

1991

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### Recommended Citation

Jung, Yeun-Jin (1991) "X-bar Theory, SPECs and Directionality," *North East Linguistics Society*. Vol. 21 , Article 14.

Available at: <https://scholarworks.umass.edu/nels/vol21/iss1/14>

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## X-bar Theory, SPECs and Directionality

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### 1. X-bar Theory and the Direction of SPECs

The current version of X-bar theory put forth by Chomsky (1986) restricts its domain to hierarchical structure, with linear order within a given bar-level assumed to be determined by independent principles and parameters. Thus, as for the precedence relations of head and complement, they have been accounted for by virtue of the head-initial/head-final parameter. However, the linear order of specifiers and its cross-categorial and cross-linguistic variation have not been sufficiently explored in the literature.

Fukui and Speas (1986), assuming a fundamental asymmetry between functional and lexical categories, suggest that the direction of SPECs of functional categories corresponds to the direction of F-feature assignment (at least) in English, while the direction of SPECs in Japanese is a completely irrelevant issue since functional categories, according to them, are entirely lacking in the language. Tateishi (1988, 1989), on the other hand, claims that Japanese has full-fledged functional categories and SPEC positions, arguing in favor of his proposal with the implicit assumption that SPECs in Japanese occur on the left branch as those in English.

On the issue of whether functional categories exist in

Korean/Japanese-type languages, I basically agree with Tateishi and other Korean linguists (e.g. Han 1987, Choe 1988, Kang 1988, Ahn and Yoon 1989, and others); however, I do not think these linguists have adequately addressed the issue of the location of functional SPECs in those languages.

In this paper, therefore, I will argue, counter to the widespread assumption of leftward direction of SPECs in the literature, that SPECs of functional categories in Korean/Japanese type languages, in effect, project to the opposite direction to those in English, focusing on the properties of NegP, CP and AgrP in Korean. I will assume in this paper that all and only  $\theta$ -related positions are filled at D-structure, following Borer (1984) (cf. Emonds 1985) and that the insertion of functional categories at a later stage is constrained by the Saturation Principle proposed by Fukui and Speas (1986).

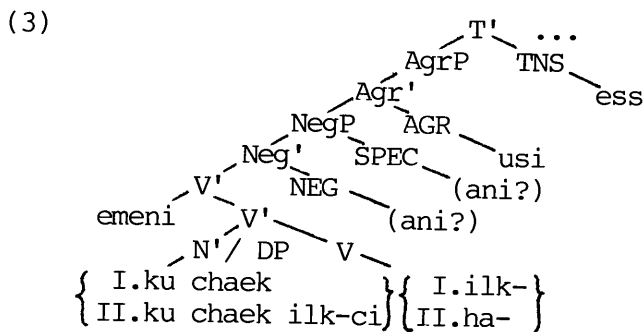
## 2. NegP and SPEC(Neg)

It is well known that Korean presents two types of negation, traditionally called type I (short-form) and type II (long-form) negation as noted below:

- (2)a. Type I : Emeni-ka ku chaek-ul ani ilk-usi-ess-ta.  
 mother-Nom the book-Acc not read-Hon-Past  
 'Mother did not read the book.'
- b. Type II: Emeni-ka ku chaek-ul ilk-ci-(lul) ani  
 read-CI-(Acc) not  
ha-si-ess-ta.  
 do-Hon-Past-Dec  
 'Mother did not read the book.'

An important difference between these two types is the position of the negative morpheme ani: In the type I negation, ani precedes the verb read while in the type II negation, it follows the verb. But in the latter case, some additional morphemes such as ci and ha are obligatorily attached to the verb stem and the complex inflection respectively.

Traditionally, these two types of negation have been analyzed as deriving from a single underlying structure by some sort of transformational rule. I suggest, however, that the two types of negation are actually derived from two different structures but by a single operation of head movement.<sup>2</sup> The verbal projection in the proposed structure of negation given in (3)<sup>3</sup> shows that in the type I negation, the complement ku chaek is selected by the verb ilk-, while in the type II negation, a complex complement headed by the so-called nominalizer -ci is selected by the verb ha-:



The actual surface order of negation in this structure will be derived by the successive movement of a verb stem to COMP motivated by the Morphological Principle as a subcase of Move-@ applied to head categories.

