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Associating EPP with ϕ -completeness*

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0. Introduction

The primary purpose of this paper is to examine the adequacy of a long-standing assumption that every clausal category is required to have a structural subject position. Although the exact nature of this requirement (known as the Extended Projection Principle (EPP)) is not clear, it may safely be said that some condition is necessary to account for the obligatory occurrence of an expletive subject in a sentence like (1):

- (1) John said that *(there) was a man in the room.

What is less obvious, on the other hand, is the universality of this condition. A standard view is that Spec-TP is necessary not only in a sentence like (1) but also in an infinitival complement of a sentence like (2a). Thus, (2b) rather than (2c) has been regarded as an appropriate representation:

- (2) a. This story seems to be believed by the villagers.
b. [TP This story₁ seems [TP *t*₁ to be believed *t*₁ by the villagers]].
c. [TP This story₁ seems [TP to be believed *t*₁ by the villagers]].

Nevertheless, the adequacy of universality of EPP has been called into question in the recent literature on various grounds (see Castillo, Drury and Grohmann 1999, Epstein

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and Seely 1999, Manzini and Roussou 2000, etc.). Chomsky (1999) also suggests, along with a traditional/standard view (called alternative I), the possibility that EPP may not be applied under certain circumstances (alternative II). In this paper, I will take up his second analysis seriously and attempt to show that it is actually a plausible hypothesis. More specifically, I will examine from an empirical point of view the notion of ‘ ϕ -completeness’ introduced by Chomsky (1998, 1999) and demonstrate that a functional category with an incomplete ϕ -set cannot trigger overt realization of its specifier position.

Section 1 provides an overview of theoretical background, focusing on the alternatives I and II, the newly introduced mechanism Agree and the notion of ϕ -completeness. Section 2 discusses defective agreement patterns in Belfast English and Arabic and shows that an incomplete ϕ -set is embodied by partial agreement. Furthermore, based on the correlation between different agreement patterns and word order in Arabic, a hypothesis is made that EPP is not applied when a functional category T(ense) has an incomplete ϕ -set. Sections 3 and 4 are devoted to reinforcing this hypothesis. A potential counter-argument, the null expletive hypothesis, is examined and rejected in section 3. Section 4 demonstrates that the subject in the VS(O) order does not move to Spec-TP.

1. Theoretical Background and Problems

Chomsky (1999) suggests the following views as to the application of EPP:

Alternative I: T has an EPP feature regardless of ϕ -completeness.

Alternative II: T has an EPP feature only if it is ϕ -complete.

A crucial difference between them resides in the notion of ϕ -completeness. Chomsky classifies a category T into two sub-classes in terms of types of ϕ -set it can carry. It is proposed that T in a tensed clause and a control infinitival clause is equipped with a complete ϕ -set, which contains both person and number features (in English).¹ On the other hand, T in a raising/ECM infinitival clause is considered to be defective or incomplete in that its ϕ -set consists only of a person feature. Thus, under the alternative II, while T in a finite/control clause has an EPP feature, T in a raising/ECM clause does not.

¹ There are two possible ways to interpret the (in)completeness of a ϕ -set. One way to look at this issue is to postulate a universal set of ϕ -features and say that if a given ϕ -set contains all of them, it is complete, whereas a given ϕ -set is incomplete if at least one of the features is missing. Let us call this view UNIVERSALITY APPROACH. The other analysis, which may be called the RELATIVIZED APPROACH, is that the type of features contained in a complete ϕ -set is relativized from language to language. Although the choice between these two approaches is not a trivial issue, the latter is tentatively adopted in this paper. Martin Atkinson (p.c.) pointed out that the relativized approach might be supported from a conceptual point of view. Chomsky (1998) speculates, in the context of the reduction of computational complexity, that although there is a universally available set F of linguistic properties, each individual language involves selection of a subset [F] of F at the initial stage of the mapping process from F to a particular linguistic expression. Furthermore, Andrew Radford (p.c.) suggested to me a slightly different version of the relativized approach, which is to some extent reconciled with the universality approach. Given the basic idea of the principles-and-parameters theory that some aspects of languages are universal and others are parameterized, a certain subset of F must be present in all languages and the choice of the rest can be parameterized.

However, the adequacy of the alternatives I and II is difficult to justify or reject in a convincing way. This is so, especially when it comes to the EPP effect in infinitival clauses. For one thing, the lack of a morphological reflex of the EPP feature makes it difficult to detect its presence in a visible way. Its presence in infinitival clauses is not immediately detectable on the basis of the category occupying Spec-TP either, because this position is allegedly occupied by a phonologically null category (either PRO or a trace).² Again, visible evidence is hard to obtain. On the other hand, to reject the EPP effect in infinitival clauses is also difficult for exactly the same reasons just described. Another difficulty in relation to the choice of the alternatives is that we do not have visible evidence for the difference between the ϕ -set of T in a control clause and that of T in a raising/ECM clause. Consequently, discussions of the EPP effect in the relevant constructions tend to be highly speculative.

