See Rizzi (1997) for detailed analysis of the projections at the left periphery of IP (TP).



In this derivation there are two copies of the subject, one in Spec VP and one in Spec IP (the overt copy). In addition there are three copies of the verb, one copy in the VP, another in IP and the last one in FP (the overt copy):



In principle, merger can involve any copy of the verb and the overt subject as long as the verb precedes the subject and nothing intervenes between the two elements¹⁵. This scenario is particularly available under the copy theory of movement where all the copies are identical. In the above structure, this situation involves the verbal copy in Z and the subject copy in the Spec of IP. By merging with the verbal copy in I, the subject NP essentially spells-out the relational agreement features on all the copies in the verbal chain. Consequently, the copy that gets ultimately pronounced does not carry the number suffix.

4. Conclusion

In this paper, I have proposed an alternative analysis to the well known verb subject agreement asymmetry in Standard Arabic. The analysis I have proposed is purely morphological. The main idea is that the absence of the number affix is due to the merger of the verb and the subject. Thanks to this merger the subject NP spells-out the number feature on the verb, thus making the presence of the number affix redundant. Moreover, it seems to be local, probably under adjacency (in the sense of Marantz 1988, Halle and Marantz 1993) which is not a syntactic constraint but a phonological one¹⁶. Finally, it violates structure preservation in that it involves the merger of a head and a maximal projection. The difference between Standard Arabic and the modern Arabic dialects is attributed to the presence of a process of PF merger in the former and its absence in the later.

¹⁵ Notice that merger between the non-overt subject copy and the verbal copy (the trace of the moved verb) is ruled out because the merged subject must spell-out the relational agreement features which a non-overt copy cannot do. This is independently supported by the fact that other null elements such as *pro* and variables do not enter into this merger (see above).

¹⁶ See Bobaljik (1994) where adjacency is invoked to account for English verbal morphology.

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