Korean (and Japanese) morphology from a syntactic perspective
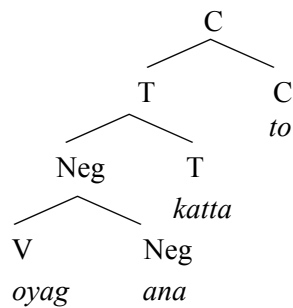
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1. Introduction.

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)[*]:
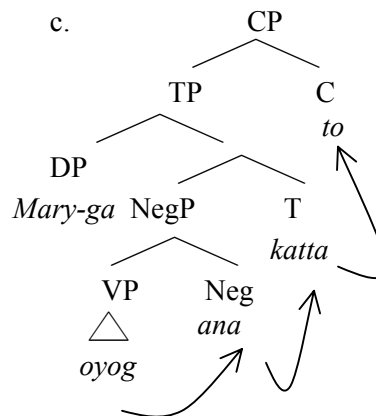
(1)   a. Mary -ga   oyog- ana- katta- to   Japanese

        Mary-NOM   swim-NEG- PAST-C

b.

```
                    C
              ┌─────┴─────┐
              T           C
         ┌────┴────┐      to
        Neg        T
     ┌───┴───┐   katta
     V       Neg
   oyag      ana
```

c.

```
                    CP
              ┌─────┴─────┐
             TP           C
         ┌────┴────┐      to
        DP      ┌──┴──┐
     Mary-ga  NegP    T
           ┌───┴───┐  katta
          VP       Neg
          △        ana
         oyog
```

Sells establishes that the complex word in (1b) does not contain any pronounced arguments of V, and 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 as 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 head-like behavior in that it determines the categorical feature of the complex word. Sells concludes that the properties of these words should not receive a syntactic treatment. and outlines a lexicalist account which 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' account remains sketchy, I will not address its details here.

In this reply, I will concentrate on Sells' arguments against the syntactic view that words are built in the syntax, and develop a syntactic account which 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 relevant syntactic assumptions in which this reply is couched, and lays out what we should expect to find. Section 4 turns to the particular cases Sells discusses, motivates syntactic analyses for them, going beyond Sells discussions. Section 5 extends the analysis to other problems of Korean morphosyntax, including the relative ordering of the focus particle *man* 'only' and the structural case markers, and two types of subject agreement in Korean, honorific agreement and plural agreement. Section 6 turns to a discussion of the interaction between word structure and scope (Lee 2004) 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 its selects for, as Sells 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, Hagström 2003), 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

Cheslwu-NOM drive   not   do-DECL

'Chelsu didn't drive'

Korean and Japanese are agglutinative languages, with 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 for the

past tense affix in the example below.[1]

(4)   John-i pap-ul   cis-ko   kwuk-ul   kkulhi-ess-ta. (Yoon 1994)

J-NOM rice-ACC cook-CONJ soup-ACC boil-PAST-DECL

'John cooked the rice and made the soup.'

This leads to the straightforward conclusion that these inflectional morphemes spell out the

corresponding syntactic head positions, in very similar ways as English *'s* does.

Since the verb and the inflectional morphemes form a phonological constituent, the question

arises if this surface phonological constituent is formed pre-spell out or not. Some linguists argue

the V remains within the VP in the syntax, and forms a constituent after 'rebracketing' or

Marantz's 'Merger' in the phonology (Yoon 1994, Fukui and Sakai 2003), others argue that the V

must raise out of the VP pre spell-out on the basis of ellipsis and coordination (Otani and

Whitman 1991, Koizumi 2000)[2]. Kayne (1994) suggests the V remains within the VP, but the VP

is attracted to the Spec of some head, yielding the head final property.

(5)   [$_{TP}$[..[V..] [$_{T'}$[T…..

This treatment is basically parallel to *'s* in English [[$_{DP}$John] ['$\underline{s}$ [brother], and 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: 141:fnt15), or only the verb and some

some VP material, which I will be tacidly assuming. These finer details of the derived structure are independent of the main point of this paper, and a subject for future research.

3. Expectations under the syntactic view.

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

3.1. Specifiers

Specifiers are to the left of heads, and attract phrases. Phrases in Spec can be attracted to higher Spec positions, as is the case with NP-movement, and successive cyclic wh-movement.

(6)   a. John$_i$ seems ~~John$_i$~~ to be ~~John$_i$~~ likely ~~John$_i$~~ to ~~John$_i$~~ become ~~John$_i$~~ an artist

       b. who$_i$ do you think ~~who$_i$~~ that Mary wrote an e-mail to ~~who$_i$~~
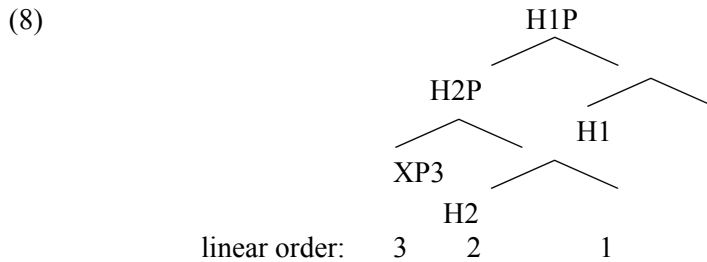
Given the phrasal movement view, we expect to find similar cases in morphology. Thus, with H1 merged higher than H2 (H1>H2) , and H2 and H1 attracting XP, we should find cases that result in the linear order XP H1 H2 by extraction of XP stranding H2, where XP H1 and H2 form a phonological "word".

