# Remarks and Replies

## Korean (and Japanese) Morphology from a Syntactic Perspective

*Hilda Koopman*

This article concentrates on Sells's (1995) arguments against the syntactic view that words are built in the syntax, and it develops a syntactic account that yields a parsimonious account of the properties of ''morphological units.'' Inflected words in Korean (and Japanese) are derived syntactically from head-initial structures by phrasal movement. Properties of words follow from regular syntactic principles and phonological properties of affixes. Agreement can be triggered under pied-piping. Word structure interacts with scope (Lee 2004, 2005), arguing for the presence of case affixes in the narrow syntax.

*Keywords:* word structure, Principle of Locality of Selection, antisymmetry, phrasal movement, pied-piping, Mirror Principle violations, agreement, low and high merger of Focus

### 1 Introduction

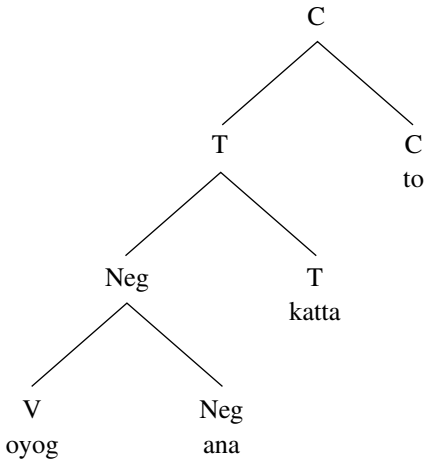
In ''Korean and Japanese Morphology from a Lexical Perspective,'' Sells (1995) argues against the view that complex words in Japanese or Korean like (1b) are derived from the underlying syntactic structure in (1c) by syntactic head movement (Sells 1995:280).

(1) a. Mary-ga oyog-ana-katta-to. (Japanese)
Mary-NOM swim-NEG-PAST-C
'Mary didn't swim.'

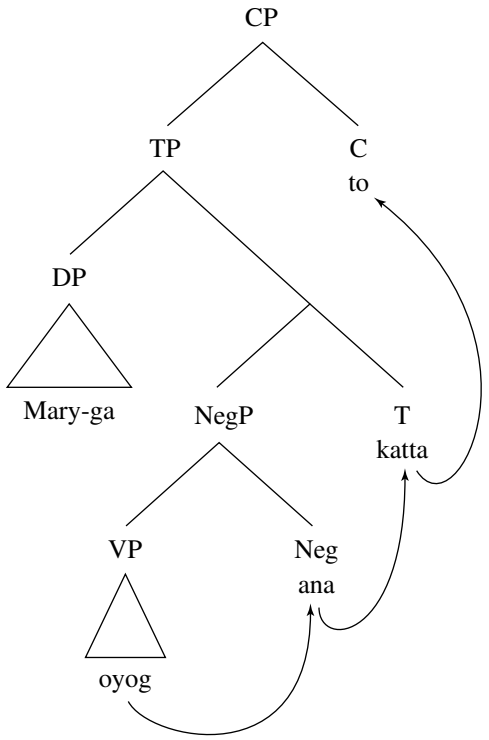
Many thanks to Sun-Ah Jun, Seungho Nam, Christina Kim, Youngjoo Lee, and Chungmin Lee; to Guglielmo Cinque, Richard Kayne, Greg Kobele, David Schüller, Dominique Sportiche, and John Whitman for extensive feedback; and to two anonymous *LI* reviewers.

Linguistic Inquiry, Volume 36, Number 4, Fall 2005
601–633

b.




c.




Sells establishes that the complex word in (1b) does not contain any pronounced arguments of V, and he argues against the syntactic view in (1) on the grounds that it leads to expectations that are not met. In particular, if inflectional morphemes are heads, they should behave like heads:

they should not be transparent for selection, and they should determine the category of the complex word. Sells shows that certain inflectional morphemes are transparent for locality of selection, and that the leftmost element in Korean and Japanese ''words'' shows headlike behavior in that it determines the categorial feature of the complex word. He concludes that the properties of these words should not receive a syntactic treatment and outlines a lexicalist account that takes the templatic nature of the morphology as basic. Strictly morphological principles regulate the flow of information within the word, a task normally performed by X-bar theory or the theory of projection. Since Sells's account is not fully fleshed out, I will not address its details here.

In this reply, I will concentrate on Sells's arguments against the view that words are built in the syntax, and I will develop a syntactic account that yields a parsimonious account of the properties of ''morphological units'': neither templatic morphology nor special morphological principles are necessary. The properties of morphological words follow from regular syntactic principles, in conjunction with phonological properties of the affixes. I will agree with Sells that the syntactic structure in (1c) does not underlie the inflected words and that the words are not derived by head movement; instead, I will pursue the idea that the complex words in question are derived by phrasal movement from merged head-complement structures (Kayne 1994:52–53).

This reply is organized as follows. Section 2 discusses the basic surface constituency of Korean (and Japanese) sentences in very general terms. Section 3 spells out some of the syntactic assumptions in which this reply is couched and lays out what we should expect to find. Section 4 motivates syntactic analyses for the particular cases Sells examines, going beyond his discussions. Section 5 extends the analysis to other problems of Korean morphosyntax, including (a) the relative ordering of the focus particle *man* 'only' and the structural Case markers and (b) two types of subject agreement in Korean, honorific agreement and plural agreement. Section 6 discusses the interaction between word structure and scope (Lee 2004, 2005), and section 7 concludes.

## 2 Surface Constituency

In a simple OV sentence in Korean, the verb does not form a surface constituent with any of the elements it selects for, as Sells (1995) shows with phonological arguments. The same point can be made by the placement of short negation *an*, which is (minimally) adjoined to VP (Whitman 2003, Hagstrom 2002) and intervenes between the dependents of the verb and the verb.

(2) Chelswu-ka ppang-ul an mek-ess-ta.
Chelswu-NOM bread-ACC not eat-PAST-DECL
'Chelswu did not eat the bread.'

(3) Chelswu-ka wuncen an ha-ta.
Chelswu-NOM drive not do-DECL
'Chelswu didn't drive.'

Korean and Japanese are agglutinative languages, the order of morphemes basically reflecting the syntactic hierarchy. Inflectional morphemes have predictable phonology and are phrasal affixes

(Yoon 1994). They allow their dependents to be coordinated, as illustrated in (4) for the past tense affix.[1]

(4) John-i pap-ul cis-ko kwuk-ul kkulhi-ess-ta.
John-NOM rice-ACC cook-CONJ soup-ACC boil-PAST-DECL
'John cooked the rice and made the soup.'
(Yoon 1994)

This leads to the straightforward conclusion that these inflectional morphemes spell out the corresponding syntactic head positions, very much as English *'s* does.

Since the verb and the inflectional morphemes form a phonological constituent, the question arises whether this surface phonological constituent is formed before Spell-Out or not. Some linguists argue that the V remains within the VP in the syntax and forms a constituent after ''rebracketing'' or Marantz's (1988) Merger in the phonology (Yoon 1994, Fukui and Sakai 2003); others argue, on the basis of ellipsis and coordination (Otani and Whitman 1991, Koizumi 2000),[2] that the V must raise out of the VP before Spell-Out. Kayne (1994) suggests that the V remains within the VP, but the VP is attracted to the specifier of some head, yielding the head-final property.

(5) $[_{TP}[ \ldots [V \ldots ]][_{T'}[T \ldots ]]]$

This treatment basically parallels that of *'s* in English $[[_{DP}$ John] [*'s* [brother]]], and it extends to all affixes that are phrasal affixes. This general analysis is compatible with analyses where the VP contains no other overt material than the V (Kayne 1994:141n15), or only the V and some VP material, as I will tacitly assume. These finer details of the derived structure are independent of the main point of this article and remain a subject for future research.

[1] See also Kuroda 2003, where it is shown that disjunction can be under the scope of the causative suffix, a clear indication of the syntactic nature of the causative suffix.

(i) Hanako-ga [[Masao-ni uti-o soozisuru] ka [heya-dai-o haraw]]-aseru koto ni sita.
Hanako-NOM Masao-DAT house-ACC clean or room-rent-ACC pay-cause that to do
'Hanako decided to make Masao clean the house or pay room rent.'
(Kuroda 2003:455, (16))

[2] Otani and Whitman (1991) argue that the null object construction in Japanese and Korean should be analyzed as VP-ellipsis, with the verb outside the elided constituent and therefore pronounced. If correct, this would constitute a strong argument in favor of V-raising. Hoji (1998), however, shows that the VP-ellipsis analysis leads to problems for the interpretation of null objects, and the current consensus seems to be that Japanese and Korean do not have VP-ellipsis, but have massive argument drop instead. Japanese and Korean probably have both VP-ellipsis and argument drop; it is difficult to see how argument drop could be responsible for the fact that adjuncts and the like can be dropped in precisely those contexts that license VP-ellipsis, such as elliptical answers to yes/no questions (McCloskey 1991). The phrasal movement approach in the text is entirely compatible with the existence of ellipsis, the constituent data concerning coordination (Koizumi 1995, 2000), and the phrasal affix nature of the verb.

## 3 Expectations under the Syntactic View

How can the phrasal movement approach explain the properties of complex words in Korean and Japanese that Sells describes? Let us briefly examine the expectations and predictions of the phrasal movement approach to complex words.

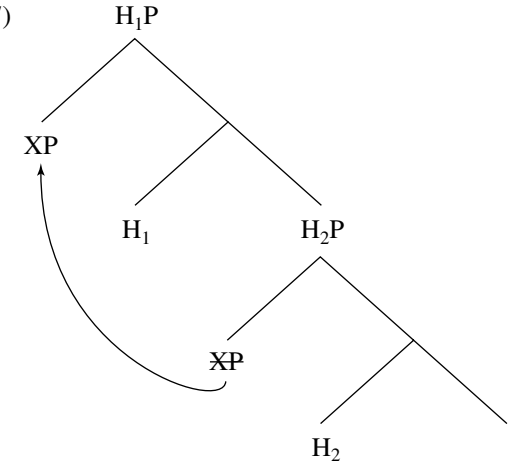
### *3.1 Specifiers*

Specifiers are located to the left of heads, and they attract phrases. Phrases in specifier position (Spec) can be attracted to higher Specs, as is the case with NP-movement and successive-cyclic *wh*-movement.

(6) a. $\text{John}_i$ seems ~~John$_i$~~ to be ~~John$_i$~~ likely ~~John$_i$~~ to ~~John$_i$~~ become ~~John$_i$~~ an artist
b. $\text{who}_i$ do you think ~~who$_i$~~ that Mary wrote an e-mail to ~~who$_i$~~

Given the phrasal movement view, we expect to find similar cases in morphology. Thus, with $H_1$ merged higher than $H_2$ ($H_1 > H_2$), and $H_2$ and $H_1$ attracting XP, we should find cases like (7) that result in the linear order XP $H_1$ $H_2$ by extraction of XP stranding $H_2$, where XP, $H_1$, and $H_2$ form a phonological ''word.''

