

# Subject Agreement in Korean: Move F, Attract F, or Agree?\*

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## 1. Introduction

Chomsky (1995: 261ff) proposes that what moves in a given movement operation is a (formal) feature rather than an entire category. He further suggests that solely the target triggers movement in order to check off its uninterpretable features by attracting the closest relevant interpretable feature. That is, what induces movement is a morphological requirement of the target (**Attract F**) rather than that of the element that enters into a checking relation with it (**Move F**). Notice that in Attract F the motivation for movement of a feature is to satisfy a morphological requirement. By contrast, Move F requires a feature to undergo movement in order to be checked off against a relevant feature. Further, eliminating Move F and Attract F, Chomsky (2000) proposes **Agree** under which feature checking reduces to deletion under identity without feature movement.

This paper examines these three approaches to subject agreement constructions in Korean. It is proposed that Move F is still needed to account for the constructions, contrary to Chomsky (1995) who tries to replace Move F by Attract F. It is also discussed that Chomsky's (2000) Agree encounters difficulties.

## 2. Subject Agreement

Choe (1988), Lee (1991), and Kim (1994), to name a few, claim that *tul* in Korean falls into two categories. One is a plural marker like English *s* as in *boys* and the other is subject agreement like English *s* as in *rings a bell*.

Consider the following:

- (1) a. haksang-**tul**-i rak'etpol-ul yolsimhi-**tul** ch'yotta<sup>1</sup>  
student-PL-NOM racquetball-ACC intensely-? hit  
'The students played racquetball intensely.'

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<sup>1</sup>I am adopting the McCune-Reischauer Romanization System.

The first *tul* following the count noun *haksaeng* functions to pluralize it. Plainly, it is a plural marker. Of particular interest is that the second *tul* follows the adverb *yolsimhi*. It is obvious that conceptually, adverbs cannot be pluralized. Nonetheless, the so-called plural marker *tul* follows the adverb. This leads to the conclusion that the second *tul* is distinct from the first in its grammatical function. If the second *tul*, unlike the first, does not serve as a plural marker, what is its grammatical function? Choe (1988: 113) argues that the second *tul* in (1a) is an exponent of subject agreement.

This follows from the observation that it occurs when its clause-mate subject, but not the object, is plural, as illustrated in (1b,c):

- (1) b. \*han haksæng-i rak'etpŏl-ul yolsimhi-**tul** ch'yotta  
 one student-NOM racquetball-ACC intensely-AgrS hit  
 'One student played racquetball intensely.'  
 c. \*han haksæng-i kwaja tu kae-lul masitke-**tul** mogotta  
 one student-NOM cookie two-ACC tastily-AgrS ate  
 'One student ate two cookies with gusto.'

The deviance of (1b,c) is accounted for straightforwardly by the fact that *tul* is a subject agreement marker: Since the subject *han haksæng* in (1b) is singular, *tul* fails to agree in number with it. Though the object *kwaja tu kae* is plural, (1c) is ungrammatical since the subject is singular. These observations lead to conclude that *tul* is a realization of [+Agr], namely, AgrS (Choe 1988:113).

More convincing evidence in favor of AgrS *tul* comes from various classes of constructions such as complex sentence (2), object control (3), subject control (4), secondary predication (5), and ECM (6) constructions (Lee 1991, Moon 1995 and Yim 1999).

- (2) a. Sangmin-i [ai-tul-i kwaja-lul masitke-**tul** mogotta]-go malhaetta  
 -NOM child-PL-NOM cookie-ACC tastily-AgrS ate-COMP said  
 'Sangmin said that the children ate the cookies with gusto.'  
 b. \*ai-tul-i [Sangmin-i kwaja-lul masitke-**tul** mogotta]-go malhaetta  
 child-PL-NOM Sangmin-NOM cookie-ACC tastily-AgrS ate-COMP said  
 'The children said that Sangmin ate the cookies deliciously.'

(2b) is ungrammatical since AgrS *tul* fails to agree in number with the singular subject *Tom*. Put differently, AgrS cannot agree in number with the plural subject *ai-tul* since they are not clause-mates. In contrast, (2a) is grammatical since *tul* agrees in number with the plural clause-mate subject *ai-tul*. Notice that *tul* is required to take a plural clause-mate subject as its licenser (Lee 1991: 86).

The AgrS analysis of *tul* also holds for object control constructions. The prediction would be that in the constructions under discussion, if *tul* agrees in number with a PRO controlled by a plural object, it would be licensed. (3a,b) bear this predication out.