- (4) **Morphological Principle** (Chomsky 1988):  
Items lexically identified as affixes should be properly attached at S-structure (cf. Lasnik 1981, Reuland 1982, Safir 1981).

The verb ha- in the type II negation has been usually assumed in the literature to be inserted as a dummy verb to support the morphologically incomplete inflection in the process of derivation. However, my claim that the verb ha- actually selects a complement like other content verbs is supported by other similar constructions in Korean.

- (5)a. Chelsu-nun [chaek-ul ilk-ki] -to ha-n-ta.  
Chelsu-Top book-Acc read-ING -also do-Pres-Dec  
'It is the case that Chelsu also reads books.'  
b. Chelsu-nun [chaek-ul ilk-ki] -ya ha-n-ta.  
-surely  
c. Chelsu-nun [chaek-ul ilk-ki] -kkaci ha-n-ta.  
-even

It is obvious in the sentences given in (5) that the complement headed by the nominalizer ki is selected by the verb ha. It is thus fair to assume that in the type II negation, the complement headed by the nominalizer ci, which is a phonological variant of ki, is also selected by the verb ha.

Then, where is the negative morpheme located in the structure? I suggest that despite its surface position between an object and a verb complex, the negative element in Korean occurs as an autonomous projection outside VP. At first glance, this suggestion might seem to raise an immediate problem with the hierarchical ordering of categories that is usually drawn from the surface order of morphemes, as noted in Baker (1985), since the negative morpheme ani apparently occurs inside VP in both

types of negation. As a matter of fact, the superficial position of ani has led some linguists to assume that ani is an adverb-like element. Oh (1971), for instance, argues that ani behaves like the adverb ppalli as illustrated in (6).

- (6) a. John-i ppalli talli-n-ta.  
           John-Nom fast run-Pres-Dec 'John runs fast.'  
       b. John-i ani talli-n-ta.  
               not 'John does not run.'

In these sentences, ani and ppalli do occur in the same position. However, a more careful look at the distribution of the negative morpheme ani in conjunction with that of real adverbs shows that ani is not an adverb.

- (7) a. Yenghi-ka [ ku chaek-ul ppalli ilk ]-ess-ta.  
           'Yenghi read the book fast.'  
       b. Yenghi-ka [ ppalli ku chaek-ul ilk ]-ess-ta.  
       c. Yenghi-ka [ ku chaek-ul an(i) ilk ]-ess-ta.  
       d. \*Yenghi-ka [ an(i) ku chaek-ul ilk ]-ess-ta.

As is well known, adverbs like ppalli can undergo free VP-internal scrambling in Korean, as shown in (7b). It is thus naturally expected that the negative morpheme ani, if it is indeed an adverb, should also be able to move freely within VP. The ungrammaticality of (7d), however, shows that this is actually not the case. Another piece of evidence that ani is different from adverbs comes from its relation with the floated quantifier ta 'all'.

- (8) a. Yenghi-ka [ ku chaek-ul ta ilk ]-ess-ta.  
           'Yenghi read all of the book.'  
       b. Yenghi-ka [ ku chaek-ul ta ppalli ilk ]-ess-ta.  
       c. Yenghi-ka [ ku chaek-ul ppalli ta ilk ]-ess-ta.  
       d. Yenghi-ka [ ku chaek-ul ta an(i) ilk ]-ess-ta.  
           'Yenghi did not read all of the book.'  
       e. \*Yenghi-ka [ ku chaek-ul an(i) ta ilk ]-ess-ta.

The quantifier ta can freely occur before or after the adverb, as illustrated in (8b) and (8c), while (8e) shows that the exchangeability does not apply to the order of the quantifier and the negative morpheme. Two conclusions can be drawn from the data given so far: First, the negative morpheme ani has a different distribution from that of the true adverbs. Second, the negative morpheme and the verb complex must be adjacent to each other. From these observations, therefore, I propose that NegP in Korean occurs outside VP as an independent projection, as shown in (3).

If this is so, where is the negative morpheme exactly located in the projection of NegP? That is, still to be determined is

whether ani occupies the head position or the SPEC position. If we assume that ani occurs in the head position, movement of a verb stem forced by the Morphological Principle would induce a violation of the ECP due to the intervening head governor ani. However, the grammaticality of the derived structures given in (9) implies that the negative element does not actually block the verb movement.