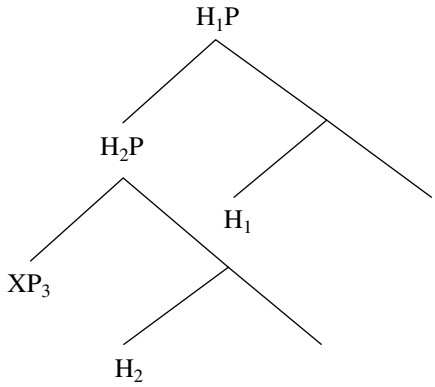
(7)




Linear order: XP $H_1$ $H_2$

Importantly, the linear order $H_1$-$H_2$ is the same as the hierarchical order: $H_1$ is merged higher than $H_2$, takes $H_2$P as a right-hand sister, and precedes $H_2$ at Spell-Out. Notice that this linear order does not ''mirror'' the syntactic hierarchy, since the surface inner affix is not hierarchically lower than the outer affix. In this sense, the example in (7) violates Baker's (1985) Mirror Principle. As I will show, the configuration in (7) surfaces in some cases in Japanese and Korean, revealing the head-initial merged structure, even though the morphology of Korean and Japanese in general strongly mirrors the syntactic hierarchy. Thus, as shown in (8), $H_1 > H_2 > XP$ is mirrored as XP] $H_2$] $H_1$. This order arises through pied-piping, sometimes referred to as ''roll-up'' (XP raises to Spec,$H_2$, and $H_2$P raises to Spec,$H_1$).

(8)




Linear order: $XP_3\ H_2\ H_1$

*3.2 Heads*

Heads, regardless of whether they are functional or lexical, project and determine the category and properties of their projection. Thus, the category of a tensed verb is $[_T$ V [T]], not V. Heads select for their complements and satisfy selection under first Merge. Heads impose restrictions on their specifier as well. I will refer to this as *specifier selection*; the EPP-feature, whatever its status may be, is an instance of specifier selection. In addition, heads can have phonological properties: for example, the property of needing to ''lean'' on a particular lexical category (the traditional bound morpheme property), or of needing to ''lean'' on some overt material in a phonological phrase (the clitic property). Thus, a phrasal affix can attract some particular phrase to its Spec, where its EPP-feature is satisfied. That phrase can undergo further movement, stranding the affix, provided there is a suitable higher attractor—say, a Focus head or a *wh*-head. Stranding can only happen if the phrasal affix cares only about being incorporated into a phonological phrase. This yields the highly restricted and very local specifier movement in (7).

*3.3 Pied-Piping and Specifier-Head Agreement*

Attracted elements in Spec find themselves in the canonical pied-piping-triggering configuration (Webelhuth 1992): a *wh*-feature in an embedded Spec can ''percolate'' up to the containing DP node, enabling the containing DP to check the *wh*-feature.

(9) [[[Whose brother]'s friend]'s car] did you borrow?

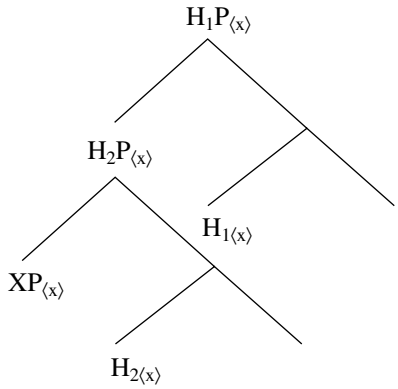
In Koopman 1996 and Koopman and Szabolcsi 2000, it is proposed that ''percolation'' results from cyclic applications of specifier-head agreement.[3] Agreement copies some feature from a

[3] For PP pied-piping, see Koopman and Szabolcsi 2000:42.

specifier onto the head.[4] If a head H acquires a feature through agreement, the HP will carry that feature, by projection: properties of heads determine the properties of the projection as a whole.

If complex words are formed by phrasal movement, similar instances of pied-piping and agreement are expected: in particular, some property of a phrase in an embedded Spec should be ''visible'' on the containing category. Assume, for concreteness, the hierarchy $H_1 > H_2 > XP$, with XP carrying the feature $\langle x \rangle$; and assume that XP moves to Spec,$H_2$ and that $H_2P$ raises to Spec,$H_1$. Cyclic application of specifier-head agreement, combined with the theory of projection, carries the feature $\langle x \rangle$ up to $H_1P$, as shown in (10).

(10)




Cyclic agreement for feature $\langle x \rangle$ results in x's being visible on $H_1P$

Pied-piping and agreement will account for Sells's observation that the leftmost element of complex words displays a certain type of headlike behavior in Japanese and Korean (section 4). In section 5, other cases of agreement under pied-piping in Korean will be discussed.

### *3.4 Locality of Selection*

In various works, Sportiche (1998, 2000 class lectures, 2001) has argued for a strict enforcement of the Principle of Locality of Selection, which states that selection must be satisfied in a strictly local relation (i.e., head-complement or specifier-head). Apparent violations of this principle abound as a result of movement, as the simple example in (11) shows.

(11) who did Mary see ~~who~~

The *wh*-phrase is selected by V, but it is not in a local configuration with its selector at Spell-Out. Local selection of course holds prior to movement; that is, there is a stage in the derivation at which the selector and the selectee are in a local configuration. Note that the *wh*-C also ''selects'' for a [+wh] phrase. This selection, commonly referred to as the EPP property, is locally satisfied after *wh*-movement.

[4] I phrase agreement in terms of copying, instead of checking or Agree, since I think this better describes the basic agreement mechanism. Nothing hinges on this particular choice, however.

Strictly enforcing the Principle of Locality of Selection has far-reaching implications for syntactic derivations, as the standard derivations violate it. For example, Sportiche argues that V selects for NP, not for DP. If this argument is correct, the standard view that V merges with DP cannot be maintained. Instead, as illustrated in (12), V must merge with NP first, in accordance with the Principle of Locality of Selection, and D attracts NP through movement; that is, D's selection for NP is locally satisfied *after* movement. In other words, movement is driven by the Principle of Locality of Selection.

(12) D ↑ [V NP]

While Sportiche is led to the analysis in (12) by patterns of reconstruction (Sportiche 1998),[5] the Principle of Locality of Selection explains why the analysis must hold. It converges with Kayne's (2000, 2003a,b) proposals that many traditional constituents are in fact not underlyingly constituents, but are remnants within a larger (remnant) constituent formed by attraction and movement. In section 4, I will show how the Principle of Locality of Selection accounts for Sells's cases of violations of locality of selection. It forces particular analyses and makes further predictions that can be tested empirically.

## 4 Korean and Japanese Morphology: A Syntactic View

Sells (1995) presents two types of argument against what he calls the syntactic view of morphology—the view that ''morphological and syntactic structures are governed by the same set of principles and constraints'' (p. 320). The first type is based on violations of locality of selection in Korean. Rightmost inflectional affixes in general do not yield such violations and therefore do not behave as heads are expected to behave. The second type shows that the leftmost element must be relevant for selection in certain cases and thus displays unexpected headlike behavior. Somewhat unrelated to the above, Sells argues against universal hierarchies and defends a templatic view of the morphology of Korean and Japanese.

### *4.1 Selection before Movement*

Sells points out that there is a very general and systematic problem with locality of selection. He illustrates this problem with the following general example, where a delimiting particle *kkaci* 'up to, even' and the topic/focus marker *nun* intervene between the verb and the dative suffix selected by the verb (gloss and translation as given by Sells):

(13) Swuni-*hanthey*-kkaci-nun *cwu*-ess-ta.
Swuni-DAT-even-FOC give-PAST-DECL
'I gave it even to Swuni.'
(Sells 1995:285, (15))

As Sells points out, locality of selection is systematically violated in this type of example, a well-known problem that arises with the incorporation of functional heads in syntactic structures

[5] For expository reasons, the picture is simplified here. If Sportiche's account is followed through, all functional categories are merged outside of V NP. (See Sportiche 1999.)

(Grimshaw 1991). Sells argues that this problem would not occur if the inflectional particles were simply nonheads. Sportiche's Principle of Locality of Selection provides a different solution: these particles are indeed heads, but at the point in the derivation where selection is locally satisfied, they have not yet been merged. They are merged later in the derivation, and they attract the focused constituent to their Spec (Kayne 1998), yielding the surface string.

A simplified derivation for (13) illustrates this analysis (section 4.2 discusses other cases where selection is satisfied before movement). We start the derivation at the point where the argument DPs have been merged in the respective v/VP shells (14a), but not the dative P *hanthey*, past tense *-ss*, the topic/focus marker *nun*, and the declarative marker *ta*. The derivation abstracts away from the external argument, the theme. At each step, the tail of the attracted element is indicated by overstriking. As (14a–g) make clear, head movement plays no role in these derivations.

(14) a. [$_{VP}$ Swuni [cwu . . . ]]
Swuni give

b. *Merge* $P_{hanthey}$, *attract DP (*Swuni*)* →
[$_{PP}$ Swuni [hanthey [$_{VP}$ ~~Swuni~~ [cwu . . . ]]]]
Swuni DAT give

c. *Merge F, move VP* →
[$_{FP}$ [[cwu . . . ]] [F [$_{PP}$ Swuni [hanthey [~~cwu~~]]]]]
give Swuni DAT

d. *Merge* kkaci*, move remnant PP* →
[[$_{PP}$ Swuni hanthey . . . ][kkaci [$_{FP}$[[$_{VP}$ cwu . . . ]] [F [$_{PP}$ ~~Swuni hanthey~~]]]]]
Swuni DAT kkaci give

e. *Merge T, move remnant VP* →
[$_{TP}$ [cwu . . . ] [$_{T}$ ess [[$_{PP}$ Swuni hanthey . . . ][kkaci [$_{VP}$ ~~cwu~~]]]]]
give PAST Swuni DAT kkaci

f. *Merge* nun*, move PP* →
[$_{TopP}$[[[$_{PP}$ Swuni hanthey . . . ] [kkaci . . . ]]] [nun [$_{TP}$ [cwu . . . ] [ess
Swuni DAT kkaci TOP give PAST
[$_{PP}$ ~~Swuni hanthey~~ [~~kkaci~~]]]]]]

g. *Merge* ta*, move TP; TP pied-pipes TopP (nunP) (possibly more steps; brackets simplified)*
[$_{DeclP}$[$_{TP}$ Swuni hanthey kkaci nun cwu-ess-] [ta
Swuni DAT kkaci TOP give-PAST-DECL
[~~Swuni hanthey kkaci nun cwu ess~~]]]

The movements in (14b), (14d), (14e), (14f), and (14g) are forced by the Principle of Locality of Selection, selection being satisfied after movement. The step in (14c), which resembles Kayne's (1998, 2000) VP-movement to WP, creates the remnant PP necessary for (14f).[6] This movement

[6] Müller (2000) argues that this movement is motivated by the principle called Shape Conservation (Williams 2003) (V > O) and that it need not take place in surface OV languages. This step must also occur in strict OV languages, however, so as to create a surface PP constituent, which can combine with Topic in the left periphery, for example.

seems to be empirically justified (see Kayne 1998, Cinque 1999, 2002), though a satisfying motivation for it remains to be proposed.[7]

*4.2 Complementizer Selection*

Sells presents complementizer selection as a case where local selection in word structure is interrupted. Korean has different types of nontensed verb endings, whose distribution is determined by selecting verbs. Sells, following Cho and Sells 1995, glosses these as COMP1, COMP2, COMP3, and so on. I will gloss them by their Spell-Out forms and will return to their distribution in section 4.5. I follow Sells (p. 305) in analyzing *anh* as a negative auxiliary that selects for a clausal constituent headed by *-ci* (see also footnote 10).