The ϕ -set of T plays a significant role not only in the choice between alternatives I and II but also in the feature-checking mechanism in general. One of the innovations in the current framework (Chomsky 1998, 1999) is the replacement of feature movement with an operation called Agree. An important characteristic of this operation is that it has effects both on LF and on PF. As far as A-movement is concerned it deletes/checks LF-related uninterpretable features (i.e., T's ϕ -features and DP's Case features). Simultaneously, it serves to assign values to the ϕ -set of T and the Case feature of a nominal category for the purpose of PF realization of the relevant categories.

With this background, let me briefly demonstrate how Agree works by using a simple transitive sentence like (3a). When the structure like (3b) is constructed, T and the subject DP have ϕ - and Case-features as illustrated below:

- (3) a. The students are reading books.
 b. $[_{TP} \text{ T-are} \quad \quad \quad [_{VP} [_{DP} \text{ the students}][_v \cdot \text{reading books}]]]$
 $\phi^*: \{ \text{person} = x, \text{number} = y \} \quad \quad \phi: \{ \text{person} = 3\text{rd}, \text{number} = \text{PL} \}$
 $\quad \quad \quad \quad \quad \quad \quad \quad \quad \text{Case}^* = z$

An asterisk added to a feature means that the feature in question is uninterpretable. Although the ϕ -set of T has person and number features, their values are not specified.³ As a result of Agree, uninterpretable features are deleted/checked and ϕ -feature values of the DP *the students* are copied onto T's ϕ -set.

What is particularly important in the present discussion is the influence of Agree on morphological realization of verbs in a sentence where ϕ -incomplete T is involved. One of the conditions on Agree discussed by Chomsky (1998, 1999) is called Matching,

² One might say that Spec-TP is occupied by a phonologically overt subject in an ECM clause. However, considering the proposals made by Koizumi (1995) and Boskovic (1997) that the ECM subject overtly moves into the matrix clause, it cannot trivially be concluded that the surface position of the ECM subject is Spec-TP of an infinitival clause.

³ For the sake of expository convenience, unvalued features are written like {person = x}, etc, whereas valued features are written like {person = 3rd}.

which requires that T and DP match in ϕ -features. Matching requires feature identity, which means “identity of choice of feature, not of value” (Chomsky 1998: 39). T’s ϕ -set in English, if it is ϕ -incomplete, is alleged to have an unspecified person feature only, whereas a DP’s ϕ -set has fully specified person and number features:

- (4) incomplete ϕ -set of T: {person = x }
 ϕ -set of a DP (e.g., *the students*): {person = 3rd, number = PL}

Both ϕ -sets in (4) are identical, since they have a person feature in common. Values of features do not play any role in Matching. Thus, although T’s incomplete ϕ -set is valueless and the DP’s ϕ -set is valued, this does not prevent their matching.

Under this definition of Matching and Agree, what is expected to happen in a clause headed by ϕ -incomplete T is that the predicate agrees with its subject only partially. As far as the circumstance illustrated in (4) is concerned, the predicate does not have to agree in number *so long as it agrees in person*. However, this observation is not easy to examine in English infinitival clauses, because infinitival predicates do not inflect for person and number. In the next section, I will demonstrate specific consequences of ϕ -incompleteness by examining two different defective agreement patterns in languages other than standard variety of English.

2. Defective Agreement Patterns and the Content of ϕ -sets

2.1 Full vs. Partial Agreement in Arabic

It is reported that in Arabic for example, a predicate exhibits either full agreement or partial agreement (Mohammad 1989, 1990, Benmamoun 1992, Fassi Fehri 1993, Coopmans 1994, Ouhalla 1994, among others), as illustrated below:⁴

- (5) a. n-nisaa?-u daxal{-na / *-at} makaatib-a-hunna
 the-women(3PF)-NOM entered{-3PF / *-3SF} offices-ACC-their
- b. daxal{ *-na / -at} n-nisaa?-u makaatib-a-hunna
 entered{ *-3PF / -3SF} the-women(3PF)-NOM offices-ACC-their
 ‘The women have entered their offices.’ (*Arabic*; Fassi Fehri 1993: 32)

The verb in (5a) must agree with its subject in person, number and gender. On the other hand, (5b) illustrates partial agreement. Although the verb agrees with its subject in person and gender,⁵ it does not show number agreement. In fact, full agreement is impossible. Still, the sentence is grammatical.

⁴ The following abbreviations are used in the gloss: S = singular, P = plural, D = dual, M = masculine, F = feminine, NOM = nominative, ACC = accusative, GEN = genitive, EXPL = expletive, INDIC = indicative, SUBJ = subjunctive, COMP = complementizer.