- (9)a. Emeni-ka ku chaek-ul ani ilk-usi-ess-ta.  
 b. Emeni-ka ku chaek-ul ilk-ci-lul ani ha-si-ess-ta.

It should be noted here that the verb cannot move through the head because ani is not affixal in nature.<sup>5</sup> Thus the initial implication of these facts is that ani occupies the SPEC position rather than the head position. And this is in fact borne out by the following contrast in the scope interpretation of the Wh-adjunct ence in relation to ani.

- (10)a. Yenghi-ka [ence [ku chaek-ul sa-ess-tako] malhaessni?  
 Yenghi-Nom when the book-Acc bought-C said-Q  
 'When did Yenghi say she bought the book?'  
 b. Yenghi-ka ence [ku chaek-ul saci ani ha-ess-tako]  
 malhaessni?  
 'When did Yenghi say she did not buy the book?'

(10a) is ambiguous with two possible scope interpretations of ence, viz., matrix or embedded scope, while (10b) allows only matrix scope interpretation. This contrast can be accounted for through Rizzi's (1990) Relativized Minimality defined below.

- (11) **Relativized Minimality:** X @-governs Y only if there is no Z such that (i) Z is a typical potential @-governor for Y, and (ii) Z c-commands Y and does not c-command-X.  
 A. Z is a typical potential head governor for Y = Z is a head m-commanding Y.  
 B. a. Z is a typical potential antecedent governor for Y, Y in an A chain = Z is an A specifier c-commanding y.  
 b. Z is a typical potential antecedent governor for Y, Y in an A'chain = Z is an A'specifier c-commanding y.  
 c. Z is a typical potential antecedent governor for Y, Y in an X chain = Z is a head c-commanding Y.

The core idea of Relativized Minimality is that governors of a particular type form barriers for traces of the same type. In the light of these restrictions, let us now consider the LF representations of (10a) and (10b) illustrated in (12) and (13) respectively.

- (12)a. [[Yenghi-ka[ t ku chaek-ul saesstako] malhaessni]  
ence]

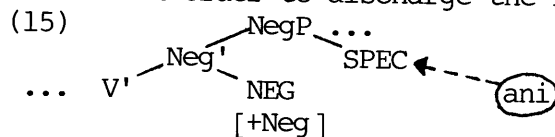
- b. [[Yenghi-ka t [ku chaek-ul saesstako malhaessni]  
ence ]
- (13)a. \*[[Yenghi-ka [ t ku chaek-ul saci ani haesstako]  
malhaessni ]ence ]
- b. [[Yenghi-ka t [ku chaek-ul saci ani haesstako]  
malhaessni ]ence ]

(12) shows that the Wh-adjunct ence is freely allowed to move either from the embedded clause or from the matrix clause, since there is no potential A' specifier in the A' chain, so that two scope interpretations can be possibly derived. However, if there is a negative element in the embedded clause, the movement of ence is only possible from the matrix clause as shown in (13). The contrast in (13) therefore entails that ani is located in a position which blocks the antecedent government in the A' chain, i.e. most plausibly, the SPEC of NegP. Thus, the arguments so far lead us to the inevitable conclusion that NegP does exist as an entity outside the VP in Korean and that the SPEC of NegP projects to the same side as the head category, that is, to the right.

Before moving on to other functional categories in Korean, let us briefly address what modules of grammar motivate the process of positioning the negative morpheme in the SPEC position. Given the assumption that all and only  $\theta$ -related positions are filled at D-structure, following Borer (1984), the SPEC positions of functional categories, not being involved in  $\theta$ -relations, should be filled at a later stage (i.e. at S-structure) either by movement or by insertion. In Fukui and Speas' framework (1986), which I crucially rely on in this paper, the occupants of the SPEC positions of functional heads are restricted by the Saturation Principle given in (14).

- (14) **The Saturation Principle** (Fukui and Speas 1986):
- Every position in a grid is discharged.
  - If X discharges a position in a grid of Y, then it discharges only one.

Hence the SPEC positions of the functional heads bearing Kase features such as [+WH], [+Nom] and [+Gen] in English are filled by some elements moved from the complements of the heads in order to satisfy the Saturation Principle. Along the similar line, the occurrence of the negative morpheme in the SPEC position in Korean can be assumed to be forced by the F-feature [+Neg]. To be more specific, the negative morpheme is inserted in the SPEC position in order to discharge the F-feature.



