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NOMINAL, VERBAL, AND CROSS-CATEGORIAL AFFIXATION IN KOREAN*

In this paper, I address a recent proposal by Yu-Cho and Sells (1995) to explicate the constraints on the morphosyntax of inflectional affixation in Korean based on the attribute TYPE, which in large measure coincides with the bound vs. free distinction but also diverges from it in crucial cases. The theory of TYPE offers an insightful account of a class of affixes – the cross-categorial affixes – that attach either to nominals or verbals. I suggest, however, that when a fuller range of relevant data is taken into account, constraints on inflectional affixation in Korean are better handled by the distinction between bound verbal roots vs. free nominal roots on the one hand, and that between affixes which attach to bound forms and those that combine with free forms. The alternative that is proposed overgenerates. To deal with this problem, non-morphological means of filtering overgeneration are suggested and argued to be necessary.

1. INTRODUCTION

In a recent paper published in this journal, Yu-Cho and Sells (1995: “A Lexical Account of Inflectional Suffixes in Korean”, abbreviated LAIS hereafter) provide an in-depth analysis of the phonology, morphology, and morphosyntax of inflectional suffixes in Korean from a consistently lexicalist perspective. The work is noteworthy not only in developing and defending a novel and interesting lexical analysis of Korean inflection in the face of the vast majority of recent works on the topic that adopts the syntactic position, but also in its empirical coverage of a broad and representative range of Korean inflectional morphology.

My purpose in this paper is to evaluate some of the theoretical and empirical claims made in LAIS. In the course of the evaluation, I will furnish additional data not covered in LAIS and suggest alternative interpretations of the constraints on inflectional affixation where possible. While LAIS also raises the issue of syntactic vs. lexicalist approaches to inflection, I shall steer clear of the lexical-syntactic debate in this paper and concentrate instead on evaluating the viability of the substantive theoretical and empirical claims made in LAIS regarding Korean inflectional morphology.¹

Section 2 of the paper summarizes the main claims of LAIS. In section 3, I identify some problems with the analysis in LAIS and elaborate on these issues in some detail, demonstrating that, once these additional factors are taken into account, not only are we able to resolve problems in LAIS but come to a better understanding of the systematic differences among different

classes of inflectional affixes that LAIS identifies. In particular, the utility of the central theoretical construct in LAIS, that of TYPE, is questioned, and alternative interpretations of the data are suggested. Section 4 closes the paper by identifying issues for further research.

2. SUMMARY OF LAIS

The first two sections of LAIS demonstrate that the bond between inflectional suffixes and roots/stems is very tight and that for the purposes of morphophonology, the combination of root/stem and affixes behaves as lexically formed, in the sense of Lexical Phonology (Kiparsky (1982)). It also points out the existence of some idiosyncratic allomorphy and contractions as evidence that such combinations are formed “in the lexicon”. For reasons of space, I shall not dwell on the contents of these sections in this paper but concentrate on the parts of the paper detailing the morphosyntax of inflectional suffixes.

Let me begin by briefly sketching the necessary background. LAIS divides inflectional affixes in Korean into three classes: nominal, verbal, and cross-categorical.

Nominal affixes are those that appear to attach exclusively to nominal roots (cf. 1a). There are two types of *verbal* suffixes, both of which attach exclusively to verbal roots or stems. One type of suffix appears in contexts of verbal subordination (complementation and adjunction) or coordination. LAIS labels them *Comp suffixes* (cf. *-key* in 1b). The other type may appear inside *Comp* suffixes in subordinate/adjoined contexts or when the verb is the head of a root clause. These are the *non-Comp verbal suffixes* (cf. *-usi* in 1b). *Cross-categorical* suffixes are intuitively nominal affixes (cf. *-to* in 1c), which can also be attached to verbal roots or stems that carry *Comp* affixes. The cross-categorical affixes correspond by and large to Yang’s (1972) “delimiters”.

- (1) a. Nominal suffix: *-eykey* ‘Dative’
- | | | |
|---------------------------------------|-----------------|---------------|
| salam _{NROOT} - eykey | ‘person-Dat’ | ‘to a person’ |
| *mek-usi _{V1} - eykey | ‘eat-Hon-Dat’ | |
| *mek-ko _{V2} - eykey | ‘eat-Comp2-Dat’ | |
- b. Verbal suffix: *-usi* ‘Subject Honorific’
- | | | |
|--|-------------------|--|
| *salam _{NROOT} - usi-eykey | ‘person-Hon-Dat’ | |
| cap- usi _{V1} -key | ‘catch-Hon-Comp2’ | ‘so that he
(honorific) can
catch’ |

Type specifications in syntax are interpreted as follows. The phrasal projection whose head bears the specification [TYPE: α] must occur in syntax as the *left-sister* of a constituent which is marked [TYPE: α]. For example, a phrase whose lexical head is TYPE:V-SIS precedes a sister constituent marked V-SIS.

Since Korean is a strictly head-final language, verbs in root contexts are specified [TYPE:NO], since they can precede nothing else. On the other hand, left-sisters of nominal heads are [TYPE:N-SIS], as they look for a nominal to their right, while non-final conjuncts in nominal coordinate structures are TYPE:COORD, as they look for a conjunct daughter to their right. The calculation of TYPE is left-to-right, even though Korean is syntactically head-final. In this respect, the analysis in LAIS is similar to left-to-right analyses of Korean in extended Categorical Grammar (Kang (1988)).

An element (simple or complex) that is specified \sim TYPE cannot serve as a formative (atom) in the syntax without the help of affixes that will give it a TYPE value. Assuming an organization of grammar in which derivation and compounding produce bound roots and inflection follows derivation, since a (bound) root by itself can never participate directly in syntax (given lexicalist assumptions), roots are always \sim TYPE, except for a few roots which do not admit inflectional suffixation but may function directly as formatives in syntax.³ With a handful of exceptions, then, \sim TYPE is co-extensive with *bound* status of a form in a language like Korean.

LAIS takes nominal roots (Nroot, henceforth), which may surface *without* an overt inflectional suffix in the syntax, to be bound forms and posits at least one null affix which brings about the shift of \sim TYPE to [TYPE: α] when a bare nominal functions as a formative in the syntax. All four classes of nominal affixes are able to bring about this change (to V-SIS, N-SIS, or COORD). Therefore, the addition of a single affix of the right type of all that is necessary to turn an Nroot into a syntactic formative.

For verbal affixes, the situation is different. The addition of a single Comp suffix may bring about a type shift from \sim TYPE to TYPE:V-SIS/N-SIS. However, roots suffixed with non-Comp V1 and V2 suffixes (which are \sim TYPE) cannot serve directly as formatives in the syntax and require a type-shifting affix such as a Comp suffix or a non-Comp V3 suffix (which shifts \sim TYPE to TYPE:NO) in order to function as a syntactic formative.

The attribution of \sim TYPE status to "bound" forms reflects the lexicalist basis of LAIS. If bound forms were imbued with TYPE values, they should be able to occur as formatives in the syntax, something that is not possible under lexicalist assumptions. However, note that bound status in LAIS cannot be equated with being \sim TYPE since there are free forms (Nroots)

that share that specification.

The account of cross-categorial suffixes in LAIS is simple and elegant and at the same time constitutes a demonstration of the theoretical utility and elegance of the attribute TYPE, over and above traditional category distinctions ($\pm N$, $\pm V$). Cross-categorial suffixes are accounted for as follows.

As suffixation is constrained by the TYPE specification of the host element, the intuitively nominal suffixes in the Xdlim pattern (cf. 2b) will attach not only to Nroots (with or without nominal affixes) but also to suffixed forms of verbs – as long as the verbal elements are TYPE:V-SIS. Since only (certain) Comp suffixes can bring about this change, it is predicted correctly that only these may be followed by nominal delimiters (cf. 4a).