(15) po 'try' selects for $C_1$ [-e]
anh 'neg V' selects for $C_2$ [-ci]
siph 'desire' selects for $C_3$ [-ko]

Inflectional elements can intervene between C and the selecting V, leading to apparent nonlocal selection.

(16) ilk-*e*-man-un *po*-ass-ta
read-e-only-FOC try-PAST-DECL
'tried only reading'
(Sells 1995:(19b))

This violation of locality is not an argument against the syntactic account under consideration. Indeed, the Principle of Locality of Selection forces an account where selection is satisfied locally before movement to higher merged heads takes place; that is, local selection of the C *e* by the verb *po* 'try' must precede merger of *man* 'only' and movement to Spec,*man*, which in turn precedes (optional) merger of *nun* 'FOCUS' and movement to Spec,*nun*. This leads to the following entirely reasonable hierarchy of merger. *Ilk* 'read' is focused and must move to Spec,*man*.

(17) Hierarchy: nun > man > po > -e > ilk

To make the derivations precise and examine further predictions, we must bring in complex verb formation: *po* 'try' obligatorily forms a complex verb with VP-*e* (Sells 1998a). This can be shown by short negation *an*, which precedes the entire verbal complex in neutral clauses and takes scope over *po* (hence, $\text{Neg}_{an} > po > -e > ilk$).[8]

[7] This step could be motivated by the Principle of Locality of Selection in the following manner. If P selects and merges with VP, there is no motivation for VP-movement. However, suppose that P and VP are not in a local relation at the point of merger, and that P merges like a C (Kayne 2000), selecting for both VP and DP. This would force DP-movement and VP-movement to positions local to P. Alternatively, this step could be motivated by the verb's need to reside in a relatively shallow structure in Spec,TP. In this sense, the motivation for this step (movement to the outer edge) could be similar to the motivation for successive-cyclic movement through Spec,CP.

[8] Short negation *an* can also take scope in the embedded complement: 'I tried not reading it'. This is irrelevant for the present discussion.

(18) *An* ilk-e po-ass-ta.
not read-e try-PAST-DECL
'I didn't try to read.'

Verbal complexes can become quite big. They resemble Hungarian or West Germanic verbal complexes, each verb carrying its own inflectional morphology (Koopman and Szabolcsi 2000).

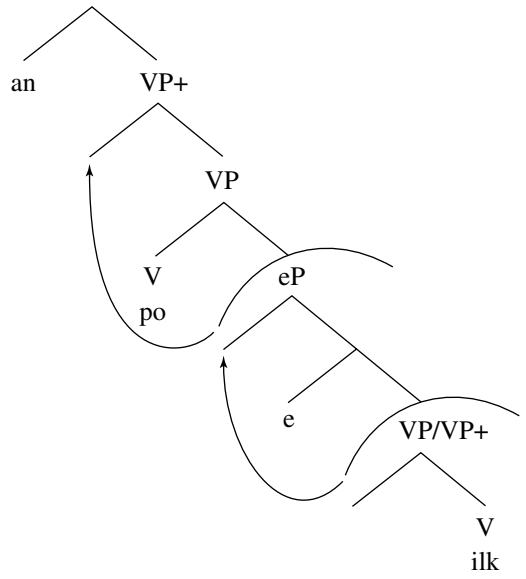
(19) an ilk-e po-ko siph-ta
not read-e try-ko want-DECL
'didn't want to try to read'

Koopman and Szabolcsi propose that there is a (universal) set of predicates that must form a complex predicate. They propose that complex verb formation is universally achieved in a particular configuration: namely, complex verb formatives must enter into a local specifier-head relation with a small clause predicate (a small clause constituent is slightly larger than VP, called VP+ in Koopman and Szabolcsi 2000). The locus of complex verb formation (VP+) is *lower* than negation (*an*). This yields the following structures for (18) and (19), with VP+ further embedded in inflectional layers:

(20) a. $[_{\text{Neg}}$ an $[_{\text{VP}+}[_{\text{CP}}[_{\text{vP}+}$ $V_{\text{ilk}}$ . . . ] -e] $[V_{\text{po}}$ . . . ]]]
b. $[_{\text{Neg}}$ an $[_{V_1P+}[_{C_2P}[_{v_2P+}[_{C_3P}[_{v_3P+}[_{\text{vP}}$ $V_{\text{ilk}}]$ -e]] $[[V_{2\text{po}}$ . . . ]] -ko]] $[_{V_1P}$ $V_{\text{siph}}$ . . . ]]]

The derivation for (18) is presented in (21).[9]

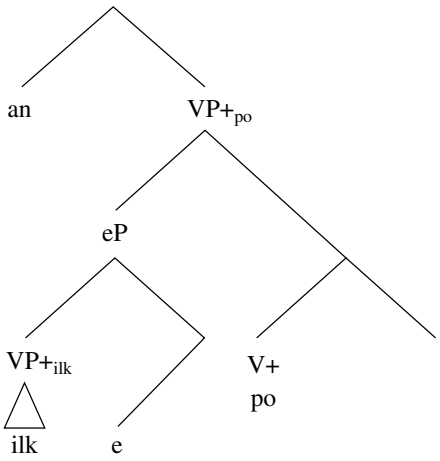
(21)




[9] Note that the basic derivation is unaffected if there is intervening structure between VP+ and eP and eP and VP, as argued in Koopman and Szabolcsi 2000.

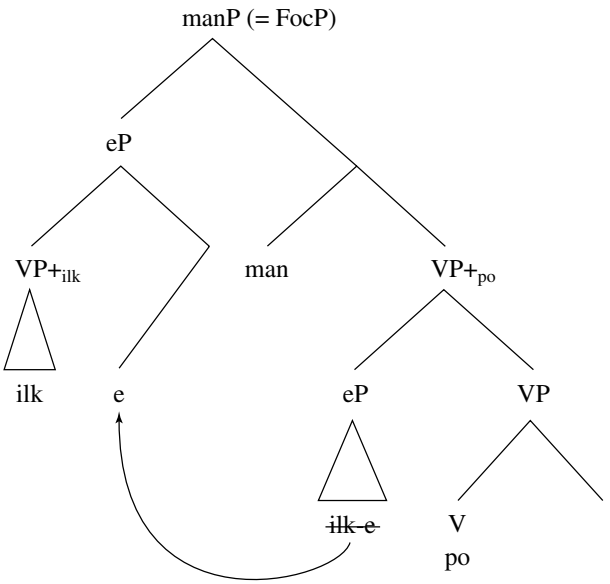
The phrasal affix *-e* selects for VP and forces VP-movement to its Spec. (VP pied-pipes VP+.) *Po* locally selects for *-e* when eP merges as its complement. *Po* attracts VP+, and VP+ pied-pipes *-e* to the position where a complex verb with *po* is formed (*-e* cannot be stranded, as it requires overt material in its Spec). This yields the surface constituent shown in (22).

(22)




We can now return to Sells's observation that *man* 'only' can intervene between the *-e* constituent and the selecting verb (16). This follows from the independently established hierarchy $\text{Focus}_{\text{man}} > \text{VP}+ > po > -e > ilk$, complex verb formation, and obligatory phrasal movement of the focused constituent to *man*. As the reader can verify, all selectional relations are locally satisfied either before or after movement.

(23)



Thus, locality of selection forces a different surface constituent structure for *ilk-e po-ass-ta* and *ilk-e-man po-ass-ta*, with *ilk-e* higher in the derivation when it is followed by *man*.

*4.3 Interactions among Focus* (man)*, Short Negation* (an)*, and Verbal Complexes*

Let us next consider the predictions if we combine the hierarchies in (17) and (24b).

(24) a. man > VP+ > po > -e > ilk (ilk-e-man ~~ilk-e~~ po ~~ilk-e~~(-ass-ta)) (17)
try read
b. an > VP+ > po > -e > ilk (*an ilk-e po* ~~ilk-e~~(-ass-ta))
NEG

First the relative order of merger between *man* 'only' and short negation *an* needs to be determined. We can do this by examining the relative scopal possibilities of *man* and *an*. As (25) shows, *man* takes scope over short negation *an* in simple clausal structures, establishing the hierarchy of merger unambiguously as $\text{Focus}_{\text{man}} > \text{Neg}_{\text{an}}$.[10]

(25) Wuncen-man an ha-ta.
drive-only not do-DECL
'I did everything but driving.'/'It is only driving that I didn't do.' (only > neg)
'*It is not the case that I did only driving and nothing else.' (*neg > only)

The focused predicate *ilk-e* must raise to Spec,*man*. Since *man* is merged higher than short negation *an*, *ilk-e* should precede *an* and take scope over negation. This prediction is borne out.[11]

(26) a. *An ilk-e man po-ass-ta.
not read-e only try-PAST-DECL

[10] Long negation *anh* can take scope over $\text{Focus}_{\text{man}}$. This follows from the fact that long negation *anh* selects for a clausal complement headed by *-ci*. This clausal complement can contain its own Focus projection, hence the availability of $\text{Neg}_{\text{anh}} > \text{Focus}_{\text{man}}$.

(i) [$_{\text{CP}}$ [Ilk-e-man po-ci]] anh-ass-ta.
read-e-only try-ci NEG.V-do-PAST-DECL
'He didn't try only reading.' (neg > only)

[11] Not all Korean speakers accept the short form negation *an* with *man* focus in this context. For those speakers who do accept this combination, the dominant reading is always focus > negation. (Many thanks to Chungmin Lee for extensive multispeaker feedback on this issue.) Some speakers accept an additional reading where focus can also take scope under negation, but only when an accentual phrase follows the focused constituent. (Thanks to Christina Kim for pointing out that the prosodic structure interacts with available scope readings.) I take the variation to reflect whether individual speakers allow focus to be merged within the *-e* complement of *po* 'try' or not. Interestingly, low merger seems to be possible only when the word structure and phonological phrasing are consistent with it. Thus, this reading seems to be unavailable when *DP man an* $V_2$ $V_1$ forms a single intonational phrase, suggesting that the hierarchical structure underlying this phrasing can only be *man* > *an*. Merger of focus within the complement must be consistent with the phonological phrasing and word structure [[ . . . man] an]. This may in fact be another instance where word structure and syntax determine scopal possibilities (Lee 2004, 2005; also see section 6 below). These Korean data resemble cases in Hungarian where embedded focus blocks restructuring (Koopman and Szabolcsi 2000).

b. Ilk-e man an po-ass-ta.
read-e only not try-PAST-DECL
'Reading is the only thing I didn't try.'/'I tried everything but reading.' (only > neg)

These facts immediately follow from the underlying hierarchy of merger, head-complement structure, and phrasal movements. Complex verb formation is obligatory, and *man* attracts a focused constituent. Certain inflectional morphemes are allowed within the complex verb, because locality of selection holds before it is formed. Other inflectional morphemes (*-man*, *-nun*) are never allowed within the complex verb, because these can *only* be merged at a later point in the derivation in accordance with universal principles that guide the structural makeup of the clause. Movement is forced, because of locality of selection. Finally, scope is determined by the hierarchy of merger, which determines the location of the scope-bearing heads.

*4.4 Selection after Movement*

Sells's second type of argument is based on cases where the leftmost element (a) shows headlike behavior and (b) is the element an outside selector needs access to. Sells illustrates this with Japanese gerunds and speech level particles.