With this in mind, let us now consider other instances of functional categories in Korean and the location of their SPEC positions.

### 3. CP and SPEC (C)

Prior to going into a detailed discussion of the location of SPEC(C), it is crucial to elucidate first whether the existence of the category COMP can be justified in Korean. Observe the following:

- (16)a. Chelsu-nun [Yenghi-ka ku chaek-ul ilk-ess-ta] -ko  
 Chelsu-Top Yenghi-Nom the book-Acc read-Past-Dec-C  
malha-ess-ta.  
 say-Past-Dec  
 'Chelsu said Yenghi read the book.'
- b. Chelsu-nun [Yenghi-ka ku chaek-ul ilk-ess] -ki-lul  
wenha-ess-ta. -C -Acc  
 want-Past-Dec  
 'Chelsu wanted Yenghi to have read the book.'
- c. Chelsu-nun [Yenghi-ka ku chaek-ul ilk-ess-nun] -ci(-ka)  
kungkumha-ess-ta. -C(-Nom)  
 wonder -Past-Dec  
 'Chelsu wondered whether Yenghi read the book.'
- d. Chelsu-nun [Yenghi-ka ku chaek-ul ilk-ess-ten] kes-ul  
al-ess-ta. C-Acc  
 know-Past-Dec  
 'Chelsu knew that Yenghi read the book.'

Among the properties expected from complementizers, sentences in (16) show that the selection of an appropriate complementizer in an embedded clause is determined by a matrix verb, as discussed in detail in Bresnan (1970) and Chomsky (1973). Hence the wrong choice of a complementizer would produce the ungrammaticality of the sentences as shown below:

- (17)a...ku chaek-ul ilk-ess- $\{(ta)-ko/*-ki/*(nun)-ci/*(ten)kes\}$   
malha-ess-ta.  
 b...ku chaek-ul ilk-ess- $\{ki/*(ta)-ko/*(nun)-ci/*(ten)kes\}$   
 -lul wenha-ess-ta.  
 c...ku chaek-ul ilk-ess- $\{(nun)ci/*(ta)-ko/*-ki/*(ten)kes\}$   
kungkumha-ess-ta.  
 d...ku chaek-ul ilk-ess- $\{(ten)kes/*(ta)-ko/*-ki/*(nun)-ci\}$   
 -ul al-ess-ta.

Another well-known property of a complementizer, i.e. a sentence introducer, is also observed in (16). Given that Korean is a head-final language, we find no conceptual problem with the fact that COMP categories in (16) serve to 'introduce' or 'mark' the embedded clauses. These facts thus suggest strongly that COMP categories do exist in Korean.



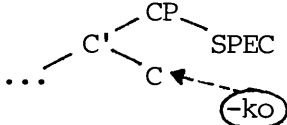
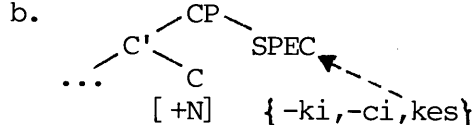
Based on these observations, the Korean complementizers can now be classified into two groups given in (18).

- (18) a. Group I: -ko / b. Group II: -ki, -ci, kes

The main difference between the two groups is that the second group has nominal characteristics while the first group lacks such properties. One of the classical arguments for characterizing the second group as nominal elements is based on their ability to attract Case particles, under the standard assumption that Case is canonically assigned to nominal expressions. Actually, the contrast in grammaticality given in (19) and (20) implies that there should be some distinct characteristic differentiating between the two groups with respect to some kind of nominal property.

- (19)\*Yenghi-nun [ku yenghwa-lul poessta] -ko-lul malhaessta.  
 Yenghi-Top the movie -Acc saw -C -Acc said  
 'Yenghi said that she saw the movie.'
- (20)a. Yenghi-nun [chungpunhi hyusikha] -ki-lul wenhaessta.  
 Yenghi-Top enough rest-take-C -Acc wanted  
 'Yenghi wanted to take enough rest.'
- b. Yenghi-nun [Chelsu-ka ttenaessnun] -ci-ka kungkumhaessta  
 Yenghi-Top Chelsu-Nom left -C -Nom wondered  
 'Yenghi wondered whether Chelsu left.'
- c. Yenghi-nun [Chelsu-ka ku kos-ul pangmunhaesstanun]  
 Yenghi-Top Chelsu-Nom the place-Acc visited  
kes-ul mollessta.  
 C -Acc not-knew  
 'Yenghi did not know that Chelsu visited the place.'