This explains the ill-formedness of (4b), where a delimiter (*-man* ‘only’) is attached to a root, and that of (4c), where the verbal host is of the wrong type. The ill-formedness of (4d) can be explained along the same lines, even though it is also ruled out redundantly by the structural patterns in (2) above:

- | | | | | |
|-----|-----|---------------------------------------|-----------------------|------------------|
| (4) | a. | [Mek-key]- man _{XLim} | ‘eat-Comp2-only’ | host: TYPE:V-SIS |
| | b.* | [Mek]- man | ‘eat-only’ | host: ~TYPE |
| | c.* | [Mek-ul _{v2}]- man | ‘eat-V.mod.pres-only’ | host: TYPE:N-SIS |
| | d.* | [Na-uy _{Gen}]- man | ‘I-Gen-only’ | host: TYPE:N-SIS |

In LAIS, the suffixation of delimiters to Comp-affixed verbal forms is not taken to be an indication that Comps are nominalizers (J.-O. Cho (1988)), but rather as evidence that certain Comps may shift the type of its host to V-SIS, like most nominal affixes. LAIS claims that additional differences between true nominals and Comp-suffixed verbal forms argue in favor of the TYPE solution over the nominalization solution.

LAIS allows TYPE specifications to be modified non-monotonically through further affixation within the word.⁴ For example, a suffixed Nroot that is TYPE:V-SIS might be changed to TYPE:N-SIS by further affixation:

- | | | | | |
|-----|----|-------------------------------------|--------------|------------|
| (5) | a. | Na _{Root} | ‘I’ | ~TYPE |
| | b. | [Na]- man _{XLim} | ‘I-only’ | TYPE:V-SIS |
| | c. | [Na-man]- uy _{ZLim} | ‘I-only-Gen’ | TYPE:N-SIS |

This summary illustrates the core elements of the morphosyntactic analysis of LAIS. I shall turn now to an evaluation of the system.

3. AN EVALUATION

While the analysis in LAIS is elegant and insightful and is the most satisfying account of cross-categorial affixation I have seen to date, it is not

without its shortcomings. My goal in this section is to identify a family of interrelated problems with the proposal in LAIS, both conceptual (addressed in section 3.1) and empirical, and suggest alternative accounts where possible.

LAIS adopts the position that nominal and verbal affixations in Korean are parallel, in the sense that both nominal and verbal roots are bound forms and need inflectional suffixation in order to surface as formatives in the syntax. I argue in section 3.2 that this assumption cannot be correct. I argue that Nroots are free morphemes even in the absence of inflectional affixation. In section 3.3, I show that all nominal affixes have the potential to be used as cross-categorial suffixes, contra LAIS. Putting the two together, we come to the conclusion that nominal affixes attach to certain forms (i.e., free forms) of verbs as cross-categorial affixes because it is the characteristic of nominal affixes to attach to free forms. The fact that a handful of verbal affixes can also occur in cross-categorial contexts is argued to provide support for the alternative perspective on nominal suffixes.

The alternative account of cross-categorial affixation in turn robs the theory of TYPE of its main empirical content in inflectional morphology, that of constraining inflectional affixation, thought it may yet serve an indispensable role in other areas of morphology, such as compounding or derivation.

3.1. *On Templates*

There are many questions one may raise about the proposal in LAIS which I cannot deal with in this paper given limitations of space. I will content myself with simply mentioning the most salient of such questions before embarking on the major task of examining the parallels between nominal and verbal affixation.

In generating and constraining word structure, LAIS relies on the idea that morphemes may be freely organized into binary branching morphological structures but must subsequently be filtered through the "structural patterns" which specify linear ordering of morphemes. The patterns, or *templates* as I shall henceforth call them, do not appear to be objects that inspire much theoretical sympathy. Where possible, one should attempt to reduce the template-like ordering restrictions (in derivation or inflection) to better-motivated theoretical devices, whether they be categories and phrase structure rules below the level of word (Selkirk (1982)), morphological subcategorization and feature percolation principles (Lieber (1980, 1992)), or ordering requirements imposed by other components of the grammar, such as syntax and semantics.⁵ At the least, if templates are to

be appealed to in the description of patterns observed in the data, a formalization of this descriptive device is called for, whether it be in the form of disjunctively ordered rule blocks (Anderson (1986), Stump (1991)), or morphological levels within Lexical Morphology (Inkelas (1993)).

LAIS does offer a reason as to why the elimination of the templates presented in (2a, b) and (3) in favor of one particular approach mentioned above (that of morphological subcategorization and extension of X-bar theory to sub-word levels) is not feasible, but the argument is weak and based on a shaky premise mentioned above: that nominal and verbal affixations are parallel. Besides, there are other ways of expressing templatic restrictions, as the above-cited references amply demonstrate.

3.2. *On the Parallelism Between Nominal and Verbal Inflection*

LAIS takes the position that both nominal and verbal roots are bound forms (specified ~TYPE). As I said earlier, a prima facie problem for such an assumption is that Nroots can surface without any inflectional suffixes in certain contexts.

In order to account for such cases, LAIS considers the possibility of specifying Nroots directly as TYPE:V-SIS but rejects such a move, claiming that it would lead to overgeneration (note 20 in LAIS), opting instead for the position that at least one null affix is present in contexts where a bare Nroot surfaces as a formative in the syntax.

Secondly, LAIS presupposes that both types of roots are bound in advancing the aforementioned argument against reducing the templates to sub-word X-bar theory. The argument runs as follows.

If one were to adopt word-internal X'-theory with negative integers (these representing the slots of the templates), in the following example, Nroot would have to be categorized as N^{-3} since it can be followed by Post, XLim and ZLim. Post would take N^{-3} to N^{-2} and XLim would take N^{-2} to N^{-1} , while ZLim would take N^{-1} to N^0 :

- (6) $[_{N^0} [_{N^{-1}} [_{N^{-2}} [_{N^{-3}} \text{Swuni}]\text{-hanthey}]\text{-man}]\text{-un}]$
 Swuni-Dat_{Post}-only_{XLim}-Top_{ZLim}
 'Only to Swuni'

As we have seen, being cross-categorical suffixes, XLim and ZLim may also attach to Comp-suffixed verbal forms. If we assume that selection for the bar-level of the subcategorized element remains constant for cross-categorical suffixes, then in (7), Vroot would have to be categorized as V^{-6} and *cap-usi-ess-ta* would have to be V^{-3} (rather than V^0). In addition, the

entire word can only be a V^{-1} . This conclusion is counterintuitive and artifactual, LAIS claims.

- (7) [V^{-1} [V^{-2} [V^{-3} [V^{-4} [V^{-5} [V^{-6} cap]-usi]-ess]-ta]-ko]-man]
 catch-Hon-Pst-Decl-Comp4-only
 ‘. . . only that he (honorific) caught.’

In the remainder of section 3.2, I will critically evaluate the assumption that Nroots are bound morphemes. I will argue that Nroots are free morphemes while Vroots are bound forms. Correspondingly, there is no need to assume null affixes for the nominal paradigm. This is a welcome result since the behavior of putative null affixes for nominals differs markedly from null affixes posited in other types of templatic systems.

3.2.1. *Nominal Roots are Free Forms*

Traditional grammars of Korean have always distinguished nominal inflectional suffixes from verbal suffixes, by designating the former particles (*cosa* or *thossi*) and the latter suffixes (*emi* or *cepmissa*). The distinction is based on the fact that Nroots but not Vroots can stand alone syntactically (cf. S.-D. Kim (1992) for a recent statement of this idea). LAIS, on the other hand, takes a different position and views Nroots and Vroots to be parallel in being bound morphemes, in attributing to both the lack of TYPE values (i.e., \sim TYPE).

As should be obvious, the feasibility of the position taken in LAIS depends crucially on an adequate account of syntactic contexts in which Nroots may surface without any suffixes. LAIS assumes that when Nroots appear ‘bare’ in syntax, they do so with the aid of at least one obligatory null affix which may range in value over the set $C = \{\text{Nom, Acc, Dir}\}$. In restricting the information provided by the putative null affix to the above set, LAIS is reflecting the commonly made observation that ‘Case-marker drop’ is possible when the bare noun is interpreted as instantiating one of the above Case relations. As seen below, unlike Nom and Acc affixes (cf. (8a, b)), Instrumental and Comitative Case affixes cannot be dropped (cf. (*8c, d)):⁶

- (8) a. John- \emptyset pap- \emptyset mek-ess-ni?
 J-Nom meal-Acc eat-Pst-Q
 a’. John-i pap-ul mek-ess-ni?
 J-Nom meal-Acc eat-Pst-Q?
 ‘Did John eat?’