(7)   H1P
           ╱   ╲
        XP   ╱   ╲
        ↑   H1   H2P
        │   ╱   ╲
        │   ~~XP~~   ╱ ╲
        │   H2
        └──────────────┘
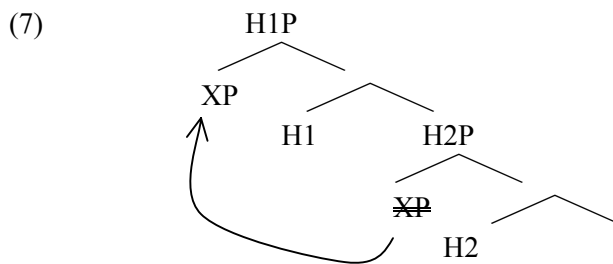
            linear order: XP H1 H2

Importantly, the linear order H1-H2 is the same as the hierarchical order: H1 is merged higher than H2, takes H2P as a righthand sister, and precedes H2 at spell-out. Notice that this linear does not "mirror" the syntactic hierarchy, since the surface inner affix is not hierarchically lower

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than the outer affix. In this sense, the example in (7) violates Baker's Mirror Principle (Baker 1985). As I will show, the configuration in (7) surfaces in some cases in Japanese and Korean, thus revealing the head initial merged structure, even though the morphology of Korean and Japanese in general strongly mirrors the syntactic hierarchy. Thus, H1>H2>XP is mirrored as XP]H2]H1). This order arises through pied-piping, sometimes also referred to as "roll-up" (XP raises to Spec of H2, and H2P raises to Spec H1).

(8)
```
                              H1P
                           ╱       ╲
                      H2P           ╱   ╲
                    ╱     ╲      H1
                 XP3      ╱  ╲
                      H2
      linear order:    3     2         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 Spec as well. I will refer to this as Spec selection: the EPP feature, whatever its status may be, is an instance of Spec selection. In addition, heads can have phonological properties, for example the phonological property that it needs to "lean" on a particular lexical category (the traditional bound morpheme property), or the property that it needs 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 types of movements of (7) above.

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3.3. Pied-piping and Spec head agreement.

Attracted elements in Spec positions 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

Koopman (1996) and Koopman and Szabolsci (2000) propose that 'percolation' results from cyclic applications of Spec head agreement[3]. Agreement copies[4] some feature from a Spec onto the head. 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 H1>H2>XP, with XP carrying the feature $<x>$, and XP moves to Spec, H2 and H2P raising to Spec H1. Cyclic application of spec head agreement and the theory of projection carries the feature $<x>$ up to H1P:

(10)   H1P$<x>$

              H2P$<x>$

                            H1$<x>$

        XP$<x>$

              H2 $<x>$
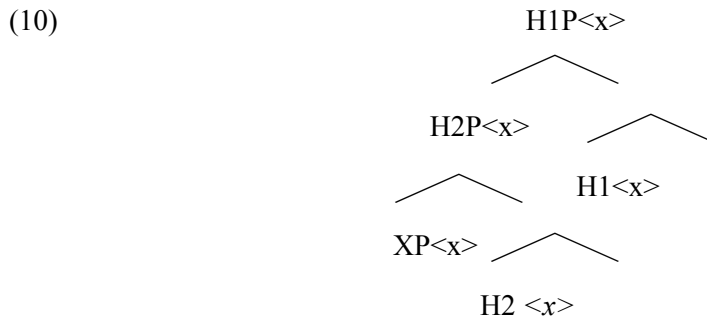
cyclic agreement for feature$< x>$ results in x being visible on H1P

Pied-piping and agreement will account for Sells' observation that the leftmost element of complex words displays certain type of head like 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: Sportiche

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 Spec head. Apparent violations of locality of selection 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 is not in a local configuration with its selector at spell-out. Local selection of course holds pre-movement, i.e. there is a stage in the derivation in which the selector and 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.

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 correct the standard view that V merges with DP cannot be maintained. Instead V must merge with NP first, in accordance with the Principle of Locality of Selection, and D attracts NP through movement, i.e. 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 view in (12) on the basis of patterns of reconstruction (Sportiche 1999)[5], the Principle of Locality of Selection provides the rationale for why that state of affairs must hold. This view converges with Kayne's proposals that many traditional constituents are in fact not underlying constituents, but are remnants within a larger (remnant) constituent formed by attraction and movement (Kayne 2000, 2003). Section 4 will show how the Principle of Locality of Selection accounts for Sells' cases of violations of locality of selection (section 4). It forces particular analyses, and makes further predictions, that can be tested empirically.

4. Korean and Japanese morphology: a syntactic view.

Sells presents two types of arguments against what he calls the syntactic view of morphology, i.e. the view that "morphological structures 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. Rightmost inflectional affixes in general do not yield violations of locality of selection, and therefore do not behave as heads are expected to behave. The second type of argument shows that the leftmost element must be relevant for selection in certain cases, and thus shows unexpected head-like 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, and illustrates this 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 in Sells):

(13)   Swuni-<u>hanthey </u>-kkaci-nun   <u>cwu</u>-ess-ta   (Sells 1995 (15): 285).

         Sooni- DAT   -even- FOC give-PAST-DECL

          'I gave it even to Sooni'

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 (Grimshaw 1991). Sells argues that this problem would not occur if the inflectional particles were simply non-heads. Sportiche's Principle of Locality of Selection provides a different answer for this problem: 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 at a later point in the derivation, and 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 arguments

DP and V/v have been merged (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 a

strike-trough. As the derivations show, head movement plays no role in these derivations

(14)   a.   [$_{VP}$swuni [cwu

                                                            Sooni   give

b. *merge P$_{hanthey}$, attract DP* (swuni)→

                                              [$_{PP}$swuni [hanthey [$_{VP}$~~swuni~~ [cwu

                                                  Sooni DAT   give

c. *merge F move VP* →

                                          [$_{FP}$[$_{VP}$cwu [F [$_{PP}$swuni [hanthey [~~cwu~~

                                              give   S   DAT

d. *merge kkaci; move remnant PP*→

                    [[$_{PP}$swuni hanthey [kkaci [$_{FP}$[$_{VP}$cwu [F [$_{PP}$~~swuni [hanthey~~

                        S   DAT   kkaci   give

e. *merge T move remnant VP* →

                    [$_{FP}$ [$_{VP}$cwu [F[$_T$iss [[$_{PP}$ swuni hanthey [kkaci [$_{VP}$~~cwu~~

                        give   PAST   S   DAT   kkacai

f. *merge nun move PP*→

            [[$_{PP}$ swuni hanthey [kkaci] [nun [$_{TP}$ [[$_{FP}$ [$_{VP}$cwu F [iss [[$_{PP}$ ~~swuni hanthey [kkaci~~

                S   DAT   kkaci   TOP   give PAST

g. merge *ta* move TP, TP pied-pipes TopP (*nunP)*: (possibly more steps) →

[[PP swuni hanthey [kkaci] [nun [TP [FP[VPcwu [F[iss [ta [[PP ~~swuni hanthey [kkaci] [un~~ [TP [VPcwu[iss

     S   *DAT*   *kkaci* *TOP*   *give PAST DECL*

The movements in (14b), (14d) (14e), (14f), and (14g) are forced by the Principle of Locality of Selection, with selection satisfied after movement. The step in (14c) resembles Kayne's (1998, 2000) VP-movement to WP creates the remnant PP necessary for (14e)[6] . This movement seems to be empirically well-motivated (see Kayne 1998, 2000), and Cinque (1999, 2002), the question of the motivation for this movement remains to be answered.[7]

4.2. Complementizer selection.

Sells presents complementizer selection as an example where local selection in word structure is interrupted. Korean has different types of non-tensed verb endings, and their distribution is determined by selecting verbs. Sells, following Cho and Sells 1995, glosses these as Comp1, Comp2, Comp3, etc. I will gloss them by their spell-out forms, and return to their distribution in 4.5. I follow Sells and analyze *ahn* as a negative auxiliary (Sells:305) selecting for a clausal constituent headed by -ci (see also footnote10).

(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 non-local selection:

(16)   ilk- **e**- man-un **po**-ass- ta   (Sells, 19b)

        read-e-only-FOC try-PAST-DECL

        'tried only reading'

The 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, i.e. local selection of the C by the

verb *try* must precede merger of *man* and movement to the specifier of *man,* which in turn

precedes (optional) merger of *nun* and movement to Spec, *nun*. This leads to the following

entirely reasonable hierarchy of merger. *Read* is focused and must moves to Spec *man* (only) .

(17)   hierarchy: nun> man > try> -e> read.

In order to make the derivations precise, and examine further predications, we must bring in

complex verb formation: *try* obligatorily forms a complex verbs with VP-e (Sells 1998). This can

be shown by short negation *an*, which precedes the entire verbal complex in neutral clauses, and

scopes over *try* (hence Neg(an) >try> e> ilk)[8].

(18)   **an** ilk-e   po-ass-ta

        not read-e try-PAST-DECL
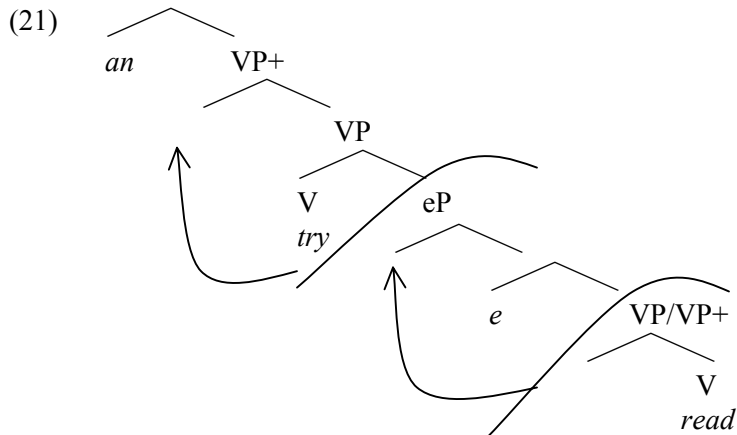
        'I didn't try to read '

Verbal complexes can become quite big, and resemble Hungarian or West Germanic verbal

complexes, with 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
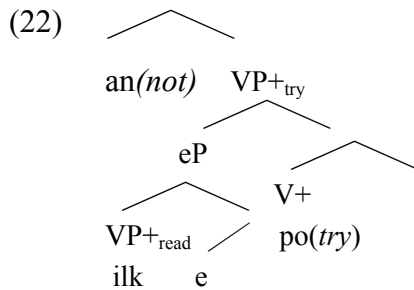
        'didn't want to try to read'

Koopman and Szabolcsi (2000) propose that there is a (universal) set of predicates which must

form a complex predicate. They propose that complex verb formation is universally achieved in a

particular configuration: i.e. complex verb formators must enter into a local Spec 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 (19), and (18), with VP+ further embedded

in inflectional layers

(20)   a. $[_{Neg}(an) [_{V1P+}[_{V2P+} [[_{V3P+}$ V_{read}]- e] $[V_2+ [V_{try}]]$-ko] V1+ $[V_{want}$

        b. $[_{Neg}(an) [[_{VP}$ V_{read}]- e] V+ $[V_{try}$

The derivation for (18) is presented below[9]:

(21)