- (3) a. Tom-i ai-tul<sub>1</sub>-ul [<sub>S</sub> PRO<sub>1</sub> chip-e-**tul** ka-dorok] soltukhaessoyo  
 Tom-NOM child-PL-ACC [house-to-AGR go-COMP] persuaded  
 'Tom persuaded the children to go home.'

- b. \*ai-tul-i Tom<sub>1</sub>-ul [<sub>s</sub> PRO<sub>1</sub> chip-e-**tul** ka-dorok] soltukhaessoyo  
 child-PL-NOM Tom -ACC [house-to-AGR go-COMP] persuaded  
 ‘The children persuaded Tom to go home.’  
 (see Lee 1991: 87)

In (3a) PRO is controlled by the plural object *ai-tul*, and *tul* attached to the postposition *e* agrees in number with it. The ungrammaticality of (3b) is explained by the fact that PRO is controlled by the singular object *John*; hence, *tul* fails to agree with PRO in number.

- (4) a. saram-tul<sub>1</sub>-i John-ege [PRO<sub>1</sub> chip-e-**tul** kagetta-go] yaksokhaetta  
 person-PL-NOM -DAT [home-LOC-AGR go.will-COMP] promised  
 ‘People promised John that they would go home.’  
 b. \*John<sub>1</sub>-i saram-tul-eke [PRO<sub>1</sub> chip-e-**tul** kagetta-go] yaksokhaetta  
 John-NOM people-PL-DAT home-LOC-AGR go-will-COMP promised  
 ‘John promised people that he would go home.’  
 (see Lee 1991: 93)

The subject agreement analysis holds for subject control constructions as well. In (4a) *tul* takes as its licenser the PRO controlled by a plural subject; hence, the former agrees in number with the latter. (4b) is ungrammatical since *tul* fails to agree in number with the PRO controlled by a singular subject.

The analysis carries over to a secondary predication (5) and an ECM (6) construction.

- (5) Sangmin-kwa Suni-ka maenbal-ro-**tul** ttwiotta  
 -and -NOM bare.foot-as-Agr ran  
 ‘Sangmin and Suni ran barefooted.’  
 (6) sonsaengnim-i [haksaeng-tul-ul kyosil-e-**tul** itta-ko] midotta  
 teacher-NOM [student-PL-ACC classroom-at-AgrS exist-COMP] believed  
 ‘A teacher believed the students to be at the classroom.’

To sum up, *tul* is an exponent of AgrS that agrees in number with a plural clause-mate subject (Lee 1991: 86).

### 3. Morphological Characteristics of *Tul*

The Korean subject agreement marker *tul* differs from the English counterpart in exactly one respect, namely, in that it can be morphologically realized on a variety of categories (parts of speech).

- (7) nohi kogiso(-**tul**) muot(-**tul**) hago(-**tul**) innungo-ni(-**tul**)?  
 you.PL there-AgrS what-AgrS do-AgrS being-Q-AgrS  
 ‘What are you (pl.) doing there?’ [addressed to more than one person]

In (7) *tul* is suffixed to the adverb *kogiso*, and the noun *muot*. It follows the verbal complex *-go* and the question marker *Q -ni* as well. Recall that in (4) *tul* attaches to the postposition *e*. By contrast, English AgrS is never allowed to follow such categories.<sup>2</sup>

I would like to briefly point out yet another interesting distinction in morphological realization between Korean and English subject agreement. *Tul*, unlike its English counterpart, may occur ubiquitously and optionally: In (7) it can occur once, twice, or more, or not at all.<sup>3</sup>

#### 4. Theoretical Issues

We have seen that the Korean subject agreement marker *tul* patterns differently from, say, the English counterpart in that the former is suffixed (relatively) freely to various categories (parts of speech) such as adverbs and postpositions. This “free suffixation” of *tul* brings up an interesting theoretical issue.

Before going into the issue, let us first consider the morphology of *-features*. In English, for instance, T bears uninterpretable *-features* for subject (and object) whereas V provides a “place” for their morphological realization (Chomsky 1995: Ch. 4). In other words, while T is a carrier of *-features* for the subject, V is a place for their morphology. Notice that there occurs a “feature dislocation”---a mismatch between a feature carrier and the featural realization. Notice that in English, the *-features* on the T are morphologically realized on the V.

Such feature dislocation appears to be counter-intuitive in some sense. However, feature dislocation seems to be “put in place.” In English, V undergoes movement to T, whose categorial [V]-feature attracts it. This is illustrated in (8a,b):

- (8) a. [TP ... T ... [VP ... V ... ]]  
[ ]
- b. [TP ... V-T ... [VP ... t ... ]]  
[ ]

Therefore, feature dislocation--the *-features* on the T and their manifestation on the V-- end up being “put in place” by means of V-to-T movement, overt or covert.