- b. John-i Pusan- \emptyset ka-yo
 J-Nom Pusan-Dir/Acc go-Decl
- b'. John-i Pusan-**ulo/ul** ka-yo
 J-Nom Pusan-Dir/Acc go-Decl
 'John goes to Pusan.'
- c.*John-i cong'i-lul khal- \emptyset cal-ass-eyo
 J-Nom paper-Acc knife-Inst cut-Pst-Decl
- c'. John-i cong'i-lul khal-**lo** cal-ass-eyo
 J-Nom paper-Acc knife-Inst cut-Pst-Decl
 'John cut the paper with a knife.'
- d.*John-i Mary- \emptyset nol-ass-eyo
 J-Nom M-Comit play-Pst-Decl
- d'. John-i Mary-**hako** nol-ass-eyo
 J-Nom M-Comit play-Pst-Decl
 'John played with Mary.'

LAIS assumes that the null affix occupies the Post slot. While they give no argument for the assumption, we may think that they did so presumably because the Post is the slot closest to the Nroot and possibly because the null Cases seen above are yield TYPE:V-SIS. POST is the only slot which is exclusively V-SIS in the LAIS analysis.

However, on further examination we find that, one, the interpretive range of the putative null affix must be considerably broadened; and, two, it cannot be restricted to affixes that yield V-SIS specifications. As seen from the following context, it must also allow interpretation as Gen (yielding a TYPE:N-SIS entity), or Conj (yielding a TYPE:COORD entity):

- (9) a. Yenghi- \emptyset hoysa-ka manghay-ss-ta
 Y-Gen company-Nom go bankrupt-Pst-Decl
- a'. Yenghi-**uy** hoysa-ka manghay-ss-ta
 Y-Gen company-Nom go bankrupt-Pst-Decl
 'Yenghi's company went bankrupt.'
- b. John- \emptyset (kuliko) Mary-ka wa-ss-ta
 J-Conj and M-Nom come-Pst-Decl
- b'. John-**kwa** (kuliko) Mary-ka wa-ss-ta
 J-Conj and Mary-Nom come-Pst-Decl
 'John and Mary came.'

This forces us to expand the interpretive range of the null affix to the set $C' = \{\text{Nom, Acc, (Dir), Gen, Conj}\}$. We must also recognize that the TYPE shift brought about by the affixation of the null affix spans the full range of values for TYPE that nominals can have, $T = \{\text{V-SIS, N-SIS, COORD}\}$. This is a rather large and underdetermined range of interpretive possibilities for a null affix – especially when we consider how one usually justifies null affixes in morphology.

The usual justification for a null affix comes when the morphology appears to have a slot-and-filler (i.e., templatic) arrangement. In this kind of system, the absence of marking in a given slot can be just as significant as the presence. This situation obtains when there is a complementarity of information marking between the absent element and overt elements competing for a given slot. We do not have to venture far to find a system of this type. Such a system can be found with verbal suffixes in Korean.

Recall that LAIS posits the following structural pattern for verbs:

- (10) Vroot-V1-V2-V3-V4
└──────────┘
(~TYPE)

Disregarding Comp suffixes, we may follow LAIS and posit two null affixes in the verbal template, in V1 and V2. The null affix in the V1 slot is *always* interpreted as the absence of grammatical Subject Honorification, while the null affix in V2 is always interpreted as Present Tense (for stative predicates):

- (11) a. John-i pap-ul cis-Ø-ess-ta
 J-Nom meal-Acc cook-Plain_{V1}-Pst-Decl
 'John cooked the meal.'
- a'. Emeni-ka pap-ul cis-**usi**-ess-ta
 Mother-Nom meal-Acc cook-Hon_{V1}-Pst-Decl
 'Mother (honorific) cooked the meal.'
- b. John-i ttoktokha-Ø-ta
 J-Nom smart-Pres_{V2}-Decl
 'John is smart.'
- b'. John-i ttoktokhay-**ss**-ta
 J-Nom smart-Pst_{V2}-Decl
 'John was smart.'

Importantly, for the null affixes in verbal inflection, it is possible to identify

the exact 'slot' that the null affix occupies because the interpretation of the null affixes is always constant and independent of the syntactic context. The information supplied by the null affixes is recovered on the basis of *paradigmatic opposition* in a given slot, e.g., among overt forms of V2 affixes, there is none which expresses Present Tense for statives. Therefore, the absence of an affix in this slot is construed as Present Tense. This situation is typical for 'slot and filler' type morphological systems.

Compared to the null affixes in the verbal paradigm, the putative null affix in the nominal paradigm exhibits quite different behavior.

First, even though LAIS assumes that the null affix occupies the Post slot, there is actually no way of knowing what the position of this putative affix is. This is so since *every* nominal slot is optional, unlike the slots V1, V2, and V3 for non-Comp verbal suffixes which are obligatory. One could just as well take the null Cases to parallel their overt counterparts with the same function and assume that null Dir occupies the Post slot, null Conj fills the Conj slot, and null Nom, Acc, and Gen fill the ZLim slot, and so on. The upshot is that there is simply no way to tell where the null affix is situated, other than that it occurs somewhere in the nominal template.

Secondly, and more importantly, the interpretation of the null affix is *context-dependent*. Its interpretation is determined strictly by the syntactic context in which the projection headed by the bare Nroot occurs. This stands in contrast to the null affixes in verbal inflection whose construal *cannot* be context-dependent. For example, the presence of "honorific Nominative" *-kkeyse* does nothing to alleviate the inappropriateness of the assertion in (12a). Neither can the presence of a temporal adverb with past time reference shift the interpretation of the null V2 affix (Present) to Past in (12b):

- (12) a.*Apenim-kkeyse chayk-ul ilk- \emptyset_{V_1} -ess-ta
 Father-Hon.Nom book-Acc read-Plain-Pst-Decl
 'Father read a book.'
- b.*John-i ecey-nun ttoktokha- \emptyset_{V_2} -ta
 J-Nom yesterday-Top smart-Pres-Decl
 '*John is smart yesterday.'

A null affix whose position is difficult to determine and whose interpretation is not fixed by paradigmatic opposition in morphology but exclusively by syntactic context is unlikely to receive serious endorsement from morphologists. Very likely it means that such null affixes do not exist.

An even greater difficulty for the assumption that Nroots are bound and that there are null affixes comes from syntactic contexts where *all*

Nroots can stand alone. In answers to questions in the informal speech style, an Nroot may stand alone, regardless of the function it bears in the immediate question context. Case affixes such as Instrumental and Comitative that could not drop in the context shown in (8) may be dropped.⁷

Unless one counterintuitively posits a highly underspecified null affix that can only be licensed by the immediately preceding discourse context, this paradigm suggests to us that there is no such thing as a nominal null affix. We must conclude that Nroots have the same freedom of distribution as free forms, and that is why they can occur alone in the answer context without the inflectional “affixes”.

- (13) a. Q: John-i mues-**ulo** cong'i-lul callu-ess-ni?
 J-Nom what-Inst paper-Acc cut-Pst-Q
 ‘What did John cut the paper with?’

A: khal-lo/khal-(\emptyset)
 knife-Inst/knife-(Inst)
 ‘With a knife/A knife.’

- b. Q: John-i nukwu-**hako** nol-ass-ni?
 J-Nom who-Comit play-Pst-Q
 ‘Who did John play with?’

A: Mary-hako/Mary-(\emptyset)
 M-Comit/M-(Comit)
 ‘With Mary/Mary.’

- c. Q: John-i nukwu-**eykey** iyakihay-ss-ni?
 J-Nom who-Dat talk-Pst-Q
 ‘Who did John talk to?’

A: Mary-eykey/Mary- \emptyset
 M-Dat/M-(Dat)
 ‘To Mary/Mary.’