⁵ It is not appropriate to consider that (5b) completely lacks agreement. When a third person plural masculine subject occurs, the verb exhibits a third person singular masculine form. This means that the verb agrees with its subject in gender, despite the lack of number agreement. Consider:

Partial agreement in (5b) seems to instantiate an incomplete ϕ -set carried by T. More specifically, the relevant ϕ -set only contains person and gender features but the number feature is missing, analogously to the absence of the number feature in the ϕ -set of T heading a raising/ECM infinitival clause in English. The (in)completeness of the ϕ -set is reflected not only in agreement morphology but also in another conspicuous property of Arabic. As exemplified by (5a) and (5b), Arabic has two types of word order, that is, SV(O) and VS(O). The difference in word order is correlated with the different agreement patterns. When a subject precedes a verb, the latter must exhibit full agreement. On the other hand, a verb agrees with its post-verbal subject only partially. This correlation is significant in considering the relation between ϕ -completeness and EPP effects. A generalization obtained from the data like (5a, b) is that while T with a complete ϕ -set has an EPP feature, T with an incomplete ϕ -set does not.

2.2 Singular Concord as Default Agreement

The verb form like *daxal-at* 'entered-3SF' in (5b) is from time to time analyzed as a default third person singular form in previous studies on the relevant phenomena (see Koopman and Sportiche 1991, Mohammad 1990, Ouhalla 1994, among others). Under this view, the Arabic example (5b) does not represent partial agreement but rather the complete lack of agreement. However, the partial agreement pattern in Arabic differs from the case of genuine default agreement in several respects.

Henry (1995) reports that the occurrence of third person singular verbs with plural subjects is found in the Belfast dialect of English (henceforth, Belfast English) as well. This phenomenon is called singular concord. In (6a) below, the verb is realized in the third person singular form despite the occurrence of the third person plural subject. Henry argues that two pieces of evidence suggest that the third person singular form in the singular concord construction is a kind of default agreement form. First, although the verb shows up in a singular form in the presence of a plural subject, it is not the case that a plural form appears with a singular subject:

- (6) a. The eggs is cracked.
 b. *The egg are cracked. (*Belfast English*; Henry 1995: 16-17)

Thus, the lack of agreement in this construction does not mean that the choice between singular and plural verbs is free regardless of the number of its subject.

Secondly, person agreement is also absent:

- (7) a. John and me is going.
 b. *John and me am going.

-
- (i) jaa?-a al-?awlaad-u
 came-3SM the-boys(3PM)-NOM
 'The boys came.'
(Mohammad 1990: 95)

- c. John and me kicks ourselves. (*Belfast English*; Henry 1995: 21)

(7a) and (7b) are parallel in that number agreement is disregarded. But while person agreement is disregarded in the former, it is observed in the latter. Notice that the conjoined subject *John and me* is syntactically first person, as indicated by the anaphor in (7c). The contrast between (7a) and (7b), then, indicates that a third person form is forced to occur regardless of the person of the subject. Putting together the above properties concerning number and person agreement, it follows that the singular concord construction exhibits total lack of subject-verb agreement. Third person singular forms in this construction, therefore, should be regarded as default agreement forms.

Now, keeping in mind that Agree feeds PF as well as LF, let us re-consider the contrast in (6a, b) above. Starting with (6b), its ungrammaticality can be analyzed in two ways. Suppose that T has a ϕ -set containing person and number features. Once Agree holds, that is, once the ϕ -sets of T and DP match, the values of the ϕ -features carried by a DP (i.e., “3rd (person)” and “singular”) are copied onto T, “yielding the surface effect of noun-verb agreement”, to borrow Chomsky’s (1999: 2) phrase. Thus, the verb should be realized as *is* and there is no way to have *are* here. The other possibility is to assume that T’s ϕ -set is empty in the singular concord construction and the ungrammaticality is attributed to the failure of Matching⁶ (and hence, no Agree). Under this assumption, the occurrence of *are* is also ruled out as an impossible option.

Neither of these two accounts is superior to the other as far as the sentence (6b) is concerned. However, once other data from singular concord are taken into consideration, the emptiness of ϕ -set starts to become more attractive. As discussed earlier, singular concord is indifferent to the person and the number of subjects. This indicates that the ϕ -set of T in this construction has neither person nor number features. With this in mind, let us consider (6a) above. Suppose that T’s ϕ -set has person and number features. Then, Matching under identity is successfully attained and Agree operates, resulting in the verb being spelled out as *are* by virtue of the ϕ -feature values of the DP *the eggs*. But this wrongly predicts that the form *is* never occurs in (6a). If, by contrast, T’s ϕ -set is empty, failure of Matching arises and no Agree holds, because matching holds if a probe and a goal have at least one feature in common. The copying of the DP’s ϕ -feature values is blocked, which at first sight prevents a verb from being spelled out morphologically. But the verb in a singular concord sentence must be spelled out, so that tense distinction can be realized, as illustrated by the following contrast:

- (8) a. These cars goes very fast.
 b. The students was late. (*Belfast English*; Henry 1995: 16-18)

⁶ Given that Matching is defined under identity, the failure of Matching means either that T’s ϕ -set does not have person and number features but instead has a distinct feature or that T’s ϕ -set is simply empty. Taking account of the relativized view of ϕ -completeness (see footnote 1), the latter possibility is more plausible.