<sup>2</sup>Avar and other Northeast Caucasian languages also show agreement of adverbs with a nominal in the same clause (Nichols 1985: 281).

- (i) Re-s sa-r dede-r-e ical-gi r-soun r-o'a  
she-Egr here-PL father-DAT-PL apples(PL)-Ptc PL-buy PL-Aux  
'She bought apples here for [her] father.'

*Apples* agrees in number with *here*, *father*, *buy*, and the auxiliary.

<sup>3</sup>It is not that the subject agreement marker is allowed to follow any class of adverb. My initial observation is as follows: Adopting Im's (1998) classification of adverbs, it cannot follow MP- and CP-modifying adverbs, as illustrated in (i). I don't discuss it here.

- (i) CP-modifying adverbs: *\*manyak-tul* 'if', *\*pirok-tul* 'though'  
MP-modifying adverbs: *\*kwayon-tul* 'indeed', *\*ama-tul* 'probably'  
TP-modifying adverbs: *oje-tul* 'yesterday', *ije-tul* 'now'  
NegP-modifying adverbs: *choldaero-tul* 'never', *chonhyo-tul* 'totally'  
vP/VP-modifying adverbs: *chal-tul* 'well', *ppalli-tul* 'quickly'

With this in mind, let us now consider the morphology of subject agreement in Korean. To take (7), *tul* follows the adverb *kogiso*. Here two possibilities are available. One is to assume that even if *tul* attaches to the adverb, what carries the  $\bar{u}$ -features is T, along the lines of the English case. The other possibility is to assume that the adverb itself carries the  $\bar{u}$ -features.

With these in mind, recall V-to-T movement in English and the categorial [V]-feature of T. V-to-T movement in English resolves feature dislocation. By contrast, the adverb marked with *tul* does not bear a categorial [V]-feature to be attracted by T; hence, no movement to T is allowed, as illustrated in (8c):

- (8) c. [... T ...    [... Adv(P) ...]]  
           [ ]

From the unavailability of categorial [V]-feature of adverb it follows that an adverb undergoes no movement to T; hence, feature dislocation involving *tul* remains unresolved.<sup>4</sup>

An alternative to resolve this feature dislocation is to take the second option:

- (8) d. An element X bears a feature F iff F is morphologically realized on it.

An element X marked morphologically with a feature F bears the relevant feature in Korean (and hopefully, in English). In short, a feature exponent must be a feature carrier and vice versa. Thus, by assumption (8d), in Korean what carries the uninterpretable  $\bar{u}$ -features of *tul* on the adverb in (7) is the adverb (phrase) itself. The adverb in (7) is both a  $\bar{u}$ -features carrier and a  $\bar{u}$ -features exponent.

Further, with respect to the ubiquitous characteristic of *tul*, I assume, if elements are marked with *tuls*, then each of them all bears uninterpretable  $\bar{u}$ -features on it.

Returning to the theoretical issue, the uninterpretable  $\bar{u}$ -features on, say, an adverb must be checked off against the interpretable  $\bar{u}$ -features on a plural subject. Three options are available: The former move, or the latter move, or neither of the two moves, namely, Agree. I will return to each of these cases below.

#### 4.1 Agree

Let us first consider the Korean subject agreement under Agree Chomsky (2000) proposes. Agree eliminates both Attract F and Move F, dispensing with feature movement. Under Agree, the subject agreement constructions that we have seen seem problematic.

Before pointing out the problems with Agree, let us first see the definition of Agree.

- (9) a. Matching is feature identity.  
       b. D(P) is the sister of P.  
       c. Locality reduces to “closest c-command.”  
           (Chomsky 2000: 122)

<sup>4</sup>Not that I am arguing that T in Korean can bear no  $\bar{u}$ -features.

Of particular concern here is locality condition (9c). Notice that Agree requires a probe P to c-command a “closest” goal G.

With this in mind, let us consider what can be a probe and a goal?

- (10) Agree operates between a probe and a goal iff
- has uninterpretable  $\phi$ -features
  - has identical, interpretable  $\phi$ -features;
  - has an unchecked feature of structural Case;
  - c-commands ;
  - there is no potential alternative goal such that c-commands and c-commands ;
  - the structural relation between ( , ) was not created by Merge ( , ).
- (from Carstens 2000: 349f)

If an element P bears uninterpretable  $\phi$ -features, then it can be a probe. Similarly, if an element G has interpretable  $\phi$ -features that is identical to those of P and it bears an unchecked structural Case feature, then it can be a goal.