- d. Q: John-i nukwu-**man** ccocha-nay-ss-ni?
 J-Nom who-only kick out-Pst-Q
 ‘Who is the only one that John kicked out?’

A: Mary-man/Mary- \emptyset
 M-only/M-(only)
 ‘Only Mary/Mary.’

In contrast, truly bound forms can never be uttered in isolation in similar contexts. This is seen by the failure of Vroots ((14a)), or Vroots with bound verbal affixes ((14b)), to be used as answer fragments. As we can expect, however, Vroots suffixed with Comp suffixes ((14c)), which take the root to a free morpheme, do occur in such contexts, exactly paralleling Nroots:

(14) a. Q: John-i mues-ul hay-ss-ni?

J-Nom what-Acc do-Pst-Q

‘What did John do?’

A: Pap mek-ess-eyo/*Pap mek-

meal eat-Pst-Decl Meal eat-

‘(He) ate his meal.’

b. Q: Apenim-i tolao-si-ess-ni?

Father-Nom return-Hon-Pst-Q?

‘Did Father return?’

A: Tolao-si-ess-eyo/ *tolao-si-/ *tolao-si-ess-

return-Hon-Pst-Decl return-Hon return-Hon-Pst

‘(Yes), he returned.’

c. Q: Ne pap cis-ko iss-ess-ni?

you meal make-Comp2 be-Pst-Q?

‘Were you making the meal?’

A: Aniyō. mek-ko iss-ess-eyo/ mek-ko-(yo) /

no. eat-Camp2 be-Pst-Decl eat-Comp2-(Disc)

*mek-(yo).

eat-(Disc)

‘No. I was eating it.’

A final argument against the bound morpheme status of Nroots (correspondingly, against null affixes in the nominal paradigm) can be constructed on the basis of the fact that affixes which we may analyze as “discourse particles”, or *discourse delimiters* (which I abbreviate DLim), can be interposed between Nroot and suffixes, or between nominal suffixes, but never between Vroot and affixes, nor between verbal suffixes.

The particles/suffixes which can be categorized as DLims include *com* (‘a little’, used as a politeness hedge) and the “copied” plural marker *tul*. DLims are distributed rather promiscuously, attaching loosely to the final

word of any major constituent of the sentence (see H.-G. Lee (1992) for detailed description). Their exact morphosyntactic status is still controversial, but in general they tend to attach to the periphery of words, following other affixes (cf. (15b), (16b), (17a)). However, in certain (colloquial) registers, they can be interposed between the Nroot and other nominal affixes (cf. (15a), (16a)), sometimes doubled by identical DLims word-finally (cf. (15c), (16c)). DLims may also be interposed between other nominal affixes (cf. (17b)):

(15) a. Macimak-**com**-kkaci cal-com hay-la (R-**DLim**-Post)
end-COM-until well-COM do-Imp

b. Macimak-kkaci-**com** cal-com hay-la (R-Post-**DLim**)
end-until-COM well-COM do-Imp

c.? Macimak-**com**-kkaci-**com** cal-com hay-la
end-COM-until-COM well-COM do-Imp
(R-**DLim**-Post-**DLim**)

‘Please, please, do your best to the very end!’

(16) a.? Mul-**tul**-ina masi-ela! (R-**DLim**-Conj)
water-TUL-at least drink-Imp

b. Mul-ina-**tul** masi-ela! (R-Conj-**DLim**)
water-at least-TUL drink-Imp

c.? Mul-**tul**-ina-**tul** masi-ela! (R-**DLim**-Conj-**DLim**)
water-TUL-at least-TUL drink-Imp

‘(Since there is nothing else), why don’t you (PL) drink at least water?’

(17) a. Yeki-eyse-cocha-**tul** pulphyeng-i-nya? (R-Post-XLim-**DLim**)
here-Loc-even-TUL complain-Cop-Q

b. Yeki-eyse-**tul**-cocha pulphyeng-i-nya? (R-Post-**DLim**-XLim)
here-Loc-TUL-even complain-Cop-Q

‘Are you (PL) complaining even in here?’

In contrast, DLims may not be positioned between the verb root and affixes (18a, b). The only place where they can occur is after non-Comp V3 affixes ((18c)), or after any Comp affix ((18d)). However, when X and ZLims are attached to Comp-suffixed verbal forms, they may permute in ordering with DLims ((18e) vs. (18f)):

- (18) a. *Mek-**tul**-ess-ni? (*R-**DLim**-V2-V3)
 eat-TUL-Pst-Q
 ‘Have you (pl.) eaten?’
- b. *Mek-**tul**-key (*R-**DLim**-Comp2)
 eat-TUL-Comp2
 ‘So that they could eat’
- c. Mek-ess-ci-**tul**? (R-V2-V3-**DLim**)
 eat-Pst-Q-TUL
 ‘Didn’t you (pl.) already eat?’
- d. Mek-key-**tul** (R-Comp2-**DLim**)
 eat-Comp2-TUL
 ‘So that they could eat’
- e. Mek-umyense-kkaci-**tul** (R-Comp2-XLim-**DLim**)
 eat-Comp2-even-TUL
 ‘Even while you (pl.) are eating’
- f. Mek-umyense-**tul**-kkaci (R-Comp2-**DLim**-XLim)
 eat-Comp2-TUL-even
 ‘Even while you (pl.) are eating’

The distribution of DLims shown above may not be accounted for by assuming that DLims are similar to X and ZLims in taking a V-SIS entity to a V-SIS entity, because, as we have seen in (15) and (16) above, DLims can be interposed between the Nroot (which is ~TYPE in LAIS) and Post suffixes.⁸

The distribution, however, is exactly what is expected if we make the assumption that DLims can be interposed between free forms but not between a bound morpheme and another element. This entails that Nroot must be a free form (i.e., TYPE:α, in the analysis of LAIS). Likewise, the product of affixation by nominal affixes must be free forms as well.

3.2.2. Summary

In sum, a variety of evidence points toward the conclusion that (i) Nroots are free morphemes, unlike Vroots, (ii) nominal affixes take free forms to free forms, justifying the traditional distinction between nominal and verbal affixes, and (iii) the assumption that there are null affixes in nominal inflection is highly questionable.

Armed with this conclusion, let us turn in the next section to cross-categorial affixation. We first find that the range of cross-categorial suffixes must be broadened beyond that envisaged in LAIS. Indeed, we find that all nominal inflectional affixes can *in principle* be used as cross-categorial affixes, some in contexts explicitly banned in the LAIS account. In addition, further investigation of affixes that can be used cross-categorially reveals that there are a handful of verbal affixes that can be used as cross-categorial affixes in nominal contexts (section 3.3.3).

This conclusion gives rise to the following question: why can most nominal suffixes be used in noun-to-verb cross-categorial contexts while only a few verbal suffixes can be used in verb-to-noun cross-categorial contexts? I suggest that this is so because all nominal affixes are free-form (to free-form) affixes, while most verbal affixes are not. The only verbal affixes that can be cross-categorial are those free-form affixes whose meanings and contextual restrictions are compatible with nominals.

3.3. *Cross-categorial Affixation*

LAIS accounts for the attachment of the intuitively nominal cross-categorial suffixes (XLim and ZLim) to verbal forms by relying on the second nominal template, the Xdlim template (cf. 2b), which we shall henceforth refer to as the *cross-categorial template*.

- (19) Cross-categorial Template:
 <[TYPE:V-SIS] – XLim – ZLim
 (if there is an element specified [TYPE:V-SIS], it may be followed by an XLim and ZLim)

Given that DLims can also attach to Comp-suffixed verbal hosts (cf. (18d, e, f)), (19) must be modified. Even though DLims are positionally flexible, for our present purposes let us place them after ZLim. With this modification, we have the following cross-categorial template:

- (20) Cross-categorial Template (2)
 <[TYPE:V-SIS] – XLim – ZLim – DLim
 (if there is an element specified [TYPE:V-SIS], it may be followed by an XLim, ZLim, DLim)

Several predictions follow from the template(s) in (19, 20). First, given that the only verbal forms that can be TYPE:V-SIS are the Comp-suffixed forms, it is predicted that cross-categorial affixes will attach to verbs only when they carry Comp-suffixes. Second, since the host TYPE of cross-

category suffixes is restricted to V-SIS, it is predicted that cross-categorical suffixes will not attach to verbs in main clauses (TYPE:NO), or to non-final conjuncts of nominal coordinate structures (TYPE:COORD), or to any element, verbal or nominal, that is specified N-SIS, such as pre-nominal forms of verbs, Genitive possessors, and determiners. Finally, it is predicted that any host that is ~TYPE, such as verbal roots or non-Comp V1–V2 suffixed elements, should prohibit delimiter suffixation.