Because of this nominal property, the second group of complementizers has been variously analyzed as a nominalizer or a complementizer in the literature. This long-standing controversy, however, can be nicely resolved if we assume that they are categorially complementizers and that the nominal property is simply the function carried by the F-feature [+N] in COMP. Hence the complementizer ko, which is lacking the F-feature, is directly inserted to COMP, while ki, ci and kes in the second group are inserted in the SPEC position in order to discharge the F-feature [+N] forced by the Saturation Principle.

- (21) a. 
- b. 

Under this view, therefore, we are forced to assume that the SPEC of CP must appear on the same side as the head category in Korean, that is, to the right.

In fact, the claim of the rightward direction of SPEC (C) is confirmed by the distinct behaviors of COMPs in relation to the LF movement of the Wh-adjunct ence:

- (22)a. Chelsu-nun [ Yenghi-ka ence ku chaek-ul ilkessta ]-ko  
 Chelsu-Top Yenghi-Nom when the book-Acc read -C  
 mitess-ni?  
 believed-Q  
 'When did Chelsu believe Yenghi read the book?'
- b. Chelsu-nun [ Yenghi-ka ence ku chaek-ul ilkess ]-ki-lul  
 wenhaess-ni? -C-Acc  
 wanted-Q  
 'When did Chelsu want Yenghi to read the book?'
- c. Chelsu-nun [ Yenghi-ka ence ku chaek-ul ilkesstun ]-ci  
 kungkumhaess-ni? -C  
 wondered-Q  
 'Did Chelsu wonder when yenghi read the book?'
- d. \*Chelsu-nun [ Yenghi-ka ence ku chaek-ul ilkessten ]  
 kes-ul aless-ni?  
 C-Acc knew-Q  
 'Did Chelsu know when yenghi read the book?'

Sentences in (22) have basically the same structure except for different COMPs selected by different matrix verbs; nonetheless, there is a clear contrast in grammaticality. Then, why does the COMP kes behave in a different way with respect to Wh-movement? The key to the answer seems to be obtainable from the difference in the morphemic status of the complementizers. As for the COMP -ko, it is directly inserted in the head position as noted above. Among the second group of complementizers, however, -ki and -ci must lower to the head position to combine with a verb complex solely due to the fact that they are affixal in nature. This process is of course independently motivated by the Morphological Principle given in (4). On the other hand, the COMP kes, which is non-affixal, stays at the SPEC position. As a result, the wh-element ence in (23)(= 22d) cannot move to the SPEC (C) in the embedded clause at LF because the position is already occupied by kes; hence the embedded scope interpretation of ence is prohibited. In the LF representations of other sentences shown in (24), however, nothing blocks the movement of ence either to the matrix SPEC (C) as shown in (24a,b) or to the embedded SPEC (C) as shown in (24c) because the embedded SPEC (C) has no occupant at LF. To be more concrete, the A' chains in (24a,b) do not contain any intervening A' specifier and the landing site of ence in (24c) has been vacated by S-structure.

- (23)\*[[Chelsu-nun [ Yenghi-ka ence ku chaek-ul ilkessten ]  
 kes-ul ] alessni ]
- (24)a. [[Chelsu-nun [ Yenghi-ka t ku chaek-ul ilkesstako ]  
 mitessni ] ence ]

- b. [[ Chelsu-nun [ Yenghi-ka t ku chaek-ul ilkesskilul ]  
wenhaessni ] ence ]
- c. [[ Chelsu-nun Yenghi-ka t ku chaek-ul ilkessnunci ]  
ence ] kungkumhaessni ]

My account of the ill-formedness of (22d) in direct association with the presence of kes in the SPEC position is further supported by the sentences like (25).

- (25) Chelsu-nun [ Yenghi-ka ence ku chaek-ul ilkessnun]-ci  
alessni?  
'Did Chelsu know when Yenghi read the book?'