```
        an        VP+
                /    \
               VP
              /  \
             V    eP
            try  /  \
                e    VP/VP+
                      \
                       V
                      read
```
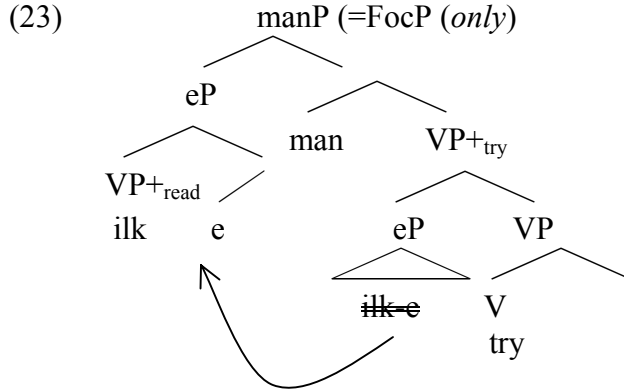
The phrasal affix –*e* Spec selects for VP+, hence forcing VP(+) movement to -*e*. *try* locally selects for –e when eP merges as its complement. *Try* attracts VP+, VP+ will pied-pipe –e to the position where a complex verb with 'try' is formed (-e cannot be stranded as it requires overt material in its Spec). This yields the following surface constituent:

(22)

```
        an(not)    VP+try
                  /      \
              eP          V+
             /  \        /
        VP+read  e    po(try)
          ilk
```

We can now return to Sells' observation that *man* ('only') can intervene between the –e constituent and the selecting verb (16). This follows from the independently established hierarchy *man (*Focus*)> VP+> try >-e>read,* complex verb formation, and obligatory phrasal movement of the focused constituent to *man.* As the reader can check all selectional relations are locally satisfied either before or after movement.

(23)