With this in mind, let us look more closely at (11).

- (11) a. ai-tul-i chip-e-tul katta  
child-PL-NOM house-to-Agr went  
‘The children went home.’

By definition (10a) and assumption (8c), *chip-e-tul* is the probe since it has uninterpretable  $\phi$ -features. Likely, by definition (10b,c) and assumption (8c), *ai-tul* is its goal since it has identical, interpretable  $\phi$ -features and an unchecked structural Case feature, namely, nominative Case. This is illustrated below:

- (11) b. ai-tul-i chip-e-tul  
Case[ ]  $\phi$ -features[-]  
 $\phi$ -features[+]  
“goal” “probe”

Suppose now that the derivation has reached the stage (11c), which shows a  $vP$  phase.

- (11) c. [<sub>VP</sub> ai-tul-i [<sub>v'</sub> [<sub>VP</sub> chip-e-tul katta] v ]]
- 

\*Agree(\*c-command)

In (11) the probe *chip-e-tul* fails to c-command its goal *ai-tul*. Therefore, Agree is not able to take place. Plainly, it fails to account for subject agreement in Korean.

Consider now the following, which shows a more serious problem with Agree.

- (12) a. ai-tul-i changnankkam-ul ppalli-tul choriphatta  
 child-PL-Nom toy-ACC quickly-AgrS constructed  
 ‘The children constructed a toy/toys quickly.’

By definition and assumption, once again, the adverb *ppalli-tul* is the probe since it has uninterpretable  $\bar{c}$ -features and *ai-tul* can be a potential goal since it has identical, interpretable  $\bar{c}$ -features and an unchecked structural Case feature. Suppose the derivation has reached the stage (12b), being a  $vP$  phase.

- (12) b. [<sub>VP</sub> ppalli-tul [<sub>VP</sub> ai-tul-i changnankkam-ul choriphatta]]<sup>5</sup>



\*Agree(c-command)

The uninterpretable  $\bar{c}$ -features of the probe must be checked off to converge. Both *ai-tul-i* and *changnankkam-ul* can be its matching goal since both of them have interpretable  $\bar{c}$ -features and unchecked structural Case features. Recall that (9c,10e) requires no element to intervene between a probe and a goal. As a result, the subject *ai-tul-i* is the only goal since it is the closest to the probe. Therefore, the probe and its goal seem to meet all the conditions in (10). It is expected that the probe could agree with its goal in (12b). A question to arise is: Can adverbs check structural Case features? In other words, can the probe *ppalli-tul*, an adverb, check the structural Case feature of the goal *ai-tul-i*? It seems implausible to claim that adverbs check structural Case features (see Chomsky 2000: 123).<sup>6</sup>

On these grounds that we have seen, the claim can be made that Agree fails to account for subject agreement in Korean; hence, it is not tenable.

#### 4.2 Attract


Movement of interpretable features is triggered solely by the requirement of uninterpretable features. This is the operation Attract F, which is defined as in (13):

- (13) Attract F  
 K attracts F if F is the closest feature that can enter into a checking relation with a sublabel of K.  
 (Chomsky 1995: 297)

<sup>5</sup> I assume that adverbials adjoin to particular functional projections, following Im (1998). He shows that adverbs in Korean have systematic correspondences to their modifying projections, lexical or functional. For instance, “tense-modifying” adverbials like *chig\_m* ‘now’ adjoin to TP, while “verb-modifying” adverbials like *ppalli* adjoin to  $\bar{P}$ . (In fact, he does not clarify if verb-modifying adverbials adjoin to VP or to  $\bar{P}$  in the sense of Chomsky 1995. I interpret his (1998: 197) term “VP adjuncts” as  $\bar{P}$  ones without discussion.)

<sup>6</sup> “Manifestation of structural Case depends on interpretable features of the probe: finite T (nominative),  $v$  (accusative), control T (null), ...”

With this in mind, let us consider subject  $\phi$ -feature checking in Korean under Attract F. We have seen that, in contrast to its English counterpart, *tul* can be morphologically realized on various categories such as adverbs and postpositions. To take (12a), it follows the adverb *ppalli-tul*. By assumption, it has uninterpretable  $\phi$ -features, and by definition, they must be checked off. A  $\phi$ -feature checking takes place in such a way that uninterpretable features *attract* identical interpretable features, thereby triggering movement of the interpretable features. Suppose the derivation has reached at the stage (14b).