(25) is a well-formed version of (22d). That is, (22d) is perfectly grammatical only if kes is replaced with ci, which differs from kes only in being affixal. This constitutes a very strong case for my claim that nominal complementizers in Korean are first inserted in the SPEC position forced by the Saturation Principle and then some of them, being affixal in nature, lower to the head position by another independent principle, i.e. the Morphological Principle. Thus, from the arguments presented so far, it can be concluded that the SPEC of CP in Korean must occur at the rightmost position of the category COMP.

#### 4. AgrP and SPEC (Agr)

The widespread assumption that SPECS in Korean appear on the same side as those in English has been particularly supported by the surface position of a subject presumably occupying the SPEC of IP. However, given the assumption that INFL actually consists of the independent projections TP and AgrP (Pollock 1987, Chomsky 1988), two potential landing sites are available for the subject raising from its D-structure position within the verbal projection. In addition, if Zagana's (1990) proposal that unlike AGR, Tense is a lexical category is on the right track, the apparent similarity in the location of a subject in English and Korean does not necessarily show that the SPEC of the functional inflection, i.e. AgrP, in Korean projects to the left; rather it can be merely an accidental surface indication of more abstract formal processes.

As is well known, in English a subject must agree with the agreement feature in INFL; hence in the structure of partitioned INFL, the subject must move up to the SPEC of AgrP for being assigned Case under agreement or (in Fukui and Speas' terms) in order to receive the F-feature [+Nom]. If so, could Nominative Case in Korean also be considered a manifestation of SPEC-Head agreement induced by F-feature assignment in AgrP? It has been argued in the literature that the Honorific feature in INFL (under the IP hypothesis) is responsible for Nominative marking in Korean.

In fact, (26) and (27) show that there is some sort of obligatory feature agreement between a subject and the honorific morpheme.

- (26)a. Kim-sensaengnim-i ttena-si-ess-ta.  
Kim-teacher -Nom leave-Hon-Past-Dec  
'Prof. Kim left.'
- b.\*Kim-sensaengnim-i ttena-ess-ta.
- (27)a. Kim-ssi-ka ttena-ess-ta.  
Kim-Mr.-Nom leave-Past-Dec  
'Mr. Kim left.'
- b.\*Kim-ssi-ka ttena-si-ess-ta.  
Hon

(26) illustrates that if a subject is socially superior to the speaker, as indicated by a title sensaengnim, the honorific marker must be present. Otherwise, it would be ungrammatical. (27) illustrates that if a subject is not superior to the speaker, as indicated by a title ssi, the honorific marker is not permitted on the verbal morphology.

However, it seems to me that the agreement between a subject and the honorific marker must be done by other mechanism than the SPEC-Head agreement by F-feature assignment, for the following reasons: First of all, the existence of double/multiple subject constructions in Korean illustrated in (28) precludes the possibility that the unique SPEC position of AgrP is utilized for the landing site of a subject, as Fukui (1986) argued for Japanese with IP structure.

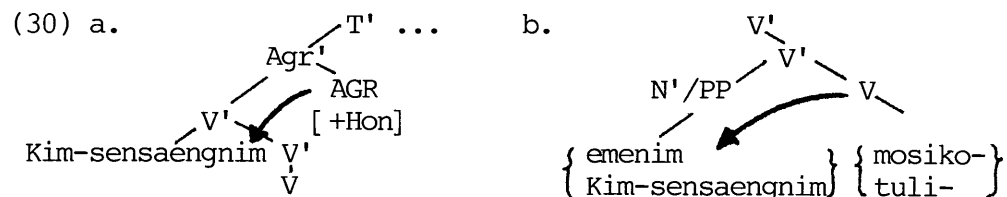
- (28) Chelsu-ka kamki-ka tul-ess-ta.  
Chelsu-Nom cold-Nom come in-Past-Dec  
'Chelsu came down with a cold.'