The LAIS account of the distribution of and constraints on cross-categorical affixation relies crucially on selection for TYPE and to the extent that the account is empirically viable, it provides an argument for the utility/necessity of TYPE as an explanatory theoretical construct. The account in LAIS invoking TYPE is insightful and is to a certain extent empirically correct. However, there are certain elements of the analysis that I wish to call into question in this section. After carefully evaluating the problematic aspects of the analysis, I shall propose an alternative perspective on cross-categorical affixation that is empirically correct and in which the attribute TYPE does not play a role.

3.3.1. *Problems with the LAIS Account*

Besides suffering from conceptual problems associated with templates which I alluded to in section 3.1, we may ask the following about the generalization embodied in the cross-categorical template(s) in (19, 20): We know that the nominal affix classes Post and Conj may attach to TYPE:V-SIS hosts. This is clear for Conj, and from what I have argued in the previous section, Post suffixes must be able to do so as well since Nroots can be TYPE:V-SIS in the absence of any suffixation. Given this conclusion, we may ask the following: why is it the case that, of the five classes of nominal suffixes, only XLim, ZLim and DLim can be attached to Comp-suffixed verbal hosts? As it stands, in LAIS only a stipulation prevents Post and Conj from being cross-categorical suffixes.

Fortunately, we find that this stipulation is unnecessary because Post and Conj elements do occur in cross-categorical contexts:

- (21) a. Cip-ey o-myense-**kkaci** Yenghi-ka kipun-i
 home-Dir come-Comp2-Post Y-Nom mood-Nom
 napp-ass-ta⁹
 bad-Pst-Decl
 ‘Yenghi continued to be in a bad mood (from morning) through
 her trip home.’
 (V-Comp-Post)

- b. Cip-ey o-myense-**na** ka-myense accessi-kkey
 home-Dir come-Comp2-Conj go-Comp2 uncle's-Dat
 tulle-la
 go-Imp
 'Drop by at uncle's house either on the way home or the way
 back.'
 (V-Comp-Cpnj)
- c. Hakyo-ey ka-taka-**hako** o-taka wucheykwuk-ey
 school-Dir go-Comp2-Conj come-Comp2 post office-Dir
 tulle-la
 go-Imp
 'Drop by the post office both on the way to school and on the
 way back.'
 (V-Comp-Conj)
- d. I kes-ul ssip-ci-**na** samkhi-ci
 this thing-Acc chew-Comp2-Conj swallow-Comp2
 mala-la
 do not-Imp
 'Do not chew or swallow this.'
 (V-Comp-Conj)

As native speakers can verify for themselves, the attachment of Conj suffixes to Comp-suffixed verbs is reasonably productive. However, only a handful of Post suffixes can be attached to Comp-suffixed verbs. But then once we recognize that the meanings of Post suffixes may not always be compatible with the meanings conveyed by verbal subordination or adjunction, this restriction is quite understandable. Delimiters, which are taken to be exemplars *par excellence* of cross-categorial affixes, are not different in this regard. They can attach to verbs only when they are syntactically, semantically, and contextually compatible with the host.

For example, while the XLim *-man* 'only' can be attached to Comp2 *-ko*, the concessive XLim *-intul* 'although' cannot (cf. *22a vs. 22a'). The failure of the latter to attach to *-ko* appears to be semantic. On the other hand, the contrast between *(22b) and (22b') is clearly syntactic. The verb *po-ta* 'try' is an Acc Case assigner. Therefore, the ZLim *-ka* (Nom Case) is not licensed.

- (22) a. *Mek-ko-**intul** siph-ta
 eat-Comp2-XLim want-Decl
 ‘*I want to although eat.’
- a'. Mek-ko-**man** siph-ta
 eat-Comp2-XLim want-Decl
 ‘I want only to eat.’
- b. *Mek-e-**ka** po-ass-ta
 eat-Comp1-Nom try-Pst-Decl
 ‘Tried eating.’
- b'. Mek-e-**lul** po-ass-ta
 eat-Comp1-Acc try-Pst-Decl
 ‘Tried eating.’

Assuming that the above strategy for filtering overgeneration non-morphologically can be generalized to all illegitimate combinations of verbs and Post/Conj suffixes, we are led to the hypothesis that all nominal suffixes are *potentially* available as (noun-to-verb) cross-categorical affixes. In tandem with the conclusion argued for earlier that Nroots can be TYPE:V-SIS independently of affixation, the revised template shown in (23) below is all that we need for the suffixation of nominal suffixes:¹⁰

- (23) Cross-categorical Template (3)
 { [TYPE:V-SIS] } – Post – Conj – XLim – ZLim – DLim

The revised template above claims that all nominal suffixes attach either to Nroots or to Comp-suffixed verbs. This then leads us to ask a further question: what is it that Nroots on the one hand, and Comp-suffixed verb on the other, have in common that allow them to host nominal affixation? The answer that is suggested in the kind of theory advanced in LAIS, as appropriately revised, would be that the two classes of entities share TYPE:V-SIS specification.

I want to pursue a different answer to this question. Specifically, I want to suggest that nominal affixes attach to these two classes of entities because both classes of entities are free forms. If such an account can be sustained, reference to TYPE can be eliminated, since the independent distinction between free-form and bound-form suffixes will suffice. Equivalently, ~TYPE vs. TYPE:α simply boils down to the distinction between bound and free forms.

At this point one might charge that the proposed alternative to do away with TYPE theory will overgenerate since, according to LAIS, what is

important is not simply whether a form is bound (\sim TYPE) or not (TYPE: α) but also the particular value that TYPE takes. As (23) shows, in LAIS it is claimed that cross-categorial suffixes do not attach to TYPE:NO, COORD, or N-SIS hosts.

The problem is, this claim does not seem entirely correct. There are in fact TYPE:NO and TYPE:COORD hosts which readily accept nominal affixes (certain delimiters) when the syntactic, semantic, and pragmatic conditions are compatible with their attachment. And while there appear to be no instances of nominal affixes (delimiters) attaching to N-SIS hosts, the illegitimate combinations can be filtered out in syntactic and/or semantic terms without invoking morphological selection for a particular value of TYPE.

If the arguments in the following sections are right, the problem with the system in LAIS is that it is *undergenerative*. In the face of under-generation, we have no choice but to relax the formal licensing conditions (= morphological conditions), so that by themselves they overgenerate, and filter out the unacceptable combinations by recourse to other modules of the grammar, such as syntax/semantics and pragmatics.

3.3.2. *Non-Morphological filtering of Overgeneration*

TYPE:NO hosts are free-standing forms. Therefore it is predicted in the proposed alternative that nominal suffixes should in principle attach freely to such forms. The prediction is borne out, but only partially. Most nominal suffixes cannot attach to TYPE:NO hosts, but certain ZLims and DLims can:

- | | |
|---|--------|
| (24) a. *Mek-ess-ta- ulo
eat-Pst-Decl-Inst
'?' | (Post) |
| b. *Mek-ess-ta- pakkey
eat-Pst-Decl-even
'?' | (XLim) |
| c. Mek-ess-tey- to !
eat-Pst-Emph-also
'(Didn't I already tell you) I ate' | (ZLim) |
| d. Mek-ess-ni- tul ?
eat-Pst-Q-TUL
'Did you (all) eat?' | (DLim) |

The simple fact that certain nominal affixes are able to attach to TYPE:NO hosts implies that the restriction imposed by the template in (23) on the hosts of nominal/cross-categorical affixation cannot be sustained. We have to allow affixation to TYPE:NO hosts and filter out overgeneration in the manner suggested earlier. Indeed, plausible non-morphological filtering can be developed for the ill-formed examples we have seen.