The remaining question is how *is* is spelled out. This is the point where a default third person singular form comes into play. Belfast English has an option to spell out a verb in the default form when Agree does not hold.

An important property of default agreement is that when a given ϕ -feature value is spelled out in a default form, T's ϕ -set does not have the corresponding feature. In Belfast English, both person and number features are missing from T's ϕ -set. A prediction is that although verbal inflection in a sentence headed by ϕ -incomplete T is determined by Agree as far as the features contained in T's ϕ -set are concerned, it is determined by default with respect to the missing feature(s). Returning to the Arabic data, we find that T heading an SV(O) sentence is ϕ -complete in that a verb must agree with its subject with respect to all the features (person, number and gender). A complete ϕ -set of T enables all the ϕ -feature values of the subject to be copied onto T and they are morphologically realized on the verb. On the other hand, if the subject occurs in the post-verbal position, the verb cannot show full agreement. Still, it is sensitive to the person and gender distinction. Therefore, the verb form in Arabic VS(O) order is not a default third person singular form resulting from the lack of agreement. Rather, subject-verb agreement *does* exist, though the verb agrees only partially.

In summary, this section demonstrated that Arabic partial agreement is different from default agreement, contrary to some of the observations made in the past. Their difference is attributed to the presence or absence of Matching. While Matching occurs with partial agreement, it does not take place with default agreement. This difference is ultimately ascribed to the content of T's ϕ -set. Furthermore, attention was paid to the correlation between agreement patterns and word order. While ϕ -complete T is able to have an EPP feature, ϕ -incomplete T is not.⁷

3. Against Null Expletive Analyses

Although the correlation between word order and agreement patterns in Arabic has already been noticed in the literature, VS(O) order is often analyzed as involving a null expletive in Spec-TP and therefore is not considered to indicate the lack of the EPP effect (see Koopman and Sportiche 1991, Mohammad 1990, Ouhalla 1994, among others, for this view). If an analysis of this kind turns out to be appropriate, the correlation between

⁷ Peter Sells (p.c.) pointed out that the SV(O) order in a singular concord sentence is unpredictable if EPP is associated exclusively with ϕ -complete T. If the subject occupies Spec-TP in the relevant construction, my hypothesis should be stated in a weaker form, that is, ϕ -incomplete T cannot have an EPP feature. Still, it is also possible to consider that the surface subject position in a singular concord sentence is not a canonical subject position. Henry (1995) reports that subject-auxiliary inversion is impossible when the verb shows singular concord:

- (i) a. *Is the eggs cracked?
- b. The eggs is cracked. (Henry 1995: 16)

Therefore, some caution may be needed before concluding that the subject in a singular concord sentence occupies Spec-TP and if it does not, strict association between EPP and ϕ -completeness can be maintained. This issue needs further consideration.

ϕ -completeness and the EPP effect cannot be maintained. This section will argue against the null expletive analyses, offering conceptual and empirical reasons for the absence of such an element.

3.1 Arabic Expletives

Ouhalla (1994), for example, argues that VS(O) order involves a null expletive. A piece of evidence he provides is that when an overt expletive occurs, the verb appears to agree with it rather than with the post-verbal DP:

- (9) a. idda^cuu ?anna-**hu** ?istaqaal-**a** l-wuzaraa?-u.
 claimed that-EXPL(3SM) resign-3SM the-ministers-NOM
 ‘They claimed that the ministers resigned.’ (Ouhalla 1994: 44)
- b. ?inna-**haa** zaar-**at-nii** talaat-u saa^ciraat-in.
 that-EXPL(3SF) visited-3SF-me three-NOM poets-GEN
 Lit. ‘It visited me three poets.’ (Fassi Fehri 1993: 39)

Ouhalla argues that the agreement pattern in VS(O) order is parallel to that of the sentences like (9a, b) and concludes that a null expletive is involved in the former case. However, Fassi Fehri (1993) rejects this analysis on the basis of the following example:

- (10) ?inna-**hu** ?amat-u llah-i daahib-**at-um**
 that-EXPL(3SM) slave(3SF)-NOM Allah-GEN going-3SF-NOM
 ‘It is Allah’s slave going.’ (Fassi Fehri 1993: 41)

Here, the verb agrees with the thematic subject rather than with the expletive. In fact, agreement with the expletive results in ungrammaticality:

- (11) idda^ca ?ahmad-u ?anna-**hu** al-?awlaad-u jaa?{-uu / *-a}.
 claimed Ahmed-NOM that-EXPL(3SM) the-boys(3PM)-NOM came{-3PM/*-3SM}
 ‘Ahmed claimed that the boys came.’ (Mohammad 1990: 119)