*4.4.1 Japanese Gerunds* Japanese gerunds can be adjectival or verbal.

(27) *Verbal gerunds*
a. tabe-te
eat-GER
b. tabe-nai-de
eat-NEG.COP-GER
*Adjectival gerund*
c. tabe-naku-te
eat-NEG-GER

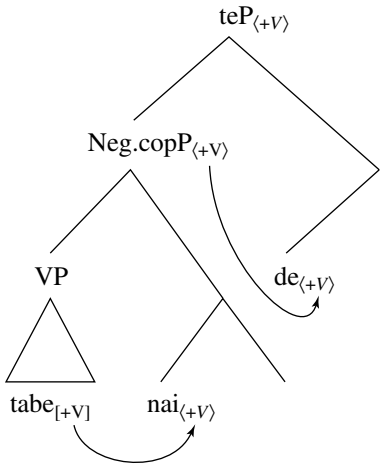
Only a verbal gerund can be selected by a verb like *oku* (past tense *oita*) 'to put/to prepare for some future eventuality'.

(28) Ziroo-wa zenbu-no tabemono-o tabe-nai-de oi-ta
Ziroo-TOP all-GEN food-ACC eat-NEG.COP-GER 'put'-PAST
/*tabe-naku-te oita.
eat-NEG-GER 'put'-PAST
'Ziroo made the provision of not eating all the food.'
(Sells 1995:(21a))

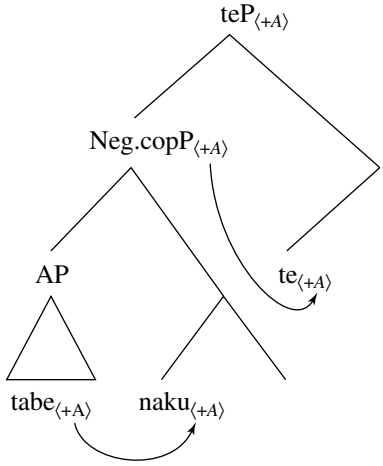
The category of the gerund must be determined by the V/A that it contains, which is merged lower than the negative copula. This configuration parallels the well-known case of pied-piping where a feature embedded in a specifier is able to satisfy an outside selector; in other words, it is a case where selection is not satisfied at the point of merger, but after movement, through

specifier-head agreement in category. Agreement in category has a phonological reflex: the spell-out of Neg and the copula covaries with the A/V features in its Spec, as does the spell-out of the formal-level affix (see section 4.4.2). This leads minimally to the structures and derivations in (29), with agreement indicated.

(29) a. *Verbal gerund*




b. *Adjectival gerund*




Cyclic application of specifier-head agreement for the categorial feature and projection carry the categorial feature up to the maximal projection, thus allowing the verb to satisfy its selection of the gerund locally. Agreement in category creates the impression that the leftmost category determines the category of the constituent, just as *wh*-specifiers create the impression that the containing phrase is [+wh].

*4.4.2 Speech Level in Japanese* Sells argues that selection has to look deep into a constituent for the form and ordering of the inflectional morpheme that indicates speech level in Japanese. Interestingly, this selection is also sensitive to category (V vs. A).

The formal speech level suffix *desu* occurs with A, but not with V.

(30) a. *tabe-ta-desu
eat-PAST-FORMAL
b. aka-katta-desu
red-PAST-FORMAL

The formal speech level suffix *mas* occurs with V, but not with A. Furthermore, *mas* precedes T, while *desu* follows it. (The surface form *masi* in the examples below is due to epenthesis.)

(31) a. tabe-masi-ta
eat-FORMAL-PAST
b. *tabe-ta-mas
eat-PAST-FORMAL

The dependency of speech level form on category (*desu* with AP, *mas* with VP) can be analyzed in two ways under the syntactic view: selection is satisfied under first Merge (32a), or selection is satisfied after movement via specifier-head agreement (32b).[12]

(32) a. Selection is satisfied under first Merge ($T > desu > AP$, $T > mas\ VP$)
b. Selection is satisfied after movement ($desu > T > AP$, $mas > T > V$)

The hierarchical order of merger would surface because of specifier extraction, the mirror-image order because of pied-piping (‘‘roll-up’’).

(33) T > Formal > AP/VP

| | | | |
|---|---|---|---|
| a. | | $[_{\text{FormalP}}$ AP [desu . . . ]] | AP to Spec,Formal |
| b. | $[_{\text{TP}}$ AP [katta | $[_{\text{FormalP}}$ ~~AP~~ [desu . . . ]]] | Specifier extraction |
| a′. | | $[_{\text{FormalP}}$ VP [mas . . . ]] | VP to Spec,Formal |
| b′. | $[_{\text{TP}}[_{\text{FormalP}}$ VP [mas . . . ]] ta] | | Pied-piping |

(34) Formal > T > AP/VP

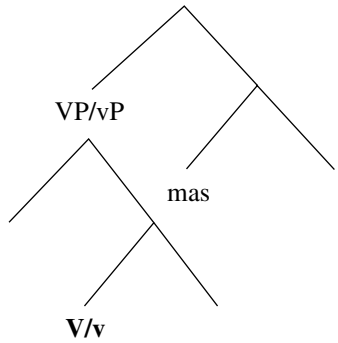
| | | | |
|---|---|---|---|
| a. | | $[_{\text{TP}}$ VP [ta . . . ]] | VP to Spec,TP |
| b. | $[_{\text{FormalP}}$ VP [masi | $[_{\text{TP}}$~~VP~~ [ta . . . ]]]] | Specifier extraction |
| a′. | | $[_{\text{TP}}$ AP [kat*ta* . . . ]] | AP to Spec,TP |
| b′. | $[_{\text{FormalP}}[_{\text{TP}}$ AP [kat*ta* . . . ]][*desu* . . . ]] | | Pied-piping |

It seems to me there is a strong bias for (34). Formal speech level is in complementary distribution with force/mood markers and is restricted to root contexts. This suggests that Formal is located at the root level, higher than T. If this is correct, we need to explain why VP must extract from TP in (34a), but AP cannot do so. In Koopman and Szabolcsi 2000 and Koopman 2002, specifier

[12] I will not consider a mixed account where *desu* and *masi* are merged in different locations.

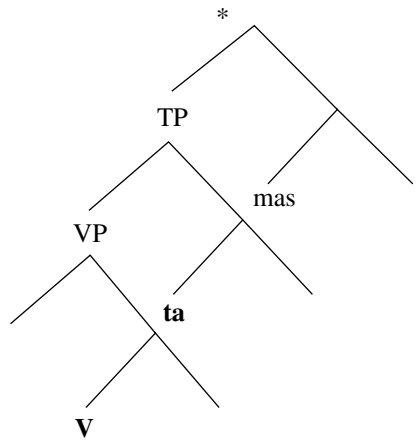
extraction is forced by means of complexity filters, which are part of the entry of individual lexical items and which are sensitive to overt phonological material. These filters ''summarize'' the syntactic forms that lead to well-formed phonological forms; moreover, they are sensitive to syntactic structure, in the sense that they pay attention to the depth of embedding of overt material at Spell-Out. Thus, *mas*, as an idiosyncratic lexical property, does not allow overt material in V/v in Spec,*mas* to be more deeply embedded than in the template in (35).

(35)




Pied-piping VP-*ta* to Spec,*mas* would yield (36). This derivation should in principle be available, as it underlies the APs in (33). (36) yields a violation of (35), since the overt material vP/VP would be embedded inside TP.

(36)




The obligatory stranding of T in (34a) can therefore be attributed to a phonological property of *mas*. In other words, specifier extraction is a way to keep the representations that Spell-Out (i.e., the phonology) accesses shallow.

The form realizing the formal speech level varies with the category in Spec; this is an overt reflection of specifier-head agreement (in category), as argued in section 3.3.[13] If this analysis is

[13] To account for the fact that AP does not specifier-extract, it must be assumed that *katta* cannot strand. This will be the case if *katta* must have overt material in its Spec at Spell-Out.

correct, we have identified a case of specifier extraction within the Japanese ''word,'' where the merged order surfaces because of specifier extraction, in conjunction with head-complement order.

### *4.5 Arguments against Universal Hierarchies?*

Sells argues against the syntactic view in part because it presupposes universal hierarchies, or principles that determine the underlying order of merger, a view he assumes to be problematic. The verbal (and nominal) morphology of Korean is usually presented as a template, where a number of morphological slots are available after the verb or the noun. Different nonfinite verb endings (Sells's COMP1–COMP4, here $C_1$–$C_4$) appear to occupy these slots, even though they have nothing in common with the other elements that can occupy them.

(37)

| $V_{root}$- | Honorific- | Tense- | Mood- | Discourse | |
|---|---|---|---|---|---|
| ilk- | usi- | ess- | ta- | ko | |
| 'read' | | | | | |
| V | 1 | 2 | 3 | 4 | |
| [ | $C_1$] | | | | (e/a) |
| [ | | $C_2$] | | | (ci/key/ko) |
| [ | | | $C_3$] | | (eya/aya, na) |
| [ | | | | $C_4$] | (ko) |

Thus, $C_1$ appears in the same slot as Honorific and can only be preceded by a verbal root; $C_2$ appears in the same slot as Tense and can only be preceded by an honorific suffix; $C_3$ appears in the same slot as Mood and can only be preceded by honorific and tense suffixes; and $C_4$ appears in the same slot as Discourse and can only be preceded by honorific, tense, and mood suffixes. This, Sells argues, is exactly what one expects under a theoretical approach that includes morphological templates, but not under a view that includes syntactic hierarchies, since the latter view would not allow C to occupy a unique location. Under a templatic view, all slots should be able to be filled, elements that fill a particular slot do not have to form a natural class, there is no reason to find a unique position for C in Korean, and there is no a priori reason to assume that C and Honorific cannot occupy the same slot.

However, the syntactic view simply does not lead one to expect a unique syntactic position for a nonfinite verb ending or a subordinator (i.e., C). No one expects English *to*, *-ing*, *for*, *if*, *that*, and the like, to occupy exactly the same syntactic position (i.e., to be merged at the same height), or English *-ing* to correspond to a unique position in the hierarchy: as is well known, *-ing* can be merged at different heights in the hierarchy, leading to different types of *-ing* clauses, with different distributional properties. Even if the different Cs were all merged in the same position, the patterns in (37) would still be precisely what one expects to find under a syntactic view. Individual heads can select for different pieces of the hierarchy; thus, $C_1$ selects for VoiceP/VP as an EPP property, $C_2$ for a constituent that includes $Agr_{Hon}$, $C_3$ for TP, and so on. Since these Cs are final, selection must minimally be satisfied after movement to their Spec. This is the only way in which the syntactic view can derive the fact that elements that do not form natural

classes seem to occupy the same slot. Sells further takes the ordering facts discussed in the previous section as an argument against universal hierarchies.