The attachment of nominal particles to TYPE:NO hosts, which constitute independent assertions, requests, commands, etc., is allowed only if the syntax, semantics, and pragmatics of the affixes is compatible with that of the hosts. Seen from this perspective, it is not surprising that DLims, which have the function of modifying the illocutionary import of utterances (see H.-G. Lee (1992) for a detailed description of the conditions on the use and conversational import of *tul* and *com*) are the ones that combine most easily with TYPE:NO hosts. The reason most other nominal suffixes cannot attach to TYPE:NO hosts is that they just don't have the right semantics/pragmatics to be used in such contexts.

Let us turn now to TYPE:COORD hosts. In the analysis of nominal conjunctives in LAIS, non-final conjuncts are specified TYPE:COORD, while final conjuncts are specified TYPE:V-SIS. This predicts that non-final conjuncts must end in a 'true' Conj affix (i.e., one that will bring about the type shift to COORD; apparently not all affixes occupying the Conj slot are deemed capable of doing so in LAIS) since the attachment of non-Conj affixes is bound to change the TYPE specification to something other than COORD. Final conjuncts are different and allow other nominal affixes to follow the Conj suffix as long as the additional affixes are TYPE:V-SIS. This is illustrated by the contrast between (25a) and (25b) below:

- (25) a.* [Pap-hako-**man** kwuk-hako] mek-ela
 rice-Conj-only soup-Conj eat-Imp
 'Eat rice alone and soup/Eat only rice and soup.'
- b. [Pap-hako kwuk-hako-**man**] mek-ela
 rice-Conj soup-Conj-only eat-Imp
 'Eat only rice and soup.'

What is wrong with (25a) is that the initial conjunct, which should be TYPE:COORD, has a final suffix *-man* which makes it TYPE:V-SIS. However, *-man* may follow the Conj suffix in the final conjunct in (25b), since its TYPE is V-SIS.

While LAIS predicts the absolute impossibility of non-Conj suffixes on non-final conjuncts in nominal coordination, I predict, on the other hand, that nominal affixes other than Conj affixes should occur on non-final

conjuncts so long as the syntactic, semantic, and pragmatic conditions allow such attachment. This prediction appears to be borne out.

Indeed, we do find XLims (cf. (26a)), ZLims (cf. (27a)), and DLims (cf. (28a)) attached to non-final conjuncts, so long as they are also attached to final conjuncts in an across-the-board (ATB) fashion. The delimiters may also appear on final conjuncts alone ((26–28b)). However, they may not be attached exclusively to non-final conjuncts ((26–28c)):

- (26) a. Na-hako-**man** ne-hako-**man** i kes-ul al-ko
 I-Conj-only you-Conj-only this thing-Acc know-Comp
 iss-ca
 be-Prop
- b. Na-hako ne-hako-**man** i kes-ul al-ko iss-ca
 I-Conj you-Conj-only this thing-Acc know-Comp be-Prop
- c.* Na-hako-**man** ne-hako i kes-ul al-ko iss-ca
 I-Conj-only you-Conj this thing-Acc know-Comp be-Prop
 ‘Let’s only me and you be aware of this fact.’
- (27) a? Chelswu-hako-**nun** Yenghi-hako-**nun** imi cip-ey
 C-Conj-Top Y-Conj-Top already home-Dir
 ka-ss-ta¹¹
 go-Pst-Decl
- b. Chelswu-hako yenghi-hako-**nun** imi cip-ey
 C-Conj Y-Conj-Top already home-Dir
 ka-ss-ta
 go-Pst-Decl
- c.* Chelswu-hako-**nun** Yenghi-hako imi cip-ey
 C-Conj-Top Y-Conj already home-Dir
 ka-ss-ta
 go-Pst-Decl
 ‘As for Chelswu and (as for) Yenghi, they already went home.’
- (28) a. Pap-hako-**tul** ttek-hako-**tul** silkhet mek-ess-nya?
 rise-Conj-TUL rice cake-Conj-TUL a lot eat-Pst-Q
- b. Pap-hako ttek-hako-**tul** silkhet mek-ess-nya?
 rice-Conj rice cake-Conj-TUL a lot eat-Pst-Q

c.*Pap-hako-**tul** ttek-hako silkhēt mek-ess-nya?
 rice-Conj-TUL rice cake-Conj a lot eat-Pst-Q

‘Did you (all) have enough of steamed rice and rice cake?’

The ATB requirement is a salient aspect of the syntax and semantics of coordinate structures. Therefore, it is not surprising to find that nominal affixes whose meanings are compatible with coordinate semantics must nevertheless be distributed in an ATB manner.

The fact that delimiters may occur on the final conjunct alone is not a violation of the ATB generalization. As is amply clear from previous work on Korean coordination (Cho and Morgan (1988), Yoon (1994a, b), and LAIS), suffixes attached to final conjuncts take scope over the entire coordinate structure, rather than over the final conjunct alone. Therefore, these suffixes do not violate ATB.

Let us turn finally to N-SIS hosts (prenominal Genitives, demonstratives, and prenominal verbal forms). LAIS predicts that no nominal suffix should be attached after any of these forms because of the incompatibility of TYPE selection. It is also predicted that it should be impossible to attach, say, a Gen suffix to a prenominal verbal form since Gen selects V-SIS hosts and maps them to N-SIS hosts. Of course, there is no restriction against having other nominal suffixes internal to N-SIS suffixes, or on the larger NP which contains the prenominal element.

This time, the empirical predictions of the LAIS system hold without exception for all nominal suffixes, including DLims, which we saw can attach to TYPE:NO and TYPE:COORD hosts quite freely. I illustrate the restrictions with the XLim *-man* ‘only’, ZLim *-nun* ‘topic’, and DLim *-tul* on prenominal Genitives:

- (29) a.*Na-uy-**man** chayk
 I-Gen-only book
 b. Na-**man**-uy chayk
 I-only-Gen book
 ‘book belonging to me alone’
 c. Na-uy chayk-**man**
 I-Gen book-only
 ‘only my book’
- (30) a.*Ecey-uy-**nun** il
 yesterday-Gen-Top event

- b.*Ecey-**nun**-uy il
 yesterday-Top-Gen event
- c. Ecey-uy il-**un**
 yesterday-Gen event-Top
 'yesterday's event' (topic)
- (31) a.*Ecey-uy-**tul** il-ul
 yesterday-Gen-TUL event-Acc
- b* Ecey-**tul**-uy il-ul
 yesterday-TUL-Gen event-Acc
- c. Ecey-uy il-ul-**tul**
 yesterday-Gen event-Acc-TUL
 'yesterday's event' (object of sentence with plural subject)

In LAIS these cases are pulled together under the requirement that N-SIS suffixes must be final in prenominal contexts. The attachment of cross-categorial suffixes (which take V-SIS to V-SIS entities) is disallowed.

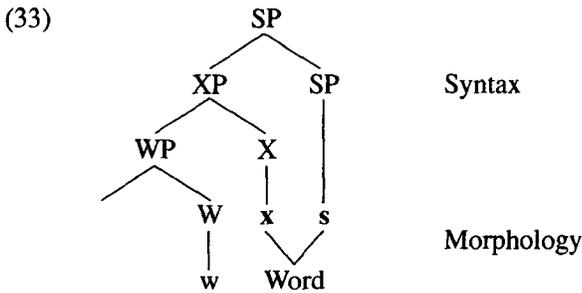
At this point, I might bite the bullet and accept this as a restriction imposed by the morphology on the cross-categorial template so that (32) would be the revised cross-categorial template:

- (32) Cross-categorial Template (4)
 ⟨[TYPE:α]⟩ – Post-Conj – . . .
 (Condition: α ≠ N-SIS)

However, it does not seem impossible to come up with non-morphological explanations for the systematic absence of cross-categorial affixes in prenominal contexts. This is what I attempt to do below.