This means that an expletive is not involved in agreement and the expletive-verb agreement in (9a, b) is only an apparent phenomenon. Furthermore, the following contrast seems to provide evidence for the lack of a parallelism between an expletive and its putative null counterpart:

- (12) idda^caa ar-rajul-u {?anna-**hu** / * ?anna} yabd-uu ?anna
 claimed the-man-NOM {that-EXPL / * that-*pro*(EXPL)} seem-3SM. that
 al-?awlaad-a saafar-uu.
 the-boys-ACC departed-3PM
 ‘The man claimed that it seems that the boys departed.’ (Mohammad 1990: 102)

While the sentence is grammatical with an expletive, it becomes ungrammatical without an (overt) expletive. The null expletive analysis, which presupposes a parallelism

between a sentence with an (overt) expletive and the one without it, cannot account for this contrast.⁸

3.2 Absence of Null Expletives

Abstracting away from Arabic cases, postulation of a null expletive in general is problematic from a conceptual point of view. It conflicts with the condition that a lexical item “enters the numeration only if it has an effect on output” (Chomsky 1995: 294). An immediate outcome of this condition is that an element that has no effect either on LF or on PF cannot exist in the computational component. It has, in fact, been pointed out in the literature that the putative null expletive is such an element (Platzack 1994, Manzini and Savoia 1997, Alexiadou and Anagnostopoulou 1998, Picallo 1998 among others). Since it is a phonologically null category, its presence does not have an effect on PF output. Likewise, it is even less conceivable that its presence has any effect on LF output. Expletives have been considered to be a semantically dummy element, which functions just as a placeholder in a phrase structure. Postulating a null expletive leads to allowing the occurrence of an element that does not have any effect on interfaces but plays a role only in the narrow syntax.

In connection with semantic interpretation, it is argued in the literature that the lack of the so-called definiteness restriction (DR) in VS(O) order in null subject languages indicates the absence of null expletives (see Alexiadou and Anagnostopoulou 1998 for Modern Greek and Picallo 1998 for Catalan). As is well known, the type of nominals that can appear in the post-verbal position is restricted to indefinite nominals in a language that has an overt expletive. On the other hand, a definite DP may occur in the post-verbal position in null subject languages. Compare (13) and (14):

- (13) a. There is { a man / *the man / *everyone } in the room.
 b. There arrived { a man / *the man / *everyone }.

- (14) jaa?-a al-?awlaad-u.
 came-3SM the-boys-NOM
 ‘The boys came.’ (*Arabic*; Mohammad 1990: 95)

Incidentally, it is noteworthy that Burzio (1986) points out a correlation between the availability of VS order with an overt expletive and the presence/absence of the DR effect. According to him, Italian and Piedmontese have, along with normal expletive constructions, an option not to use an expletive in the VS order. A crucial difference is that the DR effect is found in a sentence with an overt expletive, whereas no DR effect is

⁸ Kleanthes Grohmann (p.c.) asked why an expletive can ever occur in the VS(O) order under the view that T in this order lacks an EPP feature. A possible answer may be that the occurrence of an expletive is triggered by an EPP feature of C rather than by that of T. This idea does not seem to be implausible. As illustrated by (11), an expletive may occur in the SV order, where Spec-TP is occupied by the thematic subject. Additionally, the Arabic expletive is cliticized onto C. This means that the occurrence of an expletive may be dissociated from T’s EPP feature in Arabic. Still, this issue is debatable and left for further consideration.

observed in the VS order if an overt expletive does not occur. Consider the following Italian examples:

- (15) a. **Ci** sono molti clienti nel negozio.
 EXPL are many clients in the store
 'There are many clients in the store.'
- b. ?* **C'erano** tutti nel negozio. c. Sono arrivati tutti.
 EXPL was everyone in the store have arrived all
 'There was everyone in the store.' (Burzio 1986: 126, 134)

Although Burzio generalizes and says that the overt versus covert nature of expletives plays a role in this difference, it is not clear why a phonological distinction has an effect on the difference in semantic interpretation. Definiteness is an LF-related property and if it is associated with expletives in general, the null hypothesis is that their presence, whether they are phonologically realized or not, does not cause any difference. Rather, the contrast is accounted for in a simple way if the absence of an overt expletive is interpreted as genuine absence rather than as the presence of a null element.

To sum up, this section has shown that partial agreement in Arabic VS(O) order is not agreement between a null expletive and the verb. The lack of parallelism between the VS(O) construction and the expletive construction means that the former does not involve a null equivalent of an expletive. Postulation of such an element seems to be inappropriate crosslinguistically, judging from the absence of the DR effect in null subject languages.