> However, to work correctly, this part of the syntactic view presupposes that there is a consistent hierarchy of functional categories, such that, for example, the existence of CP always entails MoodP, MoodP entails TP, and so on. However, it is clear that there is no such hierarchy, either universally or even within a given language: if we just look at the expression of Speech Level and Tense, we find that they are reversed in Japanese and Korean. (Sells 1995:297)
>
> For the syntactic view, the facts are even more puzzling, since even within the same language there may be no consistent hierarchy. (Sells 1995:298)

Under the syntactic view, that different linear orders can be derived from a single underlying hierarchy is not problematic but expected, as shown in previous sections. Finally, evidence for underlying hierarchies, or principles that underlie clausal hierarchies, seems even stronger now than when Sells's article appeared (see, e.g., Cinque 1999, Rizzi 1997, 2000, Pollock and Poletto 2002, Hallman 1997, Koopman and Szabolcsi 2000, Julien 2002, Williams 2003).

## 5 Case and Agreement in Korean

Here, I will show that the independently motivated syntactic mechanisms introduced so far account for further properties of Korean morphology. In section 5.1, I argue that the surprising position of structural Case markers in Korean is due to very local movement stranding the Case markers. In sections 5.2 and 5.3, I argue that honorific agreement and plural agreement should be analyzed as cases of agreement triggered under TP pied-piping and, in the case of plural agreement, under further TP-extraction stranding the plural agreement.

### *5.1 The Position of Structural Case Markers*

The Korean structural Case markers, *i/ka* (nominative), *ul* (accusative), and *uy* (genitive), follow *man* 'only'. Case markers occupy a position quite distinct from Ps, which precede *man* 'only', as the following template shows:

(38) NP-HON-PL-(P)-man-CASE

The question arises how a structural Case marker can follow DP-externally merged material like Focus. Analytical options are restricted. The merged order is either $\text{Focus}_{\text{man}} > \text{Case} > \text{DP}$ or $\text{Case} > \text{Focus}_{\text{man}} > \text{DP}$. Case locally selects for DP, and so does Focus: given locality of selection, this requires movement to Spec,Case and Spec,Focus. On general conceptual grounds, Focus $>$ $\text{Case}_{\text{Nom}}$ is expected, given the general layering of syntactic hierarchies: nominative belongs to the TP level, and Focus to the CP level. In a similar way, we expect Focus $>$ $\text{Case}_{\text{Acc}}$[14] and

[14] I assume Focus can be merged in the accusative region (see also section 6). For recursion of the left periphery in lower regions of the sentence, see Hallman 1997, Sportiche 1994, Cecchetto 1999, Belletti 2003, and Koopman, to appear, among others.

Focus > $\text{Case}_{\text{Gen}}$ in the DP domain. Specific syntactic derivations follow from the Principle of Locality of Selection.

(39) Man 'only (focus)' > Nom (i/ka) > . . . DP

| | | |
|---|---|---|
| a. | [$_{\text{NomP}}$ DP [i [ . . . ]]] | DP to Spec,Nom |
| b. | [$_{\text{FocP}}$ DP [man [$_{\text{NomP}}$ ~~DP~~ [i . . . ]]]] | Merge man; DP extracts from NomP |

A DP is attracted to Spec,Nom, satisfying local selection by the Case head, and further extracts to Spec,Focus if focused. The resulting phase is sent off to the phonology, where nominative Case is spelled out as *i* or *ka* depending on the phonological properties of the preceding segment; that is, Nom behaves like a clitic. Again, in this analysis, focus and Case surface in the merged head-initial order, not in the mirrored order. Coordination may provide independent support for Focus > Case. Neither *man* nor *i* can be repeated under (DP) coordination, but DPs can. This is consistent with *man* > *i* > DP&DP.[15]

(40) a. Swuni hako Chelswu man-i ''A''-lul pat-ass-ta.
Swuni and Chelswu only-NOM A-ACC receive-PAST-DECL
'Only Swuni and Chelswu received an A.'

b. *Swuni man hako Chelswu man-i ''A''-lul pat-ass-ta.
Swuni only and Chelswu only-NOM A-ACC receive-PAST-DECL

c. *Swuni man-i hako Chelswu man-i ''A''-lul pat-ass-ta.
Swuni only-NOM and Chelswu only-NOM A-ACC receive-PAST-DECL

The hierarchy $\text{Case}_{\text{Nom}}$ > $\text{Focus}_{\text{man}}$ > DP also allows a syntactic derivation, provided we find some way to turn DP-*man* into a remnant constituent before it moves on to Focus. However, it wrongly predicts coordination under Nom to be available (40c), and it deviates from the fact that crosslinguistically Focus heads merge higher than Nom or Acc; the latter fact should follow from basic principles of architecture.

### *5.2 Honorifics*

*5.2.1 Honorific Agreement* The honorific suffix follows the verbal ''root'' and precedes Tense. It cooccurs with a structural subject that is marked [+honorific]; it thus represents a particular instance of subject agreement. Coordination shows that the morpheme that spells out honorific

[15] As an anonymous reviewer points out, *X-man-i* can be coordinated by *hokun* 'or'.

(i) Swuni man-i hokun Chelswu man-i ''A''-lul pat-ass-ta.
Swuni *man*-NOM or Chelswu *man*-NOM A-ACC receive-PAST-DECL
'Either only Swuni or only Chelswu received an A.'

These must be derived from *hokun* > *man* > Case, with across-the-board movement to create the surface constituency. Youngjoo Lee (pers. comm.) informs me that the merger 'and' > *man* would lead to the following interpretation, which is incoherent: 'Swuni was the unique individual who got an A and Chelswu was the unique individual who got an A, where there is a unique A-getting event'. Disjunction (*hokun* > *man*) does not create a problem, and neither does coordination with the sentential coordinator *kuliko*, in which case we expect two ''A-getting events.'' To derive the latter two cases, an across-the-board account must be adopted.

agreement, which I will notate as $Agr_{Hon}$, is lower than T (Choi 2001); hence, T > $Agr_{Hon}$ > vP/VoiceP.

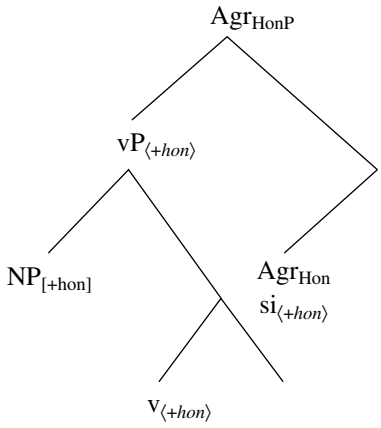
(41) [[$_{Agr_{Hon}P}$ ] ko [$_{Agr_{Hon}P}$ ]] T
Kim sacang-nim$_i$-un [t$_i$ ilccik chulkun-ha-si-] ko [t$_i$ ilccik
Kim president-HON-TOP early arrive.office-do-HON CONJ early
toykun-ha-si-]ess-ta.
leave.office-do-HON-PAST-DECL
'President Kim arrived at the office early and left early.'

Under standard approaches to agreement, the constituent triggering honorific agreement is either in a specifier-head relation with the relevant Agr head at some point or locally c-commanded by a head endowed with the agreement feature (under Agree). The discussion in section 4.3 offers another possibility: agreement could be triggered under pied-piping (as argued for independently in Koopman 2003). This alternative is further supported by the ability of an honorific possessor to trigger honorific agreement, without evidence for overt possessor raising.

(42) [Sensayng-nim-uy son-i] khu-si-ta.
teacher-HON-GEN hand-NOM big-HON-DECL
'The teacher's hands are big(hon.).'
(Sells 1995:fn. 21, citing Hong 1991:12)

The possessor in Spec,DP agrees with D and hence the entire DP carries the feature [+hon], allowing $Agr_{Hon}$ to agree with the possessor. Under an agreement-under-pied-piping approach, an honorific NP in Spec,vP triggers honorific agreement on v; vP therefore inherits the [+hon] feature and triggers further agreement under pied-piping, as illustrated in (43). The [+hon] agreement feature is checked in Spec,$Agr_{Hon}$ and will not trigger agreement on higher heads. It is interesting that the Honorific head must be merged low, both within the DP, where it precedes plural, and within the clause, where it precedes tense (and plural agreement, as well). It pied-pipes with the vP to higher merged heads, hence its linear position.

(43)



*5.2.2 Some Honorific Mysteries* Honorifics present some mysteries that Sells counts as additional strikes against the syntactic view. Here, I will show that the syntactic view can in fact make the relevant distinctions using the available mechanisms, and hence that these data do not pose an obstacle to the syntactic view.

The first observation concerns Japanese irregular honorific verb forms. Though a bit redundant, irregular honorific verb forms may appear in the syntactic honorific construction (Sells and Iida 1991), but the regular verb stem cannot appear in this environment.

(44) a. Japanese productive honorific: o-V-ni naru
b. Irregular form: *o-si-ni-naru → nasaru 'honorably do'
c. Double marking possible: o-nasari-ni naru

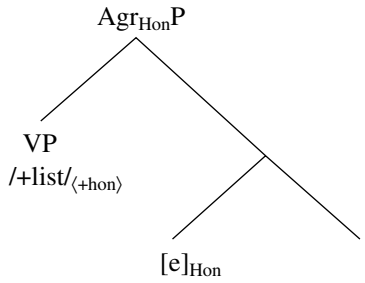
Sells points out that double marking seems problematic for a syntactic account since honorification should have a unique syntactic expression. In light of the preceding section, we can understand the honorific construction as follows: whenever a v agrees with a honorific subject, it inherits the feature [+hon]. In accordance with the Elsewhere Principle, the regular verb stem is blocked in (44b) by the listed honorific form. The listed form can appear by itself, since it carries the feature [+hon]. The listed form can also occur in the syntactic honorific construction (44c), just as double agreement is allowed.

Sells's second observation concerns irregular honorific forms in Korean, which ''fit'' into different syntactic contexts than regular ones. As shown in (37), $C_1$ cannot cooccur with an overt honorific suffix. However, $C_1$ *can* cooccur with an irregular honorific form: compare *capswusi-e* with **ilk-usi-e* in (45).

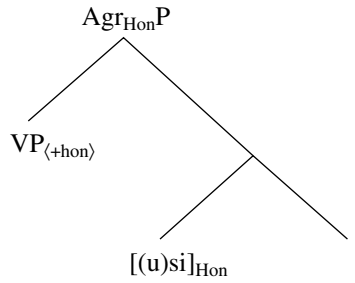
(45) a. Sensayngim-kkeyse capswusi-e po-si-ess-ta (*mekk-usi-ess-ta).
teacher-HON.SUBJ eat.HON-$C_1$ try-HON-PAST-DECL (*eat-HON-PAST-DECL)
'The teacher tried to eat.'
b. *Sensayngim-kkeyse ilk-usi-e po-si-ess-ta.
teacher-HON.SUBJ read-HON-$C_1$ try-HON-PAST-DECL
(Sells 1995:(28))

The irregular honorific form thus has the distribution of a regular verbal root, yet at the same time, it requires an honorific subject. How can we understand this distribution? Suppose that irregular honorific verb forms and regular honorific verb forms have the syntactic representations shown in (46) when handed over to the phonology. A zero head cooccurs with a phonologically specified list of stems in the case of irregular honorific verb forms. The honorific affix spells out the head of the projection in the case of regular honorifics.

(46) a. *Irregular honorifics*




b. *Regular honorifics*




(46a–b) express both the common structure of regular and irregular honorifics and their different distribution of overt/covert material. This, I claim, is not without syntactic consequences. VP-extraction would strand a silent head in (46a) but an overt head in (46b). Furthermore, pied-piping in the latter case would yield the ungrammatical string (47c).