```
                    manP (=FocP (only))
                   /        \
              eP            /  \
            /    \        man   VP+try
      VP+read     \            /    \
       ilk    e              eP      VP
                            /  \      \
                         ilk-e   V
                                try
```

Thus, locality of selection forces a different surface constituent structure for *ilke po-ass-ta* and

ilke-man po-ass ta, with *ilk-e* higher in the derivation when it is followed by *man*.

4.3. Interactions between 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+ > try > -e>read   (ilk-e-man ilk-e po ilk-e(-ass-ta) (17)

         b.   an > vp+ > try>-e>read   (**an ilk-e po** ilk-e(-ass-ta)

First the relative order of merger between *man* and *an* needs to be determined. This can be

achieved by examining the relative scopal possibilities of *man* and *an*. As the following example

shows, *man* 'only' scopes over short negation *an* (Neg) in simple clausal structures, establishing

the hierarchy of merger unambiguously as Focus(man)>Negation (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 not the case that I did only driving and nothing else'   (*neg>only)

The focused predicate *ilk-e* must raise to Spec, *man*, and *man>an*. It should therefore

precede *an*, and scope over negation: (man >an>ilk-e (+focus)> po.)This prediction is

borne out[11]:

(26)   a.   *an ilk-e- man   po-ass-ta

13

not read-e only   try-PAST-DECL

     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>not

These data immediately fall out from the underlying hierarchy of merger, head complement structure, and phrasal movements. Complex verb formation is obligatory, and *only* attracts a focused constituent. Certain inflectional morphemes are allowed within verbal compounding, because locality of selection holds before the complex verb is formed. Other inflectional morphemes are never allowed within the verbal complex (*-man, -nun*) because these can *only* be merged at a later point in the derivation accordance with universal principles that guide the structural make-up 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' second type of argument is based on cases where the leftmost element shows head-like behavior, and is the element which an outside selector needs access to. Sells illustrates this with Japanese gerunds, and with Japanese speech level particles.

4.4.1. Japanese gerunds

Japanese gerunds can be adjectival or verbal:

(27)   a. tabe- te

              eat- GER

           b. tabe –nai-   de   (Verbal gerund)

              eat-   Neg.cop- GER

      c. tabe-naku-te   (Adjectival gerund)

        eat   Neg-GER

Only the verbal gerunds (27a, b) can be selected by a V like *oku* (*oita* past tense) 'to put/to prepare for some future eventuality' (Sells 1995: 21a)

(28)   ziroo-wa zenbu-no tabemono-o   tabe-nai-de   oit- ta   /*tabe-naku-te oita

   Ziroo-TOP all-GEN   food-   ACC   eat-neg.cop-GER'put'-PAST

        'Ziro made the provision of not eating all the food'

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, i.e. this is a case where selection is not satisfied at the point of merger, but after movement, through spec 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 form of the Formal level affix. This leads minimally to the following structures and derivations, with agreement indicated:

(29)   a. *Verbal gerund*

b. *Adjectival gerund*

teP$_{<+A>}$

Neg.cop$_{<+A>}$

te$_{<+A>}$

AP

naku$_{<+A>}$

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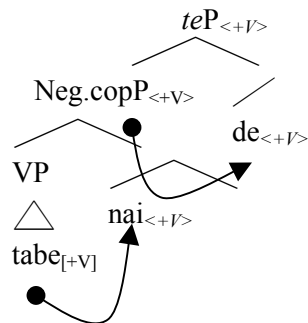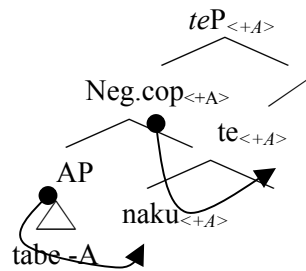
Cyclic application of Spec head agreement for the categorical feature and projection carry the categorical feature up to the maximal projection, thus allowing the verb to satisfy its selection of the gerund locally. Agreement in category creates the impression that the leftmost category determines the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

4.4.2. Speech level.

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 versus A).

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

(31)   a. tabe-*masi*-ta   V-mas-T

eat- FORMAL- PAST

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b. *tabe-ta-　mas

　　eat-　PAST-FORMAL

The dependency of the form of speech level on category (*desu* with AP, *mas* with VP), is

analyzable in two ways under the syntactic view: selection is satisfied under first merge, or

selection is satisfied after movement through Spec 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 Spec extraction, the mirror order

because of pied-piping ("roll-up"):

(33)　　T > formal> AP/VP

|			
a.		[AP [desu	*AP to Spec,Formal*
b.	[AP [katta	[AP [desu	*Spec- extraction*
a'		[VP [mas	*VP to Spec Formal*
b'	[VP mas(i) ta		*pied-piping*

(34)　　Formal> T>VP/AP

|			
a		[VP[ta..	*VP to Spec TP*
b	[VP [masi	[VP [ta..	*Spec-extraction*
a'		AP kat*ta*	AP to Spec T
b'	[AP katta] 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 Formal is

located at the root level, higher than T. If this is correct, it must be explained why VP must

extract from TP in (34a), but AP cannot do so. In Koopman and Szabolcsi 2000, and Koopman

2002, Spec extraction is forced by means of complexity filters, which are part of the entry of

individual lexical item, and which are sensitive to overt phonological material. These filters "summarize" the syntactic forms that lead to wellformed phonological forms, and 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 to be more deeply embedded than the following template:

(35)   overt material in **V/v** in Spec, mas cannot be more deeply embedded than:

```
            /\
     VP/vP    /\
           mas
      /\
        /\
      V/v
```
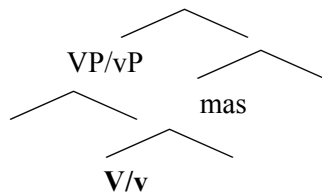
Pied-piping VP-ta, to Spec, mas, which we expect to be available in principle on the basis of the derivation of adjectival predicates, would yield a violation of (35), since VP/vP would be embedded under TP.

(36)   *
```
                /\
          TP      /\
        /\   mas
     VP     /\
         ta
      /\
        /\
      V
```
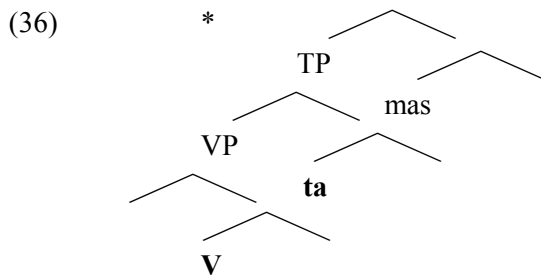
The obligatory stranding of T in (34a) can therefore be attributed to a phonological property of *mas*. In other words, Spec-extraction is a way to keep the representations that spell-out/the phonology accesses shallow.

The form of Formal speech level covaries with the category in Spec: this is an overt reflection of Spec head agreement (in category), as argued in 3.3.[13] If this analysis is correct, we have identified a case of Spec extraction within the Japanese "word", where the merged order surfaces because of Spec extraction, in conjunction with head complement order.

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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, in which there are a number of morphological slots available after the verb or the noun. Different non-finite verb endings (his C1, C2, C3, C4)) appear to occupy these slots, even though they have nothing in common with the other elements that can occupy these slots:

(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)

[C3]   (eya/aya and na)

[C4]   (ko)

Thus, C1 appears in the same slot as Honorific, and can only follow a verbal root, C2 appears in the same slot as Tense, and can only be preceded by a Honorific suffix, C3 by Honorific and Tense, and C4 by Honorific, Tense and Mood, etc. 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 this would not allow a unique location of C. 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, nor is there any a-priori reason to assume C and honorific cannot occupy the same slot.

The syntactic view simply does not lead one to expect a unique syntactic position for a non-finite verb ending or a subordinator (i.e. C). Noone expects English, *to, -ing, for, if, that,* etc 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 C1 selects for VoiceP/VP as a EPP property, C2 for a constituent that includes Agr_{hon}, C3 for TP etc. 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 appearance 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, p.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 p 299.

That different linear orders can be derived from a single underlying hierarchy, is not problematic, but expected under the syntactic view, as we have shown in the previous sections. Finally, evidence for underlying hierarchies, or principles that underlie clausal hierarchies seems even stronger now than at the time when Sells published his article (Cinque 1999, Rizzi 1997, 2000,

Pollock and Poletto 2003, Hallman 1998, Koopman and Szabolcsi 2000, Julien 2002, Williams 2003, among others).

5. Case and agreement

Here I will show that the independently motivated syntactic mechanisms introduced so far account for further properties of Korean morphology. In 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 5.2. and 5.3, I argue that honorific agreement and plural agreement should be analyzed as cases of agreement triggered under pied-piping, and stranding, in the case of plural agreement.

5. 1. The position of structural Case markers.

The structural case markers, *i/ka* (nom)*, ul* (acc), 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(*only*)- 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 $Focus_{man}$>Case>DP or Case>$Focus_{man}$>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 >$Case_{nom}$ 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> $Case_{Acc}$[14] and Focus> $Case_{Gen}$ in the DP domain. Specific syntactic derivations follow from the Principle of locality of selection:

(39) $Focus_{man}$ 'only'   >Nom (i/ka) > ..DP

    a.   DP   [i   *DP to Spec, nom*

b. [DP   [man   ~~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 phonology, where the nominative is spelled out as *i* or *ka* depending on the phonological properties of the preceding segment, i.e. Nom behaves as 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/kwa Chelswu man- i "A" -lul   pat-   ass- ta

Swuni only and   Chelsu   only nom A   -ACC   receive-PAST-DECL

c. *Swuni man- i   hako/kwa Chelswu man- i "A" -lul   pat-   ass- ta

Swuni only- nom and   Chelswu only-nom A   -ACC   receive-PAST-DECL

The hierarchy Nom> Focus (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 nominative to be available (40c), and it deviates from the fact that crosslinguistically Focus heads merge higher than Nom or Acc; this latter fact should follow from basic principles of architecture.

5.2. 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 the morpheme that spell out honorific agreement, which I will notate as

Agr_{hon} , is lower than T (Choi 2001), hence $T>Agr_{hon}>vP/VoiceP$:

(41) $[_{AgrhonP}$] ko $[_{AgrhonP}$] T

      Kim sacang- nim_i-un $[t_i$ ilccik chulkun-   ha- si-] ko

       Kim president-hon-top early arrive.office-do-hon-conj

                  $[t_i$ illcik toykun-   ha-si-]ess-ta

   early 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 Spec 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 finds further support by the ability of an honorific possessor to trigger

honorific agreement, without evidence for overt possessor raising. (Sells 1995, fnt. 21, citing

Hon 1991:12):

(42)   [Sensayng-nim-uy   son-i]   khu-si-ta

     teacher-   Hon-Gen   hand-Nom   big-Hon-decl

     'The teacher's hands are big (hon.)'

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. The honorific agreement feature is

checked off 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 will pied-pipe with the vP to higher merged heads, hence its linear position.

(43)

$$Agr_{honP}$$

$$vP<+hon>$$

$$Agr_{hon}$$

NP $$si<+hon>$$

[+hon] v

$$<+hon>$$
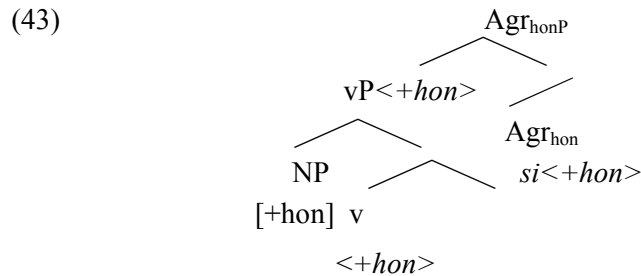
5.2.1. Some honorific mysteries.

There are some mysteries with honorifics which Sells takes as additional strikes against the syntactic view. The purpose of this section is to show that the syntactic view can in fact make the relevant distinctions using the available mechanisms, and hence that these data do not form any particular 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 Ida 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 is 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 +honorific. 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 +honorific. The listed form can also occur in the syntactic honorific construction (44c), just like double agreement is allowed.

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Sells' second observation concerns irregular honorific forms in Korean, which 'fit' into different syntactic contexts than regular ones. As shown in (37), C1 cannot cooccur with an overt honorific suffix. However, C1 *can* cooccur with an irregular honorific form: (*capswusi-e* versus **ilk-usi-e*) (Sells:293 (28)):