Secondly, in addition to subject honorification, Korean employs object honorification as well, as illustrated below:

- (29)a. Yenghi-ka Kim-sensaengnim-kke ku nomun-ul tuli-ess-ta.  
Yenghi-Nom Kim-teacher-Dat the paper-Acc give(Hon)-Past  
'Yenghi gave Prof. Kim the paper.'
- b.\*Yenghi-ka Kim sensaengnim-kke ku nomun-ul cu-ess-ta.  
give(Plain)
- c. Yenghi-ka emenim-ul mosiko-ka-ess-ta.  
Yenghi-Nom mother-Acc accompany(Hon)-go-Past-Dec  
'Yenghi accompanied Mother.'
- d.\*Yenghi-ka emenim-ul teliko-ka-ess-ta.  
accompany(Plain)

(29) shows that the verb and the indirect or direct object require mutual agreement. Notice that in the case of object honorification, inherently honorific verb stems, rather than an honorific suffix,

must be selected to honorify the object. If a plain verb is selected, ungrammatical sentences will result, as shown in (29b) and (29d). This phenomenon, together with subject honorification, suggests that there must be some more general mechanism governing agreement phenomena in Korean, other than the SPEC-Head agreement by F-feature assignment. I thus suggest that for honorification in Korean, the head AGR and the verb stem must govern the subject and the object respectively and that the structural condition must be met at D-structure because at S-structure, a subject will move up to an inflectional node for Case reasons and a verb stem will undergo verb movement to the COMP by the Morphological Principle, so that the government relation would be hard to form between the agreeing elements without a violation of the ECP.



The implication of this analysis is therefore that Nominative Case in Korean, unlike English, is assigned by something other than agreement feature. I claim it is assigned by Tense on the basis of the following empirical considerations. Consider (31):

- (31)a. Yenghi-nun [ emenim-uy mak-usi-m ] -ttaemune  
 Yenghi-Top mother-Gen hold back-Hon-ING-because  
 ttena-ci motha-ess-ta.  
 leave-CI can't-Past-Dec  
 'Yenghi could't leave because of Mother's holding-back.'
- b. Haksaengtul-un [ Kim-sensaengnim-uy chincelhan  
 students-Top Kim-teacher-Gen kind  
 kaluchi-si-m ] -ul wenha-Ø-pni-ta.  
 teach-Hon-ING-Acc want-Pres-Polite-Dec  
 'Students want Prof. Kim's kind teaching.'

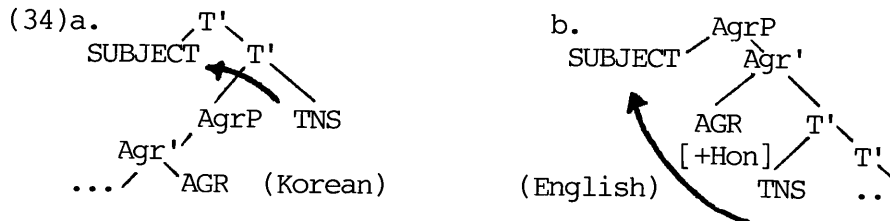
The NPs in the bracketed clause in (31) exhibit Genitive Case despite the presence of the honorific marker. If AGR is indeed responsible for Nominative Case in Korean, the Genitive Case carried by the NPs would remain unexplained. Moreover, if the NPs have Nominative Case instead of Genitive Case due to the honorific marker, the resulting string is ungrammatical, as illustrated in (32).

- (32)a. \*Yenghi-nun [ emenim-i mak-usi-m ] -ttaemene ttena-ci  
 motha-ess-ta. Nom Hon  
 b. \*Haksaengtul-un [ Kim-sensaengnim-i chincelhan  
 kaluchi-si-m ] -ul wenha-Ø-pni-ta.

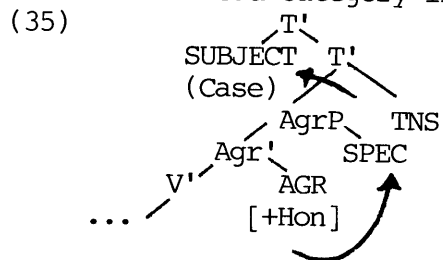
(33) demonstrates that the impossibility of Nominative Case in the bracketed phrase in (32) corresponds to the impossibility of occurrence of Tense in it, substantiating the claim that Tense is the Nominative assigner in Korean.

- (33)a. \*Yenghi-nun [emenim-uy mak-usi-ess-m] -ttaemune  
 ttena-ci motha-ess-ta. Past  
 b. \*Haksaengtul-un [Kim-sensaengnim-uy chincelhan  
 kaluchi-si-ess-m]-ul wenha-Ø-pni-ta.