(47) a. [$_{eP}$[$_{vP}$ capswusi] [-e [$_{Agr_{Hon}P}$[$_{vP}$ ~~capswusi~~ . . . ] [$_{Agr_{Hon}}$[ . . . ]]]]
eat.HON e

b. *[$_{eP}$[[$_{vP}$ ilk-] [-e [$_{Agr_{Hon}P}$[$_{vP}$ ~~ilk~~ . . . ] [$_{Agr_{Hon}}$ -usi [. . . ]]]]
read e HON

c. *[$_{eP}$[$_{Agr_{Hon}P}$ [$_{vP}$ ilk . . . ] [-usi [ . . . ]]] [-e [ . . . ]]]
read HON e

(47a) shows that an irregular honorific verb has the same distribution as a root v; that is, it can occupy the Spec,CP of this particular C, satisfying its selectional requirement. (47b) can be argued to violate a phonological requirement on the overt honorific *-si* (it must have a VP with overt V in its Spec at Spell-Out; it is not a clitic); and (47c) can be argued to violate a size requirement on overt material in Spec,*-e* (the overt V may not be more deeply embedded than vP). The silent honorific in (47a) ''escapes'' phonological conditions by virtue of being silent, and therefore only (47a) converges. Thus, the projection headed by *-e* may contain an honorific subject and an honorific verb form, as long as the honorific head itself is silent.

### *5.3 Plural Agreement*

Korean has a second kind of subject agreement: plural subjects optionally trigger plural agreement (spelled *tul*), a phenomenon that strongly resembles complementizer agreement in the West Germanic languages. Sells does not discuss *tul*: ''The plural marker *tul* . . . does not appear in the charts above because it shows considerable freedom with respect to where it may attach within the word'' (Sells 1995:fn. 40). In this section, I will show that the quite challenging distribution of *tul* in the Korean verbal complex can be quite nicely integrated into the syntactic account. More specifically, I will argue that plural agreement is triggered under pied-piping of TP and stranding of Agr$_{Pl}$. The differences between plural agreement and honorific agreement follow from the high location of Agr$_{Pl}$, which seems to correspond more closely to a very high Agr$_S$.

*5.3.1 Distribution of* Tul *Tul* is both a plural suffix on nouns and a plural agreement marker optionally cooccurring with a plural subject (in the examples in this section and section 5.3.2, italics indicate optionality).[16] *Tul* can follow any of the root Cs, provided the CP contains a plural subject.[17]

(48) a. Ai-tul-i cywusi-lul masi-ess-ta-*tul*. Decl-*tul*
child-PL-NOM juice-ACC drink-PAST-DECL-PL
'The children drank juice.'
b. Ai-tul-i cywusi-lul masi-ess-ni-*tul*? Q-*tul*
child-PL-NOM juice-ACC drink-PAST-Q-PL
'Did the children drink juice?'
c. Tten-ass-eyo-*tul*. Level-*tul*
leave-PAST-INFORMAL-PL
'They left.'

*Tul* may also follow any of the embedded Cs ($C_1$ through $C_3$; section 4.2), if the CP contains a plural structural subject.[18]

(49) a. Ilk-e-*tul* po-ass-ta-*tul*.
read-e-PL try-PAST-DECL-PL
'They tried to read it.'
b. Ilk-ko-*tul* siph-keyss-ta-*tul*.
read-ko-PL want-MODAL-DECL-PL
'They might want to read it.'

[16] The data in this section are mostly drawn from Park and Sohn 1993 and references cited therein. I would like to thank Sun-Ah Jun and Seungho Nam for additional help.

[17] Some Korean speakers find the sequence *ta-tul* acceptable, but slightly degraded.

*Tul* can optionally follow adverbs and PPs as long as these are ''controlled'' by the plural subject and occur on the projection line between V and the surface position of the plural subject DP, as in (i) (Yim, to appear). I will not discuss these cases here.

(i) Hakko-eyse-*tul* wass-ni-*tul*?
school-from-PL came-Q-PL
'Did they come from school?'

[18] *Man* can further attach to the CP (*ilk-e-tul man*), suggesting (remnant) CP-extraction to Focus [ilk-e-tul] man [~~ilk-e-tul~~] V.

(i) Ilk-e-*tul*-man po-ass-ta-*tul*.
read-e-PL-only try-PAST-DECL-PL
'They tried only reading it.'

As an anonymous reviewer points out, the order *ilk-e man-tul* is also acceptable, though generally less preferred. This might suggest (a) the presence of an additional Agr position just below *man* and (b) CP-recursion, with VP-*e* moving through $Agr_S$ and triggering plural agreement under pied-piping.

(ii) $[_{FocP}$ VP-e [man $[_{Agr_sP}$ ~~VP-e~~ $[_{Agr_s}$ tul . . . $[_{VP+}[_{CP}$ ~~VP-e~~] $[[_{VP}$ po [ . . . ]]]]]]]
try

This analysis predicts that *man* should have scope over *an* (negation) in this particular linear string, though not necessarily in the other order. (These predictions can only be tested with speakers who allow *man* to be merged within the infinitival (see footnote 11); judgments are very difficult to make, though they tend to go in the right direction.)

c. Ilk-ci-*tul* anh-ass-ta-*tul*.
read-ci-PL NEG.V-PAST-DECL-PL
'They didn't read it.'
d. Ilk-usi-ess-eya-*tul* hay-ss-ta.
read-HON-PAST-eya-PL do-PAST-DECL
'They(hon.) had to read it.'

*Tul* may not follow any of the mood/force markers, however, if the latter are embedded under the general subordinator *ko*, which Sells (p. 297) describes as ''basically a marker of someone's words or thoughts.''

(50) John-i [chinkwu-tul-i tten-ass-ta-(*tul)-ko-(*tul)] malha-ess-ta.
John-NOM friend-PL-NOM leave-PAST-DECL-(*PL)-ko-(*PL) say-PAST-DECL
'John said that his friends left.'
(Park and Sohn 1993:201)

*Tul* may follow the subordinator *ko*, however, if *ko* itself can be said to have a plural subject.[19]

(51) Chinkwu-tul-i [John-i tten-ass-ta-ko-*tul*] malha-ess-ta-tul.
friend-PL-NOM John-NOM leave-PAST-DECL-ko-PL say-PAST-DECL-PL
'His friends said that John left.'

Thus, plural *tul* may appear following C heads, but nowhere between Mood/Force and the verb.[20]

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| (52) | ilk- | (*tul) | usi- | (*tul) | ess- | (*tul) | ta- | (*tul) | ko |
| | V | | $Agr_{Hon}$ | | T | | Mood/ Force | | ''C'' |

*5.3.2* Tul *as Stranded* $Agr_S$ Plural agreement occurs in a different position than honorific agreement. It is neither in complementary distribution with it nor fused with it, and they can cooccur (49d). Plural agreement follows C, which makes it look very similar to the complementizer agreement found in the West Germanic SOV languages (modulo the linear position of the TP). Like complementizer agreement, plural agreement is optional. Its linear position suggests that it spells out a much higher head than honorific agreement—say, a very high Agr projection just below the C region ($C > Agr_S$) or just above C ($Agr_S > C$). If plural spells out high $Agr_S$, as in (53a), this order can only be derived by obligatorily stranding $Agr_S$. Since TP precedes C, it is natural to think of the extracted XP that contains the agreement-triggering category as TP, and to think that agreement is triggered under pied-piping.[21]

[19] Park and Sohn (1993) further show that *tul* cannot occur in relative clauses or in noun-complement structures. I leave these out of consideration for reasons of space.

[20] The contrast between (49) and (52) is quite problematic for a templatic view of morphology. If *-tul* can attach to $C_1$ (for example), and if $C_1$ occurs in slot 1, why then can it not attach to other elements in slot 1?

[21] Turkish data presented by Kural (1994) initially inspired me to pursue this type of analysis. Subject agreement in Turkish follows what Kural analyzes as a complementizer; see (i) on page 626.

(53) a. $C > Agr_S >$
b. $[TP_i\ [C\ [\sout{TP}_{\langle +pl \rangle}\ [Agr_{S\langle +pl \rangle} \ldots\ ]]]]$

This stranding derivation accounts for the linear position of plural agreement: it must follow C, and cannot occur anywhere in the verbal complex between V and C, because $Agr_S$ is merged higher than T and obligatorily stranded by TP-movement.

Alternatively, Agr could be merged higher than C, as Shlonsky (1994) proposes for complementizer agreement in the West Germanic SOV languages. If so, the linear order would mirror the hierarchical order ($Agr_{Pl} > C > T$). This hypothesis is adopted by Park and Sohn (1993), on the grounds that it explains why *tul* can only appear in root contexts. Unfortunately, this generalization appears to be incorrect; plural agreement *does* occur in nonroot contexts, though not in all nonroot contexts. Clausal complements allow for optional plural agreement when they contain a plural subject with $C_1$, $C_2$, or $C_3$ endings (49), even when they form a verbal complex. Embedding these predicates under a verb like *malha* 'say' does not affect the plural marking on the embedded C; instead, it only affects *tul*'s ability to appear before the subordinator *ko* (52), showing that this must be related to some property of *ko* (section 5.3.3).

(54) John-i ilk-ko-(*tul*) siph-keyss-ta-(*tul)-ko malha-ess-ta.
John-NOM read-ko-PL want-PAST-DECL-(*PL)-ko say-PAST-DECL
'John said they wanted to read.'

The underlined *tul* is licensed by a plural DP internal to the embedded complement—that is, PRO, the external argument of *ilk* 'read'. Finally, *tul* may appear in embedded contexts, as long as the subordinator *ko* is absent.[22]

(55) Na-nun kutul-i tolawa-ss-nunci-tul-(ul) mul-ess-ta.
I-nun they-NOM return-PAST-NMLZ-PL-(ACC) ask-PAST-DECL
'I asked if they have returned.'

I will assume that *tul* spells out $Agr_S$ ($C > Agr$),[23] as this seems to be a more economical analysis than one which assumes that the quite diverse C-like elements can be selected by subject agreement

(i) Ahmet benim uyu-du-ğ-um-u samyor.
Ahmet my sleep-past-COMP-1SG-ACC think
'Ahmet thinks I am sleeping.'

Having shown that in certain Turkic languages, a postnominal agreement morpheme agrees with the subject of a prenominal relative, Kornfilt (2002) analyzes the relation in terms of $Agr_S$ stranding.

[22] The fact that *tul* can be followed by Case is expected, as the entire CP can move on to Spec,Case.

[23] Examples (54)–(55) show that complements of restructuring verbs can also contain a high $Agr_S$, as well as a C, in accordance with Koopman and Szabolcsi's (2000) idea that complements of restructuring predicates are always dominated by full CPs, which are made to look small when part of the CP, which is selected by the restructuring predicate, extracts to form a complex predicate, forcing the rest of the clause to raise into the higher clause.

and that TP-extraction is forced.[24] If this is correct, the linear order represents another case where two heads occur in the merged-head-initial order, and where agreement is triggered under pied-piping.[25]

*5.3.3* Ko-*Subordination* Why can *tul* not precede the subordinator *ko*? A clausal complement with a plural subject cannot trigger plural agreement, either after the question particle or following the subordinator *ko* (see (51)) unless *ko* can be said to have a PRO controlled by the plural DP of a verb of thinking or speech.