4. Positions of Verbs and Subjects

Although I made a proposal that the agreement patterns are correlated with the presence/absence of an EPP feature in T, two more issues have yet to be discussed in order to reinforce this proposal. It must be shown that the verb does not move to C. If it is placed in a position higher than TP, the VS(O) order does not necessarily indicate that the post-verbal subject cannot move into Spec-TP. In this connection, the subject position needs to be specified. This section explores these two issues.

4.1 Verb Position

The VS order is found not only in Arabic. Celtic languages such as Irish and Welsh, for example, are known to display dominant (surface) VS order. Some Germanic languages have constructions known as Verb Second (V2), where a verb can precede its subject:

- (16) a. Einen Schreibtisch *habe* ich gestern gekauft.
 a desk have I yesterday bought
- b. Gestern *habe* ich einen Schreibtisch gekauft.
 yesterday have I a desk bought
 'I bought a desk yesterday.' (German)

A question constantly asked in relation to the VS(O) order is where the verb is located.

Fassi Fehri (1993) and Plunkett (1993) deny the possibility of overt verb raising to C in Arabic. Consider the following example:

- (17) ?-uriid-u ?an ya-xruj-a al-tullaab-u.
 1S-want-INDIC COMP 3SM.-leave-SUBJ the-students-NOM
 'I want the students to leave.' (Plunkett 1993: 240)

The (non-)occurrence of a complementizer is regarded as a principal criterion to see whether C can be a surface position for a verb. For example, although German is a V2 language, V-to-T-to-C movement does not take place when a complementizer appears:

- (18) Ich weiß [*daß* die Kinder (*haben) den Film gesehen haben].
 I know that the children (*have) the film seen have
 'I know that the children have seen the film.'

The highest verbal category, the auxiliary *haben* 'have', must stay in the sentence-final position in the presence of a complementizer. The sentence becomes ungrammatical if a verb appears in the second position despite the presence of a complementizer. If the ungrammaticality is considered to be caused by the conflict between the complementizer and the verb for a single C position, the well-formed Arabic example in (17) is regarded as evidence for the non-occurrence of the verb in C.

The behavior of negation suggests lack of verb movement to T. One of the conspicuous characteristics of Arabic negative sentences is that the tense distinction appears on the negative element, while the verb form remains invariable (Benmamoun 1991, Fassi Fehri 1993, Plunkett 1993, Ouhalla 1994, among others). On the other hand, it is on the verb that the tense distinction is realized in the absence of negation:⁹

- (19) a. t-tullaab-u {**lam / lan**} yaðhabuu.
 the-students-NOM {**not.PAST / not.FUT**} go
 'The students {did not / will not} go.'
- b. t-tullaab-u {**ðahabuu / sayaðhabuuna**}.
 the-students-NOM {**go.PAST / go.FUT**}
 'The students {left / will go}.' (Benmamoun 1991: 18, 19)

The difference between (19a) and (19b) in terms of verb forms is parallel to that found in English. While tense is realized on verbs in affirmative declarative sentences, no tense distinction is found in the verb form in negative sentences. Tense is specified in the

⁹ Arabic verbs exhibit discontinuous affixes in their imperfect tense forms. Thus, *yaðhabuu* in (19a) is analyzed as *ya-ðhab-uu*, where the split affix *ya...uu* encodes third person plural masculine agreement. Since agreement has no bearing on the present discussion, irrelevant details are omitted in the morphological analysis of the verb in these examples. The verb forms in (19b) are also typed without detailed analysis of their morphological structures for the same reason.

auxiliary verb *do* instead. The only difference between Arabic and English is that Arabic does not make use of a dummy auxiliary like *do* in negative sentences. Paying attention to these factors, Benmamoun (1991) presents an analysis, in which the Arabic negative element is generated as a head of NegP and undergoes overt raising to T. According to him, NegP is located between T and VP both in Arabic and in English. Under this analysis, overt V-to-T raising is considered to be impossible.¹⁰

Still, it is not appropriate to deny overt verb raising in Arabic. A piece of evidence for overt V-raising out of *vP* is that the subject can follow a transitive verb:

- (20) qara?-a al-?awlaad-u kitaab-an.
 read-3SM the-boys-NOM book-ACC
 'The boys read a book.' (Mohammad 1990: 96)

Given that the external argument is base-generated in Spec-*vP*, verb movement across the subject derives the VSO order in this sentence. Taking this into consideration, the VS(O) order is analyzed as involving V-raising into a position between T and *v*, though the verb does not move to C.

4.2 Subject Position

Opinions vary among scholars as to the surface position of the post-verbal subject. Some consider that it moves out of *vP* (Ouhalla 1994, Benmamoun 1998, Alexiadou and Anagnostopoulou 1998), while others argue that it remains inside *vP* (Koopman and Sportiche 1991, Fassi Fehri 1993, Plunkett 1993). This subsection explores these possibilities and shows that both views are actually right. What is important, however, is that the subject moves out of *vP*, provided that a *vP*-external functional category attracting the subject is ϕ -complete. Otherwise, the subject remains inside *vP*.