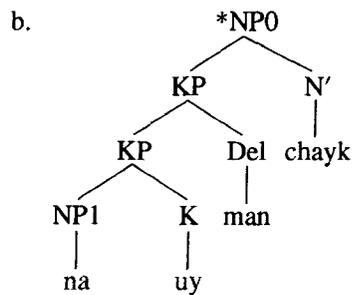
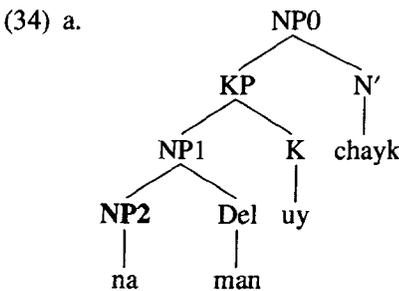
It has been long recognized in traditional and generative treatments of inflection (see Sells (1995), and Yoon (1992, 1994a, 1994b), for different strategies of capturing this intuition) that inflectional suffixes in Korean always have phrasal scope, i.e., they are *phrasal suffixes* in a certain sense. One way to analyze the phrasal scope property of inflectional affixes is to model the notion of phrasal suffix within the constructs of Autolexical theory (Sadock (1990)). A phrasal suffix *-s* belongs to the syntactic category S and subcategorizes a phrase XP in the syntax, heading a phrase SP. Since Korean is syntactically head-final, XP will precede S in the syntax. Morphologically, however, *-s* is specified to be a suffix (or enclitic). Therefore, to satisfy both of its requirements, it must appear as a suffix on the element that is rightmost in XP, which is its head *x*.

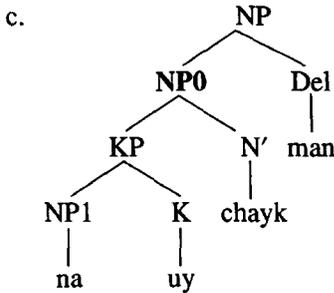
Schematically:



Let us tackle the paradigms in (29–31) with this background. In an NP with a prenominal Genitive there are two maximal projections (NPs) that nominal suffixes (qua phrasal suffixes) may have scope over: the prenominal NP and the larger, containing NP. In each case, however, a nominal suffix must attach to the final element of the domain it has scope over.

(29b) (see 34a below) arises when the nominal affix *-man* has scope over the prenominal NP alone (NP-internal scope). (29c) (see 34c) arises when it combines with the larger NP (wide scope). Seen from this perspective, what is wrong with *(29a) (see *34b), where *-man* is positioned outside the Genitive suffix but before the head noun of the larger NP, is the following. In this position, it cannot be construed as having wide scope because its positioning is not final with respect to the larger NP. Nor can be it construed as having scope only over the prenominal NP. As the English translation ‘book [belonging to [me alone]]’ indicates, Genitive (or nominal dependent marking, such as the phrase ‘belonging to’) must take scope over the delimiter *-man* in the NP-internal scope reading:





In contrast to (29), we find that (30a, b) and (31a, b) are ungrammatical regardless of the relative order of the Genitive and the delimiter suffixes. This may be explained as follows.

As before, the delimiters cannot be construed as having wide scope over the larger NP in (30–31) since they are not final with respect to the larger NP. On the other hand, narrow (NP-internal) scope is ruled out for *-nun* because we may assume plausibly that there are no NP-internal topics. Topic is a necessarily clausal construct. *-tul* is ruled out NP-internally since there is no NP-internal plural antecedent for it, while the plural subject of the sentence containing the larger NP is too far away to license it (see H.-G. Lee (1992) for the locality condition on *tul*-licensing).

This line of explanation allows us to understand the otherwise puzzling minimal contrast between (29b) and (35b) below:

(35) a. Na-**man**-uy pimil (= 29b)
I-only-Gen secret

b.*Na-**pakkey**-uy pimil
I-only-Gen secret

‘The secret belonging to me alone.’

c. Na-uy pimil-**pakkey** mos cikhi-n-ta
I-Gen secret-only not protect-Pres-Decl

‘I can only protect my own secret.’

Both *-man* and *-pakkey* are XLims and both can mean ‘only’. However, only the former is allowed to take NP-internal scope. The reason is this: *-pakkey* is a Negative Polarity suffix, requiring a sentential negative element to license it (cf. (35c)). When it has NP-internal scope (as indicated by its positioning in (35b)), it must have a negative licenser internal to the NP. However, there is no such element. The ungrammaticality of (35b) follows.

Assuming that the non-morphological filtering account sketched in this section is correct in principle, we are led to the conclusion that the cross-

categorical template (or whatever its ultimate reduction may be) need not impose any *morphological* restrictions on the TYPE value of the host of affixation. All that is required is that the host have a TYPE specification. That is,

- (36) Cross-categorical Template (5)
 ⟨[TYPE:α] – Post-Conj – . . .

As is easy to see, this is completely equivalent to saying that any free-form host can take any cross-categorical suffix, as far as morphology is concerned.

3.3.3. Verbal Cross-categorical Affixes

There exists a further reason to suspect that what is relevant for the affixation of cross-categorical suffixes is the free vs. bound distinction and not the distinctions made in TYPE theory. While LAIS and our discussion thus far has assumed that only nominal affixes can be used as cross-categorical suffixes, we can in fact find a small number of intuitively verbal suffixes that are used cross-categorially. In other words, not only do we find *noun-to-verb* cross-categorical affixes, but also a handful of *verb-to-noun* cross-categorical affixes.

The existence of verb-to-noun cross-categorical suffixes is a welcome result in the following sense. The earlier, restricted versions of the cross-categorical template in (36) claim that only intuitively nominal suffixes are capable of functioning as cross-categorical suffixes. This leaves us wondering why verbal suffixes cannot be so used. My answer is that they can, albeit in a much more restricted fashion. The reason why they are restricted can also be explained, once we make the assumption that cross-categorical suffixes are those that attach to free forms and yield free forms, which is what (36) claims, in contrast to the earlier restricted versions.

The verb-to-noun cross-categorical class is restricted because *most* verbal suffixes either take bound forms to bound forms (the classes V1, V2 in LAIS), or bound forms to free forms (the classes V3, and Comp suffixes). It is only the V4 verbal suffixes which take free forms to free forms. As we predict, only these maybe used as cross-categorical suffixes. This is the case with the discourse V4 suffix *-yo*, illustrated below:

- (37) a. John-i wa-ss-tey-yo (Verbal V4)
 J-Nom come-Pst-hearsay-YO
 ‘They say that John came.’

- b. John-i-**yo** pap-ul-**yo** an-mek-ess-eyo
 J-Nom-YO meal-Acc-YO not-eat-Pst-Decl
 (V-to-N cross-categorial)

‘John did not eat his meal.’

-*Nikka* seems to be another V4 suffix that can cross over into nominal contexts:

- (38)a. Pap mek-ess-ta-**nikka!** (V4 Verbal)
 meal eat-Pst-Decl-NIKKA
 ‘I ate! (emphatic)’

- b. Na-**nikka** ku kes-ul phul-ess-ci!
 I-NIKKA that thing-Acc solve-Pst-Decl
 (V-to-N cross-categorial)

‘It is only because I (emphatic) did it that the problem was solved.’

If one were to use TYPE theory to analyze this class, the affixes in question would be those that take TYPE:NO to TYPE:NO entities. It is unclear, by examining their TYPE specifications, what this class has in common with, say, the nominal Delimiters, which take V-SIS to V-SIS. However, the similarities are readily captured in the proposed alternative, which views both of them as free-form (to free-form) affixes.

3.3.4. *Summary*

To conclude this section, I have argued that (i) all nominal suffixes may in principle be used as cross-categorial suffixes, (ii) limiting the host of cross-categorial affixation to TYPE:V-SIS entities is inadequate, (iii) cross-categorial affixes may attach to any free form host, so long as the syntax, semantics, and the pragmatics of the affixes is compatible with such attachment, and (iv) there are plausible non-morphological means of filtering overgeneration.

4. CONCLUSION AND REMAINING ISSUES

By way of conclusion, I will identify several issues that remain on the research agenda.