(56) John-i [chinkwu-tul-i tten-ass-nya-(*tul)-ko-(*tul)] mwul-ess-ta.
John-NOM friend-PL-NOM leave-PAST-Q-(*PL)-ko-(*PL) ask-PAST-DECL
'John asked if his friends left.'

(57) Chinkwu-tul-i [John-i tten-ass-ta-ko-tul] malha-ess-ta-tul.
friend-PL-NOM John-NOM leave-PAST-DECL-ko-PL say-PAST-DECL-PL
'His friends said that John left.'

In an article on logophoricity, Koopman and Sportiche (1989) analyze certain types of complementizers (*say*-type complementizers) as Vs projecting a PRO subject, dominated by a CP node, and taking a CP complement. This proposal directly captures the distribution of plural agreement following *ko*, as the following derivation (which abstracts away from leftward TP-movements) illustrates:

(58) $C_1 > Agr_{S_1} > T > DP_{Pl}$ malha $> C_2 > Agr_{S_2} > T > PRO_{Pl} >$ ko $C_3 > Agr_{S_3} > T > DP_{Pl}$

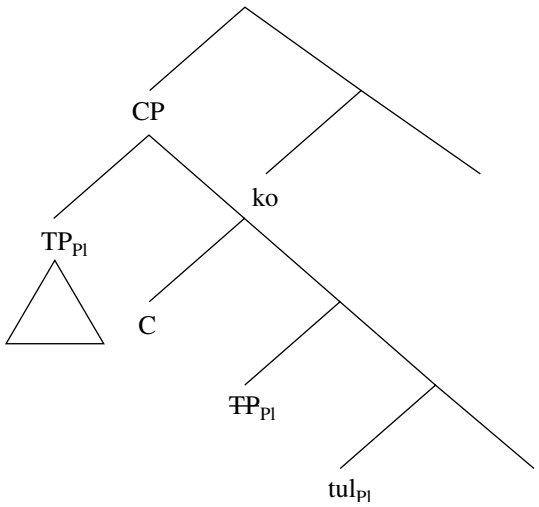
A plural subject in $C_1$ will yield plural agreement following $C_1$; a plural subject in $C_2$ will yield plural agreement following *ko*. A plural subject in $C_3$ should be able to yield plural agreement following $C_3$, but cannot do so if $C_3$ is selected by *ko*. In (56), PRO is singular, since its controller is singular; *ko* therefore cannot be followed by *tul*. In (57), PRO is plural, since its controller is plural, whence *ko-tul*. Korean thus presents strong evidence for the syntactic presence of a PRO introduced by particular types of complementizers.

The question remains, what rules out **C-tul-ko*? The derivation underlying this order would result in the structure given in (59).

[24] Possibly related to a *that*-trace effect. Alternatively, it may be related to Kayne's (2003b:24–25) proposal that a complement can never move to the Spec of the head that selects it. This implies all derivations should conform to [H [$_{XP}$ X [$_{YP}$ Y . . . ]]], with YP moving to Spec,HP, possibly transiting through Spec,XP (which would require the presence of another intermediate category ZP between X and YP). Some pied-piping derivations in this article violate this constraint, but this may be an artifact of the presentation. It is important to note that the more fully specified derivations in Koopman and Szabolcsi 2000 obey this constraint.

[25] It is of course tempting to extend the treatment of *tul* as stranded $Agr_S$ to other cases of complementizer agreement. It seems that only the SOV Germanic languages have complementizer agreement, and that complementizer agreement is only possible in clauses that have an OV order. This suggests that TP-movement to C with concomitant Agr stranding underlies $Agr_S$ stranding, with additional movement of the C to a higher position: embedded verb-second is incompatible with complementizer agreement (see Shlonsky 1994, Kayne 1994:56, Zwart 1997, 2001, Bennis and Haegeman 1984, Bayer 1984, and in particular Carstens 2003).

(59)




This configuration, which contains overt phonological material on a right branch lower than the head C, is well known for causing ungrammaticality (**a proud of John mother*). It is likely that such structures are filtered out by complexity filters (see Koopman 2002 for discussion). Making merger of $Agr_{S.Pl}$ optional, a choice that is always available in Korean, will yield convergence, since it removes the phonological problem of having overt material dominated by the head on a right branch.

## 6 On the Interaction between Scope and Word Structure

In this section, I further examine the interaction between scope and word structure. If word structure is derived in the syntax, and scope is determined by the merger of scope-determining heads, word structure should interact with available scope possibilities as a consequence of the syntactic derivation that underlies the linear order.

Lee (2004, 2005) makes exactly this point. Lee shows that an accusative object that precedes a universal subject cannot take scope over a subject QP (60), but a preceding PP can take scope either over or under the quantified subject (61).

(60) John man-ul motun-salam-i salangha-ta.
John FOCUS-ACC every-person-NOM love-DECL
'Everyone loves John (and no one else).' (every > only, *only > every)

(61) John hako-man motun-salam-i akswuhay-ss-ta.
John with-only every-person-NOM shake.hands-PAST-DECL
'Everyone shook hands with only John.'/'John is the only one with whom everyone shook hands.' (every > only, only > every)

Lee argues that word structure accounts for these scope interactions. She proposes that *man* is

an agreement morpheme that triggers movement of the focus-marked constituent to a silent Focus head ONLY, where semantic interpretation is determined. The silent Focus head can be merged at several points in the hierarchy. If it is merged low, the universal > focus reading results; if it is merged higher than the universal, in the left periphery, the reading is focus > universal. *DP P-man-Acc* cannot take scope over universal subjects because this linear order signals that the silent Focus head must be merged below Acc; hence, universal > focus is the only available reading. Lee appeals to the Mirror Principle (''Check inner affixes before outer affixes'') to force the low position of the silent Focus head with accusative Case. A PP as in (61) can take scope either above or below universals, because the linear order is consistent with both high and low merger of ONLY. Lee thus presents an extremely strong case for the syntactic relevance of affix ordering.

As far as I can tell, these scope facts are accounted for very similarly by the proposal made here, where *man* is merged directly as a Focus head, higher than Acc, provided of course that we accept head-complement order. The linear string *man-Acc* shows that *man* must be merged immediately above Acc, in conjunction with the universal hierarchy Focus > Case, since this is the only way to form this particular surface constituent. Hence, *DP-man-Acc* will take scope under the universal (and preposing to the left of the universal must be achieved by scrambling, which does not affect scope). There is simply no other derivation that Korean speakers can converge on given the primary data (*DP-man-ul*) than the one in (62).

(62) $[_{\text{FocP}}$ DP [man $[_{\text{AccP}}$ ~~DP~~ [ul [ . . . ]]]]]

Consider, for example, what outputs would result from merging *man* higher than the subject QP (63a). This derivation would necessarily yield the reading focus > universal (63b–c).

(63) *Merge* man *(focus)*

a. $[_{\text{FocP}}$ [*man* $[_{\text{NomP}}[_{\text{QP}}$ motun DP] [Nom . . . $[_{\text{AccP}}$ *DP*$_{[+foc]}$ [ul . . . ]]]]]]
every

*DP*$_{[+foc]}$ *pied-pipes accusative* ul *(assuming a remnant can be formed)*

b. *$[_{\text{FocP}}$ [DP$_{[+\text{foc}]}$ [*ul* . . . ]] [*man* $[_{\text{NomP}}[_{\text{QP}}$ motun DP] [Nom [ . . . ]]]]]

*Extract DP*$_{[+foc]}$ *and strand accusative*

c. *$[_{\text{FocP}}$ *DP*$_{[+foc]}$ [*man* $[_{\text{NomP}}[_{\text{QP}}$ motun DP] [Nom . . . $[_{\text{AccP}}$[~~DP$_{[+\text{foc}]}$~~] [*ul* . . . ]]]]]]

Neither string, (63b) or (63c), corresponds to the input strings that native speakers are asked to judge in (61). How can these strings be ruled out? An accusative can scramble higher than a universal, suggesting that the ungrammaticality of (63b) is not due to a basic syntactic problem (i.e., *DP-Acc* can move around). This derivation yields an overt Case marker preceding the focus element, and this is simply never observed in Korean, either for focus or for topic. These heads simply cannot contain a CaseP in their Spec, which suggests that a language-specific filter is responsible for the judgment on (63b). (63c) displays a stranded accusative *-ul*. It is reasonable to assume that stranding violates a phonological condition on *ul*: it cannot be a sole remnant in a local domain because it needs to lean on overt phonological material in that domain. Interestingly,

not pronouncing *ul* is a way to remove the phonological restriction, and as expected, both high scope (= high merger of *man*) and low scope (= low merger of *man*) are possible in this case.[26]

(64) John-*man*$_i$ *motun*-salam-i $e_i$ salanghanta.
John-only every-person-NOM love
'Only John, everyone loves *e*.'
(Lee 2005:(26))
a. Everyone loves John and no one else. (every > only)
b. John is the only one whom everyone loves. (only > every)

Finally, as in Lee's account, Case markers must be part of the ''narrow'' syntax, since they interact with the derivations in specific ways, forcing decisions about the location of scope-bearing heads and hence making very specific predictions about scope interactions.

## 7 Conclusion

In this article, I have argued in favor of a syntactic view of Korean (and Japanese) morphology, which derives the surface constituency of ''words'' from an underlying specifier-head-complement order by means of local phrasal movements, providing strong support for Kayne's (1994) antisymmetry proposals. My primary concern has been to show that syntactic analyses can be motivated, contra Sells 1995, and that the vocabulary necessary to describe word structure is the usual syntactic vocabulary: namely, underlying universal hierarchies, with hierarchical merger determining scope; local movement from Spec, stranding heads; pied-piping; and generalized specifier-head agreement under pied-piping. Inflected words in Japanese and Korean are derived by phrasal movement, many of them, though not all, mirroring the syntactic hierarchy of merger. Underlying head-complement order surfaces in particular instances, with heads to the left of their complements, thus directly supporting antisymmetry. Phrasal movement straightforwardly accounts for the fact that the affixes behave like phrasal affixes. Thus, there are no fundamental differences between the syntax of Korean (and Japanese) ''words'' and the phrasal syntax of these languages (Koopman and Szabolcsi 2000, Julien 2002). This view is compatible with the basic ideas of Distributed Morphology (Halle and Marantz 1993): syntax is responsible for word structure and not the lexicon. Phonological material is selected on the basis of syntactic structures, including local specifier-head configurations; that is, the input of V-T in Korean and Japanese is not a single head, but a small syntactic configuration. I have assumed that syntactic structure directly feeds the phonology/linearization, and that at least the postsyntactic mechanisms of structure building (insertion) and linear reordering (merger or movement) are disallowed.[27] The view developed here is incompatible with the hypothesis that agreement nodes and Case are outside the ''narrow syntax.'' Indeed, section 6 presents Lee's (2004, 2005) argument that Case at least

[26] This account should extend to other cases where topic and focus markers are incompatible (such as Japanese **ga-wa*, **wa-ga*; see Kayne 1994:143).