(45) a. Sensayngim-kkeyse   capswusi-e   po-si-   ess-ta   (*mekk-usi-ess-ta)

       teacher-   Hon.Subj   eat.hon   C1   try-Hon-past-decl (*eat-hon-past-decl)

   b.   * Sensayngim-kkeyse   ilk-usi-e   po-si-ess-ta

      teacher-   Hon.Subj   read-Hon-C1   try-Hon-past-decl

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 following syntactic representations 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   regular honorific

           $Agr_{hon}P$ b. $Agr_{hon}P$

      VP   VP

    /+list/ $[e]_{hon}$ <+hon> $[(u)si]_{hon}$

    <+hon>

These structures express their common distribution, but differ in the distribution of overt/covert material. My claim is that this is not without syntactic consequences. VP extraction in (46a) would strand a silent head but an overt head in (46b). Furthermore, pied-piping in the latter case would yield the ungrammatical string (47c). This is illustrated below

(47)   a.   [[$_{vP}$ capswusi   ] [-e [$_{AgrhonP}$[$_{VP}$ ~~capswusi~~ [$_{Agrhon}$]]

              eat.hon   *-e*

b.   * [[$_{vP}$ ilk-   [-e-[$_{AgrhonP}$ [$_{VP}$ ~~ilk-~~ [$_{Agrhon}$ usi]..

                read-   *-e*   *-HON*

c.   *[[$_{AgrP}$ [$_{VP}$ ilk- usi]-   [-e]

                  read- *HON-*   *e*

(47a) shows that an irregular honorific verb has the same distribution as a root v, i.e. it can be in the Spec, CP of this particular C satisfying the selectional requirement of this C. (47b) can be argued to violate a phonological requirement on the overt honorific–*si* (i.e. 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 (47a) "escapes" phonological conditions by virtue of being silent, and therefore only (47a) converges. This allows the projection headed by –e to 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 *tul,* a phenomenon that strongly resembles complementizer agreement in the West Germanic languages. Sells did not include *tul* in his article: "The plural marker *tul* does not appear in the charts above because it shows considerable freedom to where it may attach within the word". (Sells: 316, footnote 40). In this section, I will show that the quite challenging distribution of *tul* in the verbal complex can be quite nicely integrated in the syntactic account . More specifically, I will argue that plural agreement is triggered under pied-piping of TP and stranding of Agr$_{plural}$. The differences with honorific agreement follow from the high location of plural Agreement, which seems to correspond more closely to a very high AgrS.

5.3.1. Distribution of *tul*.

Tul is a plural suffix on nouns, and a plural agreement marker optionally co-occurring with a plural subject[16] (optionality is indicated in the examples below by italics). This section focuses on the following facts: *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.   ttenass –eyo   *-tul*   …Level-tul

                 left-   INFORMAL-PL

                 ' They left'

Tul may also follow any of the embedded Cs (C1 through C3, section 4.2.), if that 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'

      c   ilk- ci-*tul*   ahn-   ass- ta- *tul*

                 read-ci PL   neg.aux- 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* (Park and Sohn: 1993, p. 201), which Sells (p. 297) describes as "basically a marker of someone's words or thoughts":

(50) John-i [chinkwu-tul-i ttenas-ta (*tul)-ko(*tul)] malha-ess-ta

John-NOM friend-PL-i left-DECL-(*PL)-ko(*PL)said-PAST-DECL

'John said that his friends left'

Tul may follow the subordinator *ko*, however if *ko* itself can be said to have a plural subject (Park and Sohn 1993: 197 (13)[19]:

(51) chinkwu-tul-i [John-i ttenas-ta –ko-*tul*] malha-ess-ta-tul

friend- PL-i John-i left- DECL-ko-PL said- PAST-DECL-PL

'His friends said that John left'

Thus, plural *tul* can 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 AgrS.

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 (49e). Plural agreement follows C, which makes it look very similar to the complementizer agreement in the West Germanic SOV languages (modulo the linear position of the TP). Like complementizer agreement, plural agreement is optional. The linear position suggests it spells out a much higher head than honorific agreement, say a very high Agr projection just below the C region, i.e. C > AgrS, or just above C, i.e. AgrS>C. If plural spells out high AgrS, as in (53a), this order can only

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be derived by obligatorily stranding AgrS. Since TP precedes C, it is natural to think of the extracted XP that contains the agreement triggering category as TP, and that agreement is triggered under pied-piping:[21]

(53)   a.   C> AgrS >

       b. $[TP_i [C [\overline{TP}_{<+plural>} AgrS_{<+plural>}$

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 AgrS 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 OV 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 non-root contexts, though not in all non-root contexts. Clausal complements allow for optional plural agreement when they contain a plural subject with C1, C2 and C3 endings (49), even when they form a verbal complex. Embedding these predicates under a verb like *say*, does not affect the plural marking on the embedded C , but only affects *tul*'s possible co-occurrence before the subordinator *ko* (52), showing that this must be related to some property of *ko*. (section 5.3.3.)

(54)   b.   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, i.e. PRO, the external argument of *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-N-   PL(-ACC)   ask-PAST-DECL

        'I asked if they have returned.'

I will assume that *tul* spells out AgrS (C>Agr)[23], as it seems to be a more economical analysis

than one which assumes that the quite diverse C like elements can be selected by subject

agreement. 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 cannot *tul* precede the subordinator *ko?* A clausal complement with a plural subject cannot

trigger plural agreement, neither after the question particle, nor following the subordinator *ko*. (cf

(51)) unless *ko* can be said to have a PRO controlled by the plural DP of the verbs of thinking or

speech:

(56)   John-i   [chinkwu-tul-i ttenas-nya (*tul)-ko(*tul)] mwul-ess-ta

         John-NOM   friend-PL-NOM left- Q   ko   ask- PAST-DECL

         'John asked if his friends left'

(57)   chinkwu-tul-i [John-i ttenas-ta –ko-tul]   malha-ess-ta-tul

           friend- PL-i   John-i left- DECL-ko-PL   said- PAST-DECL

           'His friends said that John left'

In our paper on logophoricity (Koopman and Sportiche 1989)), certain types of complementizers

("*say*" type complementizers) are analyzed 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 from leftward TP

movements) illustrates.

(58) $C_1 > AgrS_1 > T > DP_{pl}$ say> $C_2 > AgrS_2 > T > PRO_{pl}$> ko> [$C_3 > AgrS_3 > T > DP_{pl}$

A plural subject in C1 will yield plural agreement following C1, a plural subject in C2 will yield, plural agreement following *ko.* A plural in C3 should be able to yield plural following C3, but cannot do so if C3 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 present 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 following structure:

(59)
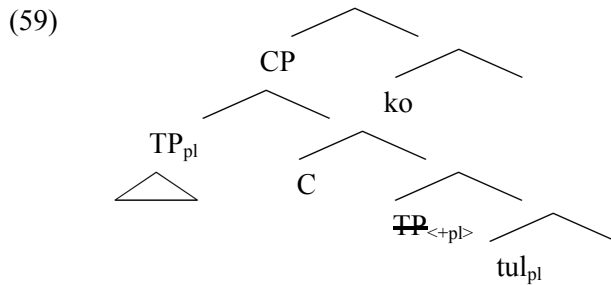
This configuration contains overt phonological material on a right branch lower than the head C, and is well-known for causing ungrammaticality (**a proud of John mother*). It is likely that such structures are filtered out by complexity filters (see Koopman 2002 for discussion). Making merger of AgrS$_{pl}$ optional, an option 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, we 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 the heads that determine scope, word structure should interact with available scope possibilities as a consequence of the syntactic derivation that underlies the linear order.

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

(60)   John man-ul   motun-salam-i salangha-ta (every>only   *only>every)

         John FOCUS-ACC every person-NOM love-DECL

         'Everyone loves John (and no one else)'

(61)   John hako-man motun-salam-i akswuhay-ss-ta (every>only and only>every)

         John with only every-person-NOM shook.hands-PAST.DECL

         'Everyone shook hands with only John'

         'John is the only one with whom everyone shook hands'

Lee argues that word structure accounts for these scope interactions. Lee 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 ONLY is merged low universal> focus results, if ONLY is merged higher than the universal, in the left periphery, the reading is focus>universal. DP-man-acc cannot scope over universal subjects because the linear order DP-man-acc signals the silent Focus head must be merged below accusative hence universal>only is the only available reading. Lee appeals to the Mirror Principle ("check inner affixes before you check outer affixes"), to force the low position of the silent Focus head with accusative case. A PP (61) can scope either over universals, or below universals, because the linear order is consistent with both high or 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 fall out in very similar ways in the proposal made in this paper, where *man* is merged directly as a focus head, higher than accusative, provided of course that we accept head complement order. The linear string *man-acc* shows that *man* (only) must be merged immediately above accusative, 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 scope under 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 derivation in (62):

(62)   [DP man [~~DP~~[ul […

Consider, for example, what outputs would result from merger of *man* higher than the subject QP. This derivation would necessarily yield the reading *only>every*.

(63)   *Merge man (focus)*:

a. [$_{Focus}$ [**man**   [$_{QP}$ every DP   ]nom ..   [**DP**$_{+focus}$[ul$_{acc}$

Move DP +focus: move [DP-ul] (assuming a remnant can be formed)

b. *[DP- **ul** $_{acc}$ -**man** [$_{QP}$ every DP-nom   [~~DP acc~~ [

or: extract DP[+focus], and strand accusative

c. *[$_{Focus}$ **DP**$_{+focus}$ [**man**   [$_{QP}$ every DP-nom   [~~DP~~ [**ul** $_{acc}$

Neither string 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 the (63b) is not due to a basic syntactic problem (i.e. DP-acc can move around). This derivation yields an overt case marker preceding focus, and this is simply never observed in Korean, neither for focus nor for topic. These heads simply cannot contain a CaseP in their Spec, which suggests a language specific filter. (63c) results in a stranded accusative –*ul*. It is

reasonable to assume that this violates a phonological condition on *ul*: it can not be a sole remnant in a loacal 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. (Lee 2004a, ex. (26))[26]

(64) a. John-**man**₁   [**motun**-salam-i   e₁   salanghanta].

    John-only   every-person-NOM   love

    'Only John, everyone loves *e*.'

    (i) Everyone loves John and no one else.   (very > only)

    (ii) 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 paper, I have argued in favor of a syntactic view of Korean (and Japanese) morphology, which derives the surface constituency of "words" from an underling Spec H complement order by means of local phrasal movements, providing strong support for Kayne (1994). 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: i.e. underlying universal hierarchies, with hierachical merger determining scope, local movement from Spec, stranding heads, pied-piping, and generalized Spec head agreement under pied-piping. Inflected words in Japanese and Korean, are derived by phrasal movement, with many, but not all, words mirroring the syntactic hierarchy of merger. Underlying head complement order surfaces in particular instances, with heads to the left of their complement, thus directly supporting antisymmetry. Phrasal movement straightforwardly accounts for the fact that the affixes behave

as phrasal affixes. Thus there are no fundamental differences between the syntax of Korean (and Japanese) "words" and the phrasal syntax (Koopman and Szabolsci 2000, and 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, and late insertion. Phonological material is selected on the basis of syntactic structures, for the cases we discussed local Spec head configurations: i.e. the input of V-T in Korean and Japanese is not a single head, but a small syntactic configuration. Secondly, I have assumed that syntactic structure directly feeds the phonology/linearization, and that at least the postsyntactic mechansism of structure building (insertion) and linear reordering (Merger or movement) are disallowed[27]. The view developed in this paper is incompatible with the hypothesis that agreement nodes and Case are outside "the narrow syntax". Indeed, section 6 presents Lee's (2004) argument that Case at least must be part of the narrow syntax, since the 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 skepticism that some types of movements could be taking place in the phonology. However, certain strings that the syntactic derivations generate are filtered out by "phonological" properties of individual lexical items (complexity filters) which operate when phonological material is inserted. These seem to be appropriately located at the syntax/phonology interface, as the phonological insertion seems sensitive to the syntactic hierarchy. Sometimes not inserting phonological material can salvage particular derivations. Finally, the important theoretical question what drives the movements needs further exploration (see Kayne 2003b, and Koopman and Szabolsci (2000). To a large extent, movement is driven by Sportiche's 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 in which selection can be satisfied.

Overall then, this paper yields a quite different understanding of Korean and Japanese syntax, one in which all Spec positions need to be filled in the course of the derivation (Kayne 1998 and later

work, and Koopman 2000). Within this view, however, it is not the case that there will be massive movements in Korean or Japanese, but not in English or in French. If indeed V selects for NP, and not for DP, there will be massive movements in all human languages, as one of the tasks performed by Merge is taken over by Move. 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.