Hence, in Korean, a subject must move to a sister position to the lexical inflection TP for being assigned Nominative Case under government by Tense, while in English, a subject must move to the SPEC of AgrP in order to discharge the F-feature [+Nom].



Under this analysis, multiple subject constructions in Korean can now be straightforwardly accounted for by the iterability of the Tense node where Nominative Case is structurally assigned; furthermore, the surface direction of a subject in Korean can be naturally predicted by the directionality of government which holds uniformly to the left in Korean. Then, the remaining question we should address is: what is the function of AgrP in Korean, if the category indeed exists? I suggest that Korean utilizes AgrP purely for the purpose of morphological realization of the F-feature [+Honorific]. Whether the feature is realized on the head or on the SPEC position will be decided by theory-internal motivation. Therefore, given the restriction imposed by the Saturation Principle, the honorific marker must be manifested on the SPEC position insofar as the F-feature is present in AGR and thus from the surface position of the honorific marker, it can be induced that the SPEC of AgrP must project to the same direction as the head category in Korean.



5. Conclusion

This paper has focused on providing empirical justification

for the rightward direction of SPECS of functional categories in Korean, opposed to the usual assumption. In the so-called agglutinating languages like Korean, the SPEC positions of functional categories are seemingly less prominent than those in non-agglutinating languages. Given the facts provided above, however, it is naturally expected that it is because in those languages the Morphological Principle usually overrides other principles (e.g. the Saturation Principle) involved in the projection of functional SPECS. Thus a significant generalization that can be drawn from this study is that **F-features in Korean are uniformly assigned to the right**. This observation is completely compatible with other types of directionality parametrized between Korean and English grammar such as headedness, the directionality of  $\theta$ -role assignment and the directionality of government (or the directionality of Case assignment), in terms of which Korean and English are by and large mirror images of each others in their syntactic projections.

\* I wish to thank Heles Contreras and Karen Zagona for their comments, suggestions and encouragement. All errors and omissions are of course mine.

#### NOTES

1. The possibility of rightward projection of the specifiers of functional categories in Korean was implied in the footnotes of Choe (1987) and Ahn and Yoon (1989) though their analyses crucially rely on the usual assumption. However, the idea presented in this paper was independently developed through Heles Contreras' seminar class in 1989.
2. I leave aside the negation of copula constructions here.
3. In this constituent structure, I assume Contreras (1987) and Koopman and Sportiche (1988) and Fukui and Speas (1986) (among others) for a VP-internal subject, Pollock (1987) and Chomsky (1988) for separated INFL, and Zagona (1990) for TENSE as a lexical category.
4. In this sense, the verb ha 'do' is different from the do of do support in English: i.e. the dummy verb do in English does not select a 'nominalized' complement, unlike Korean. For the detailed discussion of the internal structure of the ci complement, see Jung (in preparation).
5. Ouhalla (1990) provides a significant cross-linguistic observation that the head NEG, if it is not affixal in nature, blocks verb-movement to/through it. Therefore, if the negative morpheme in Korean is assumed to occur in the head position, a verb stem would have to move across it due to its non-affixal nature, thus inducing a violation of the ECP.
6. Although I only deal with the complementizers underscored in this paper, the immediately preceding morphemes -ta, -nun and -ten should also be considered part of complex COMPs (e.g. -nun/ten) or another independent head of double CP constructions (e.g. -ta). See Jung (in preparation) for further discussion.

7. The wide scope interpretation of ence (i.e. Wh-Q) in (22d) may derive by the pied-piping of the embedded clause, as observed in the following contrast in the potential answers to it:
- a. \*?Eje-yo. 'Yesterday.'
- b. Eje ilkessten ke(s)-yo. 'that (she) read yesterday.'
8. The impossibility of a wide scope interpretation for ence in (24c) seems to have to do with an inherent property of ci (i.e. [+WH]) which requires that a Wh-phrase be adjacent to it at LF. For lack of space, I leave aside this issue.
9. Zagona (1990) argues that Fukui and Speas' treatment of INFL as a functional head exclusively derives from the properties of AGR, and proposes that once INFL is partitioned, TNS should be considered a lexical head, rather than a functional head (see Zagona (1990) for detailed discussion).
10. I put aside the important question of how multiple subject constructions are derived (see Jung (in preparation) for details).

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