[27] This leaves open the possibility that merger that does not yield a different linear order is allowed. For general conceptual arguments against the postsyntactic mechanisms of Distributed Morphology, see Williams 2003.

must be part of the narrow syntax, since word structure interacts with where scopal heads can be merged. The way the derivations intertwine, and combine to yield morphological structures, surface constituencies, and semantic structures, leads to doubts about postsyntactic movements. However, certain strings that the syntactic derivations generate are filtered out by ''phonological'' properties of individual lexical items (complexity filters) that operate when phonological material is inserted. These seem to be appropriately located at the syntax-phonology interface, as phonological insertion seems sensitive to the syntactic hierarchy. Sometimes, not inserting phonological material can salvage particular derivations. Finally, the important theoretical question of what drives the movements needs further exploration (see Kayne 2003b, Koopman and Szabolcsi (2000). To a large extent, movement is driven by Sportiche's (1999) Principle of Locality of Selection and the intertwined nature of the derivations. Movement is ubiquitous, simply because in most cases movement to a local Spec is the only way to satisfy selectional requirements.

Overall then, this article yields a quite different understanding of Korean and Japanese syntax from that proposed by Sells (1995), one in which all Specs need to be filled in the course of the derivation (Kayne 1998 and later work, Koopman 2000). Within this view, however, it is not the case that there will be more movements in Korean and Japanese than in English. If indeed V selects for NP, and not for DP, all languages will have to resort to movement to satisfy the Principle of Locality of Selection. Future research thus shifts to determining the laws that govern what can merge with what, and how a simple computational system can yield the network of multiple selectional relations.

## References

Baker, Mark. 1985. The Mirror Principle and morphosyntactic explanation. *Linguistic Inquiry* 16:373–415.

Bayer, Josef. 1984. COMP in Bavarian syntax. *The Linguistic Review* 3:209–274.

Belletti, Adriana. 2003. Aspects of the low IP area. In *The structure of IP and CP. The cartography of syntactic structures, vol. 2*, ed. by Luigi Rizzi, 16–51. Oxford: Oxford University Press.

Bennis, Hans, and Liliane Haegeman. 1984. On the status of agreement and relative clauses in West Flemish. In *Sentential complementation*, ed. by Wim de Geest and Yvan Putseys, 33–55. Dordrecht: Foris.

Carstens, Vicki. 2003. Rethinking complementizer agreement: Agree with a Case-checked goal. *Linguistic Inquiry* 34:393–413.

Cecchetto, Carlo. 1999. A comparative analysis of left and right dislocation in Romance. *Studia Linguistica* 53:40–67.

Cho, Young-mee Yu, and Peter Sells. 1995. A lexical account of inflectional suffixes in Korean. *Journal of East Asian Linguistics* 4:119–174.

Cinque, Guglielmo. 1999. *Adverbs and functional projections: A cross-linguistic perspective*. New York: Oxford University Press.

Cinque, Guglielmo. 2002. Complement and adverbial PPs: Implications for clause structure. Abstract, 25th GLOW Colloquium. Available at www.meertens.knaw.nl/glow2002/programme.html.

Fukui, Naoki, and Hiromu Sakai. 2003. The visibility guideline for functional categories: Verb raising in Japanese and related issues. *Lingua* 113:321–375.

Grimshaw, Jane. 1991. Extended projection. Ms., Brandeis University, Waltham, Mass.

Hagstrom, Paul. 2002. Implications of child errors for the syntax of negation in Korean. *Journal of East Asian Linguistics* 11:211–242.

Halle, Morris, and Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In *The view*

*from Building 20: Essays in linguistics in honor of Sylvain Bromberger*, ed. by Kenneth Hale and Samuel Jay Keyser, 111–176. Cambridge, Mass.: MIT Press.
Hallman, Peter. 1997. Reiterative syntax. In *Clitics, pronouns, and movement*, ed. by James R. Black and Virginia Motapanyane, 87–131. Amsterdam: John Benjamins.
Hoji, Hajime. 1998. Null object and sloppy identity in Japanese. *Linguistic Inquiry* 29:127–152.
Hong, Ki-Sun. 1991. Argument structure and Case marking in Korean. Doctoral dissertation, Stanford University, Stanford, Calif.
Julien, Marit. 2002. *Syntactic heads and word formation*. New York: Oxford University Press.
Kayne, Richard S. 1994. *The antisymmetry of syntax*. Cambridge, Mass.: MIT Press.
Kayne, Richard S. 1998. Overt vs. covert movement. *Syntax* 1:128–191.
Kayne, Richard S. 2000. *Parameters and universals*. New York: Oxford University Press.
Kayne, Richard S. 2003a. Antisymmetry and Japanese. *English Linguistics* 20:1–40.
Kayne, Richard S. 2003b. Some notes on comparative syntax, with special reference to English and French. Ms., New York University.
Koizumi, Masatoshi. 1995. Phrase structure in minimalist syntax. Doctoral dissertation, MIT, Cambridge, Mass.
Koizumi, Masatoshi. 2000. String vacuous overt verb raising. *Journal of East Asian Linguistics* 9:227–285.
Koopman, Hilda. 1996. The spec-head configuration. In *Syntax at sunset*, ed. by Felicia Lee and Edward Garret, 37–65. Los Angeles: UCLA, Department of Linguistics.
Koopman, Hilda. 2000. *The syntax of specifiers and heads*. London: Routledge.
Koopman, Hilda. 2002. Derivations and complexity filters. In *Dimensions of movement: From features to remnants*, ed. by Artemis Alexiadou, Elena Anagnostopoulou, Sjef Barbiers, and Hans-Martin Gärtner, 155–188. Amsterdam: John Benjamins.
Koopman, Hilda. 2003. Inside the noun in Maasai. In *Syntax at sunset 3: Head movement and syntactic theory*, ed. by Anoop Mahajan, 77–116. UCLA Working Papers in Linguistics 10. Los Angeles: UCLA, Department of Linguistics.
Koopman, Hilda. To appear. Topics in imperatives. In *Imperatives in generative grammar*, ed. by Wim van der Wurff. Amsterdam: John Benjamins.
Koopman, Hilda, and Dominique Sportiche. 1989. Pronouns, logical variables, and logophoricity in Abe. *Linguistic Inquiry* 20:555–589.
Koopman, Hilda, and Anna Szabolcsi. 2000. *Verbal complexes*. Cambridge, Mass.: MIT Press.
Kornfilt, Jaklin. 2002. Agreement and its placement in Turkic non-subject relative clauses. Ms., Syracuse University, Syracuse, N.Y.
Kural, Murat. 1994. Infl and Comp in Turkish subordinate clauses. In *Proceedings of the Twelfth West Coast Conference on Formal Linguistics*, ed. by Eric Duncan, Donka Farkas, and Philip Spaelti, 339–354. Stanford, Calif.: CSLI Publications.
Kuroda, S.-Y. 2003. Complex predicates and predicate raising. *Lingua* 113:447–480.
Lee, Youngjoo. 2004. The syntax and semantics of focus particles. Doctoral dissertation, MIT, Cambridge, Mass.
Lee, Youngjoo. 2005. Exhaustivity as agreement: The case of Korean *man* 'only'. *Natural Language Semantics* 13:169–200.
Marantz, Alec. 1988. Clitics, morphological merger, and the mapping to phonological structure. In *Theoretical morphology: Approaches in modern linguistics*, ed. by Michael Hammond and Michael Noonan, 253–270. San Diego, Calif.: Academic Press.
McCloskey, James. 1991. Clause structure, ellipsis and proper government in Irish. *Lingua* 85:259–302.
Müller, Gereon. 2000. Shape conservation and remnant movement. In *NELS 30*, ed. by Masako Hirotani, Andries Coetzee, Nancy Hall, and Ji-yung Kim, 525–539. Amherst: University of Massachusetts, GLSA.

Otani, Kazuyo, and John Whitman. 1991. V-raising and VP-ellipsis. *Linguistic Inquiry* 22:345–358.
Park, Myung-Kwan, and Keun-Won Sohn. 1993. A minimalist approach to plural marker licensing in Korean. In *Papers from the Fifth Student Conference in Linguistics (SCIL-V)*, ed. by Vern M. Lindblad and Michael Gamon, 193–209. MIT Working Papers in Linguistics 20. Cambridge, Mass.: MIT, Department of Linguistics and Philosophy, MITWPL.
Poletto, Cecilia, and Jean-Yves Pollock. 2002. On the left periphery of some Romance *wh*-questions. In *The structure of IP and CP. The cartography of syntactic structures, vol. 1*, ed. by Guglielmo Cinque, 251–296. New York: Oxford University Press.
Rizzi, Luigi. 1997. On the fine structure of the left periphery. In *Elements of grammar*, ed. by Liliane Haegeman, 281–337. Dordrecht: Kluwer. Also in Luigi Rizzi. *Comparative syntax and language acquisition*, 241–296. London: Routledge (2000).
Rizzi, Luigi. 2000. *Comparative syntax and language acquisition*. London: Routledge.
Sells, Peter. 1995. Korean and Japanese morphology from a lexical perspective. *Linguistic Inquiry* 26: 277–325.
Sells, Peter. 1998a. Structural relationships within complex predicates. In *Selected papers from the 11th meeting of the International Circle of Korean Linguistics*, ed. by Byung-Soo Park and James Yoon, 115–147. Seoul: International Circle of Korean Linguistics.
Sells, Peter. 1998b. Three aspects of negation. *Journal of Linguistic Studies* 6:1–15.
Sells, Peter, and Masayo Iida. 1991. Subject and object honorification in Japanese. In *Proceedings of the Seventeenth Annual Meeting of the Berkeley Linguistics Society*, ed. by Laurel A. Sutton and Christopher Johnson, with Ruth Shields, 312–323. Berkeley: University of California, Berkeley Linguistics Society.
Shlonsky, Ur. 1994. Agreement in Comp. *The Linguistic Review* 11:351–375.
Sportiche, Dominique. 1994. Adjuncts and adjunctions. Available at http://www.linguistics.ucla.edu/people/sportich/papers/lsrl94.pdf.
Sportiche, Dominique. 1998. *Atoms and partitions of clause structure*. London: Routledge.
Sportiche, Dominique. 1999. Reconstruction, constituency, and morphology. Abstract, GLOW Colloquium, Berlin.
Sportiche, Dominique. 2001. Structural bonds and strict locality. Tools in Linguistic Theory #1. Utrecht University.
Webelhuth, Gert. 1992. *Principles and parameters of syntactic saturation*. New York: Oxford University Press.
Whitman, John. 2003. Preverbal elements in Korean and Japanese. In *Handbook of comparative syntax*, ed. by Guglielmo Cinque and Richard S. Kayne, 880–902. New York: Oxford University Press.
Williams, Edwin. 2003. *Representation theory*. Cambridge, Mass.: MIT Press.
Yim, Changguk. To appear. Subject agreement in Korean: Move F, Attract F, or Agree? In *Proceedings of* ''*The role of agreement*.'' Austin: University of Texas.
Yoon, James H. 1994. Korean verbal inflection and checking theory. In *The morphology-syntax connection*, ed. by Heidi Harley and Colin Phillips, 251–270. MIT Working Papers in Linguistics 22. Cambridge, Mass.: MIT, Department of Linguistics and Philosophy, MITWPL.
Zwart, C. Jan-Wouter. 1997. *Morphosyntax of verb movement: A minimalist approach to the syntax of Dutch*. Dordrecht: Kluwer.
Zwart, C. Jan-Wouter. 2001. Syntactic and phonological verb movement. *Syntax* 4:34–62.

*Department of Linguistics*
*UCLA*
*3125 Campbell Hall*
*Los Angeles, California 90095-1543*

*koopman@ucla.edu*