- (14) a. ai-tul-i                chip-e-tul    katta  
           child-PL-NOM house-to-Agr went  
           'The children went home.'
- b. [<sub>VP</sub> ai-tul-i [<sub>V'</sub> [<sub>VP</sub> chip-e-tul katta] v ]]  
               +    -
- 
- \*Attract

Attract requires uninterpretable  $\phi$ -features to check off relevant interpretable  $\phi$ -features, by “moving” the latter. In (14b) the uninterpretable  $\phi$ -features on the PP *chip-e-tul* attract the interpretable  $\phi$ -features on the subject *ai-tul-i*, thereby entering into a checking relation. The point here is that the interpretable  $\phi$ -features on the subject undergo “downward” feature movement (lowering of feature). Lowering is not allowed. (I will return below to why that is so.) Given this, Attract F fails to explain subject agreement in Korean.

We can ask at this point: What bars lowering under Minimalism? The ECP cannot be the answer for this. The reason is that Minimalism has eliminated the notions like traces, government, and proper government, all of which constitute the ECP. Rather, the answer would come from Chomsky’s (1995: 253) note:

A chain CH = (  $\phi$ ,  $t(\phi)$  ) formed by Move meets several conditions, which we take to be part of the definition of the operation itself. One of these is the C-Command Condition:  $\phi$  must c-command its trace, so that there cannot be an operation that lowers  $\phi$  or moves it “sideways”.....

What precludes lowering (downward movement) under Minimalism is movement operation per se. For this reason Attract F fails to account for the Korean subject agreement.

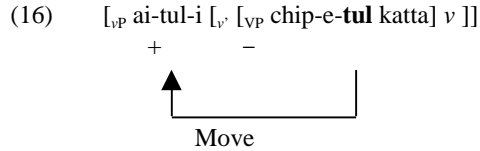
#### 4.3 Move

We have seen that since lowering is prohibited Attract F fails to provide an appropriate account for  $\phi$ -feature checking between a subject and AgrS in Korean. Alternatively, let us consider it under Move F, which is defined in (15):

- (15) Move F
- a. F is an unchecked feature.
  - b. F enters into a checking relation with a sublabel of K as a result of the operation. (Chomsky 1995: 269)



Note that under Move, what moves is uninterpretable  $-features$  rather than uninterpretable ones. With this in mind, let's return to the  $-feature$  checking of AgrS with a subject. Recall that *tul* can follow an adverb. By assumption, once again, the adverb bears uninterpretable  $-features$ . Suppose the derivation has reached at the stage (16).



Move F requires the uninterpretable  $-features$  on the adverb to undergo movement to the interpretable  $-features$  on the subject, thereby entering into a checking relation. This checking relation is established by “raising” the uninterpretable  $-features$  on the adverb rather than by “lowering” them. This, thus, leads to conclude that Move F is still needed, contrary to Chomsky 1995.

## 6. Conclusion and Some Issues To Be Considered

In this paper I have investigated  $-feature$  checking of *tul* in Korean under Minimalism (Chomsky 1995: Ch.4. and 2000). The fact that *tul* attaches to a variety of categories and lowering is barred has led to conclude that Move F is still needed in order to account for subject  $-feature$  checking in Korean, contrary to Chomsky (1995: Ch.4).

An interesting issue to arise here is the one pointed out by John Whitman (p.c.). In general, feature movement seems to be movement to the position of a head. However, the feature movement that we have seen above is movement to the position of a Spec. That is, feature checking takes place at a Spec position rather than a head position. This seems to have to do with a projection status of a probe. Chomsky (2000) shows the only case where heads like T and  $v$  are probes. By contrast, the Korean subject agreement shows a different case in which maximal projections such as adverb and postposition phrases are probes. I shall leave this issue for future research.

Yosi Dobashi (p.c.) points a related issue out. Chomsky (1986:16) argues against adjunction to an argument for the theta-theoretic reason, namely the theta-criterion. To take (16), the  $-features$  on the adverb move to the  $-features$  on the subject, which is A(argument)-position. I will interpret “adjunction to an argument” somewhat *loosely*. Adjunction to a Spec/ $v$ P is barred in the sense of Chomsky (1986), while adjunction to a Spec/TP is allowed on the following ground. Although it is an A-position, a Spec/TP is not the position where a theta-role is directly assigned. Rather, a Spec/ $v$ P is the very one in which a theta-role is assigned. Therefore, following Dobashi's suggestion, I assume that the adjunction to subject takes place after the subject moves into the Spec/TP.

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