Recent studies on the structure of functional projections have advanced a view that an intermediate specifier position between the highest inflectional projection and *vP* is available for a subject (see Jonas and Bobaljik 1993, henceforth J&B; Bobaljik 1995, etc.). This analysis results mainly from the examination of the so-called Object Shift (OS) in Germanic languages. J&B, for instance, propose the following generalization: If a language permits OS, the subject in VS(O) order moves from Spec-*vP* to a specifier position located between the highest inflectional projection and *vP*. They argue, mainly based on the following data, that indefinite subjects in Icelandic always move out of *vP*:

¹⁰ The same observation is made by Ouhalla (1994). Additionally, Fassi Fehri (1993) provides examples, where both complementizer and negation occur. Consider:

- (i) ?-uriid-u ?an laa y-a?tiy-a zayd-un
 1S-want-INDIC that not 3SM-come-SUBJ Zayd-NOM
 'I want Zayd not to come.' (Fassi Fehri 1993: 26)

The occurrence of the complementizer and negation before the verb reinforces the current observation that the verb does not move to T, let alone to C.

- (21) a. tað luku sennilega einhverjir stúdentar [VP **alveg** verkerninu].
 EXPL finished probably some students completely the.assignment
- b. *tað luku sennilega [VP **alveg** einhverjir stúdentar verkerninu].
 EXPL finished probably completely some students the.assignment
 (Jonas and Bobaljik 1993: 80, 81)

Assuming that the adverb *alveg* ‘completely’ is adjoined to the left of vP, J&B argue that the above contrast supports their observation. They further argue that when OS takes place, the subject must precede the shifted object:¹¹

- (22) a. tað borðuðu margir strákar₁ bjúgun₂ [VP **ekki** t₁ t₂].
 EXPL ate many boys the.sausages not
 ‘Many boys didn’t eat the sausages.’
- b. *tað borðuðu bjúgun₁ [VP **ekki** margir strákar t₁].
 EXPL ate the.sausages not many boys
 (Jonas and Bobaljik 1993: 83)

In this connection, a possible prediction is that if vP-external subject is possible in Arabic, the subject at least can precede a vP-adverb. This prediction is borne out:

- (23) ?akala zayd-un [VP **kaṭiiran** t-tufaah-a].
 ate Zayd-NOM abundantly the-apples-ACC
 ‘Zayd ate the apples abundantly.’ (Rahhali & Souâli 1997: 321)

Then, another prediction is that VOS order does not arise if a language has an option to have vP-external subject and OS. However, Arabic does allow VOS order:

- (24) ?ishtar-aa l-kitaab-a l-tullaab-u.
 bought-3SM the-book-ACC the-students-NOM
 ‘The students bought the book.’ (Ouhalla 1994: 53)

This fact casts doubt on the validity of J&B’s generalization. Subjects may remain inside vP even though a language has OS.¹²

Semantic interpretation of the subject may also be useful in the discussion of subject positions. Diesing (1992) argues that in German, whereas a bare plural subject

¹¹ J&B assume that the negative element *ekki* ‘not’ in Icelandic is an adverb adjoined to vP. This paper adopts their assumption for the sake of argument.

¹² The VOS order in (24) is not a result of right-dislocation. Ouhalla (1994) argues that a VOS sentence with a right-dislocated subject exhibits full agreement. Compare (24) and (i):

- (i) ?ishtar-uu l-kitaab-a, l-tullaab-u.
 bought-3PM the-book-ACC the-students-NOM
 ‘As for the students, they bought the book.’ (Ouhalla 1994: 54)

When the participle precedes its subject, it agrees partially, as illustrated by (27a). On the other hand, (27b) indicates that the participle must exhibit full agreement when it follows the subject. Assuming that (27a) is derived by overt participle raising with the subject remaining in vP and that (27b) is derived by subject raising out of vP , the participle agreement patterns also supports the idea that EPP is associated with a complete ϕ -set.

5. Conclusion

This paper critically examined the adequacy of universal application of EPP. First, it was demonstrated that ϕ -incompleteness is embodied by partial agreement. Secondly, attention was paid to the correlation between agreement patterns and word order difference. While SV(O) order emerges with full agreement, the subject cannot precede the verb when the latter exhibits partial agreement. This leads to the hypothesis that a functional category is qualified to have an EPP feature if it is ϕ -complete. To reinforce this view, three issues were taken up. First, the null expletive analysis of VS(O) order was rejected, based on conceptual and empirical considerations. Secondly, it was shown that the verb in VS(O) order does not move up to the C position. Thirdly, it was demonstrated that the subject in VS(O) order may or may not move out of vP . But when it moves from its base position, the functional category attracting the subject must be ϕ -complete.