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FOOTNOTES

[1] See also Kuroda (2000) who shows that disjunction can be under the scope of causative suffix, a clear indication of the syntactic nature of the causative suffix: (Kuroda 2000: 445:16)

(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'

[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 (1995), 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 etc 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 with ellipsis, the constituent data concerning coordination (Koizumi 1995, 2000) and the phrasal affix nature of the verb.

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

[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.

[5] For expository reasons, the picture is simplified here. If followed through, all functional categories are merged outside of V NP. (See Sportiche 2002).

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

[7] This step could be motivated by the Principle of Locality of Selection in the following fashion. If P selects and merges with VP, there would be no motivation for VP movement. However, suppose that P and VP are not in a local relation at the point of merger, with P merging like a C (Kayne, 2000), and P selecting for both VP, and DP. This will force DP movement and VP movement to positions local to P. As a final possibility, this step may be motivated by the need for the verb to be in a relative 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] Neg *an* can also scope in the embedded complement 'I tried not reading it'. This is irrelevant for the discussion here.

[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).

[10] Long negation *ahn* can scope over *man*-focus. This follows from the fact that long negation *ahn* selects for a clausal complement headed by *–ci*. This clausal complement can contain its own focus projection, hence the availability of Neg>man(only).

(i)   [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 that do accept this combination, the scope reading always includes the focus>negation as the dominant reading. (Many thanks to Chungmin Lee for extensive multispeaker feedback on this issue). Some speakers accept an additional reading where focus can also scope under negation, but only when an accentual phrase follows the focused constituent. (Thanks to Christina Kim for the 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 'try' or not. Interestingly, low merger seems to be only possible when the word structure and phonological phrasing is consistent with it . Thus, this reading seems to be unavailable when *DP man an V2 V1*-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/word

structure, [[.. man] an]This may in fact be another instance where word structure and syntax determine scopal possibilities (Lee 2004 and section 6). These Korean data resemble Hungarian where embedded focus blocks restructuring (Koopman, and Szabolcsi, 2000).

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

[13] In order to account for the fact AP does not Spec-extract, it must be assumed that *katta* cannot strand. This can be achieved if *katta* must have overt material in its Spec at spell-out.

[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 1996, Sportiche 1996, Cecchetto 1998, Koopman (2001), and Belletti (2003) among others.

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

    (i) Swuni man - i   hokum Chelswu man- i   "A" -lul   pat- ass- ta

       Swuni man-NOM or   Chelswu man-NOM A-ACC   got- PAST-DECL

       'Either only Swuni or only Chelswu got an A'.

These must be derived from *hokun(or)> man> case*, with ATB movement to create the surface constituency. Youngjoo Lee (personal communication) informs me that that merger *and> man>* would lead to the following interpretation, which is inherent: "Swuni was the unique individual who got an A and Chelswu was the unique individual who got an A, where there is unique A getting event." Disjunction (or>man> does not create a problem, and neither does coordination with the sentential coordinator *kuliko* (the

sentential coordinator), in which case we expect two "A getting events". To derive the latter two cases an ATB account must be adopted.

[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 Seungo Nam for additional help.

[17] Some Korean speakers find the sequence *ta-tul* acceptable, but slightly degraded. T*ul* 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. (Yim 2001).These cases will not be discussed in this paper.

(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 [ikl-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 the presence of an additional Agr position just below *man*, and CP recursion, with VP-e moving through AgrS and triggering plural agreement under pied-piping:

(ii)   VP-e man [CP   [~~VP-e~~ [AgrStul   .. […   [VP+[CP ~~VP [e~~[CP] [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

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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..

[19] Park and Sohn (1993) further show that *tul* cannot occur in relative clauses nor in

noun-complement structures. We 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 C1 etc, and if C1 occurs in slot 1,why then cannot it

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 follows what Kural analyzes as a complementizer.

    (i) Ahmet benim uyu-   du-¢g-um-u   sanýyor

       Ahmet my   sleep-past-COMP-1SG-ACC think

       'Ahmet thinks I am sleeping'

Kornfilt (2002) shows that in certain Turkic languages a post-nominal agreement

morpheme agrees with the subject of a pre-nominal relative, and analyzes these in terms

of AgrS stranding.

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

Spec, Case.

[23]These examples show that complements of restructuring verbs can also contain a high

AgrS, as well as a C, in accordance with Koopman & 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.

[24] Possibly related to a *that-t* effect. Alternatively, it may be related to Kayne's proposal that complements can never move to the Spec of the head that selects it (Kayne 2003b:24-25). This implies all derivations should confirm 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). Athough some pied-piping derivations in this paper violate this constraint, 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 only the SOV Germanic languages have complementizer agreement, and that complementizer agreement is only possible in clauses that have an OV order. This suggests TP movement to C with Agr stranding underlies AgrS stranding, with additional movement of the C to a higher position: Embedded verb second is incompatible with complementizer agreement (cf. Shlonsky 1994, Kayne 1994: p.56, Zwart 1997, Bennis and Haegeman, 1983, Bayer 1983, see in particular Carstens 2003).

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

[27] This leaves open the possibility that Merger which does not yield a different linear order is allowed. For general criticism about the postsyntactic mechanisms of Distributed Morphology, see Williams (2003).