References

- Alexiadou, Artemis, and Elena Anagnostopoulou. 1998. Parameterizing Agr: Word order, V-movement and EPP-checking. *Natural Language and Linguistic Theory* 16: 491-539.
- Bahloul, Maher, and Wayne Harbert. 1993. Agreement asymmetries in Arabic. In *Proceedings of the West Coast Conference on Formal Linguistics* 11, 15-31.
- Benmamoun, Elabbas. 1991. Negation and verb movement. In *Proceedings of NELS* 21, 17-31. GLSA, University of Massachusetts, Amherst.
- Benmamoun, Elabbas. 1992. Structural conditions on agreement. In *Proceedings of NELS* 22, 17-32. GLSA, University of Massachusetts, Amherst.
- Benmamoun, Elabbas. 1998. Spec-head agreement and overt case in Arabic. In *Specifiers*, ed. David Adger, Susan Pintzuk, Bernadette Plunkett, and George Tsoulas, 110-125. Oxford: Oxford University Press.
- Bobaljik, Jonathan. 1995. Morphosyntax: The syntax of verbal inflection. Doctoral dissertation, MIT, Cambridge, Mass.
- Boskovic, Zeljko. 1997. *The syntax of nonfinite complementation*. Cambridge, Mass.: MIT Press.
- Burzio, Luigi. 1986. *Italian syntax*. Dordrecht: D. Reidel.
- Castillo, Juan C., John E. Drury, and Kleanthes K. Grohmann. 1999. Merge over Move and the Extended Projection Principle. In *University of Maryland working papers in linguistics* 8, 63-103. Department of Linguistics, University of Maryland.
- Chomsky, Noam. 1995. Categories and transformations. In *The Minimalist Program*, 219-394. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 1998. Minimalist inquiries: The framework. *MIT occasional papers in*

linguistics 15.

- Chomsky, Noam. 1999. Derivation by phase. *MIT occasional papers in linguistics* 18.
- Coopmans, Peter. 1994. Comments on the paper by Ouhalla. In *Verb movement*, ed. David Lightfoot and Norbert Hornstein, 73-85. Cambridge: Cambridge University Press.
- Diesing, Molly. 1992. *Indefinites*. Cambridge, Mass.: MIT Press.
- Epstein, Samuel D., and T. Daniel Seely. 1999. SPEC-ifying the GF "subject;" eliminating A-chains and the EPP within a derivational model. Ms., University of Michigan.
- Fassi Fehri, Abdelkader. 1993. *Issues in the structure of Arabic clauses and words*. Dordrecht: Kluwer Academic Publishers.
- Henry, Alison. 1995. *Belfast English and Standard English*. Oxford: Oxford University Press.
- Jonas, Dianne, and Jonathan Bobaljik. 1993. Specs for subjects: The role of TP in Icelandic. In *MIT working papers in linguistics* 18, 59-98. Department of Linguistics and Philosophy, MIT, Cambridge, Mass.
- Kiss, Katalin É. 1996. Two subject positions in English. *The Linguistic Review* 13: 119-142.
- Koizumi, Masatoshi. 1995. Phrase structure in minimalist syntax. Doctoral dissertation, MIT, Cambridge, Mass.
- Koopman, Hilda, and Dominique Sportiche. 1991. The position of subjects. *Lingua* 85: 211-258.
- Manzini, M. Rita, and Anna Roussou. 2000. A minimalist theory of A-movement and control. *Lingua* 110: 409-447.
- Manzini, M. Rita, and Leonardo M. Savoia. 1997. Null subjects without *pro*. *UCL working papers in linguistics* 9, 303-313. Department of Phonetics and Linguistics, University College London.
- Mohammad, Mohammad A. 1989. Nominative case, i-subjects, and subject-verb agreement. In *Papers from the 24th Regional Meeting, Chicago Linguistic Society*, 223-235. Chicago Linguistic Society, University of Chicago, Chicago, Ill.
- Mohammad, Mohammad A. 1990. The problem of subject-verb agreement in Arabic. In *Perspectives on Arabic linguistics* 1, ed. Mushira Eid, 95-125. Amsterdam: John Benjamins.
- Ouhalla, Jamal. 1994. Verb movement and word order in Arabic. In *Verb movement*, ed. David Lightfoot and Norbert Hornstein, 41-72. Cambridge: Cambridge University Press.
- Picallo, M. Carme. 1998. On the Extended Projection Principle and null expletive subjects. *Probus* 10: 219-241.
- Platzack, Christer. 1994. Null subjects, weak Agr and syntactic differences in Scandinavian. In *Working papers in Scandinavian syntax* 53, 85-106. Department of Scandinavian Languages, University of Lund.
- Plunkett, Bernadette. 1993. The position of subjects in Modern Standard Arabic. In *Perspectives on Arabic Linguistics* 5, ed. Mushira Eid and Clive Holes, 231-260. Amsterdam: John Benjamins.
- Rahhali, Mohammed and El Hassan Souâli. 1997. A minimalist approach to verb movement in Standard Arabic. *Studia Linguistica* 51: 317-338.

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