The ordering of inflectional affixes and how to characterize the ordering remains a high priority on the agenda. If we are to avoid the theoretically

undesirable device of templates in describing affix order, alternative means of characterizing affixal order, whether they be lexical or syntactic, have to be found. While there are a number analyses of affix order for non-Comp verbal affixes, the ordering for nominal affixes has not been tackled in a systematic manner yet. The fact that the ordering of nominal affixes is not fixed and that certain affixes can occur more than once within a word will present further analytic difficulties.

Another issue that this paper has raised is the need to distinguish between constraints on affixal combinations that are purely morphological and those that are syntactic, semantic, or pragmatic. I have suggested that a large burden may fall on the latter in describing constraints on nominal, or cross-categorial, affixation (i.e., free-form-to-free-form affixation). It goes without saying that more comprehensive accounts of just how non-morphological 'blocking' of affix combinations is achieved must be developed, in order for us to ascertain just how much combinatorial and positional "blocking" is due to morphology per se and how much is due to something else.

Thirdly, in order to achieve the goals of the above paragraph, a more comprehensive account of the syntax, semantics, and pragmatics of certain ill-understood classes of affixes – the X, Y, DLims and the verbal 'discourse' affixes – should be developed, building on important previous works such as Yang (1972), for X, YLims and H.-G. Lee (1992) for DLims.

Finally, while I have identified a number of problems with the proposal in LAIS and suggested that the distinctions made by TYPE theory may be unnecessary to explain constraints on affixation,¹² we should not lose sight of the fact that the questions I have raised could be framed only because of the insight that was gained through LAIS, which is the first systematic attempt I know of that tries to make theoretical sense out of the interesting complexities of Korean inflectional morphology.

NOTES

* The idea of writing this paper was suggested to me by the editors of this journal. It turned out to be a bit more than the simple "response" that they had originally intended. I thank them and the journal for providing me the opportunity and the forum to express some of my thoughts on Korean inflectional morphosyntax. This paper and the issues that it addresses would not have materialized without the work that inspired it. My thoughts on several of the issues raised in this paper crystallized through reading and critically reviewing several stages of the work that finally appeared as Yu-Cho and Sells (1995). I believe it is the single most important work to date on the generative morphology of Korean to appear on this side of the Pacific. I am indebted to Peter and Young-Mee for their stimulating research and for constructive suggestions that led to revisions. I would also like to thank Chin-Wu Kim for his helpful comments on an earlier version of this paper.

¹ Sells (1995) is an extended critique of a particular type of syntactic analysis of inflection, a class of analyses that assumes head to head movement as the operation responsible for putting roots and affixes together. Yoon (1992, 1994a, 1994b) present arguments for a syntactic analysis of inflectional affixes that does not assume head to head movement.

² The only other work I am aware of in which inflectional affixation is taken to determine the distribution of derivational roots/stems in the syntax is Myers (1984), which claims that inflectional affixation can be category-changing (or more generally, category-determining), on the basis of zero derivations in English.

³ These would include underived adverbs (*cal* 'well'; *mos* 'not'), numerals, and certain pronominal adjectives and determiners (*say* 'new'; *on* 'all'; *ku* 'that').

⁴ Technically, this is possible because TYPE is a c-structure attribute in LFG. The shift from ~TYPE to TYPE:α is monotonic since it is feature-addition, not feature-change. In the syntax proper, TYPE specifications are usually inherited unmodified along head paths. We shall not deal with the role of TYPE in syntax.

In addition, even within a word, certain types of information must be monotonically distributed. These are treated as f-structure information. For example, the specification for the FORM of Comp must be an f-structure information since a verb can never be suffixed with two different comps. Likewise, information about Postpositional and Surface Cases (P-CASE and CASE) must be f-structure information.

⁵ See Yoon (1994a, 1994b) *inter alia* for an attempt to explicate the template-like ordering in Korean verbal morphology in syntactic terms, and Rice (1993), Speas (1990) for similar proposals concerning templatic systems in Athapaskan languages.

⁶ It is not clear whether it is Dir, and not the Acc with which it can alternate, that is dropped in (8b). If Case-marker drop (in the absence of discourse context, see next note) is normally limited to S(tructural)-Case, then it must be Acc and not Dir which has 'dropped'.

On this alternative, except for null Conj, the only Case affixes that can 'drop' independently of discourse context would be those that express S-Case, i.e., Nom, Acc, and Gen.

⁷ The difference between syntactic contexts in which all affixes can be dropped (such as (13) in the text and Gapping, Non-constituent coordination shown below) and those in which only a handful may be missing (cf. (8) in the text) appears to be a matter of whether or not the information carried by the affix(es) is in an intuitive sense 'recoverable from' the immediate context.

We may assume that, in the context in (8), affixes which are missing are those that are licensed independently by S-Case – {Nom, Acc, Gen} – as suggested in the previous note. S-Case, then, seems sufficient to license "affix drop", independently of any discourse context.

In contrast, other nominal affixes may drop only when there is a sufficiently rich discourse context. For example, in the answer-to-question context in (13), we may assume that it is possible to recover the content of the missing nominal affixes through identification with the previously mentioned token of the identical affix in the question sentence.

Such recovery also seems possible in *Non-constituent Coordination* (cf. (ia, b)) and *Gapping* (cf. (iia, b)) contexts, so that affixes that normally do not drop (cf. (8c, d)) can be missing. We may assume plausibly that the missing affixal information in the first conjunct is identified by the overt affix in the second conjunct.

- (i) a. John-un khal- \emptyset_{Inst} \emptyset_{NP} \emptyset_{V} , Mary-nun kawi-lo cong-i-lul
 J-Top knife-(Inst) M-Top scissors-Inst paper-Acc
 cut-Pst-Decl
 callu-ess-ta
- a'. John-un khal-lo \emptyset_{NP} \emptyset_{V} , Mary-nun kawi-lo cong-i-lul callu-ess-ta
 J-Top knife-Inst M-Top scissors-Inst paper-Acc cut-Pst-Decl
 'John cut the paper with a knife, and Mary with scissors.'

- b. John-un Mary- \emptyset_{Comit} \emptyset_v , Bill-un Jane-hako nol-ass-ta
 J-Top M-(Comit) B-Top J-Comit play-Pst-Decl
- b'. John-un Mary-hako \emptyset_v , Bill-un Jane-hako nol-ass-ta
 J-Top M-Comit B-Top J-Comit play-Pst-Decl
- 'John played with Mary and Bill with Jane.'

⁸ Unless such structures are analyzed as R-Post₁-DLim-Post₂, where Post₁, which is necessary to shift ~TYPE to TYPE:V-SIS, is null. Note, however, that the nominal "structural patterns" in (2a, b) do not admit such an ordering of affixes. On the other hand, the failure of DLims to break into pre-V3 positions can be accounted for in LAIS without any revision, since non-Comp verbal affixes in these slots are correctly taken to be ~TYPE, i.e., bound.

While revising the template to allow certain affixes to occupy more than one position is technically possible, the fact that there is variable positioning at all raises doubts as to whether a template is the correct means of capturing (partial) ordering generalizations among multiple affixes. Muysken (1986) makes an analogous remark about templates on the basis of Quechua morphology.

⁹ In commenting on the present work, Yu-Cho and Sells remark that *-kkaci* here would be licensed as an XLim in their system, not as a Post. On the XLim reading *-kkaci* is most naturally construed as 'even'. *-kkaci* in (21a) does allow this reading, but it also allows a purely locational reading of 'from time X' until time Y'. LAIS takes this reading to reflect the postpositional use of *-kkaci*.

The same ambiguity exists with *-puthe* 'from':

- (i) Yenghi-nun [cha-ey tha-myense-**puthe**] kipun-i nappa-ss-ta
 Y-Top car-Loc enter-Comp-Post mood-Nom bad-Pst-Decl
- 'Yenghi has been in a foul mood from the moment she was getting in the car.'
 (Post reading of *-puthe*)
- 'Yenghi was in a foul mood even when she was getting into the car.'
 (XLim reading of *-puthe*)

¹⁰ The conclusion that all nominal suffixes can potentially be attached to Comp-suffixed forms of verbs does not imply that the latter are nominals (as claimed by Cho (1988)). What determines the possibility of nominal/cross-categorial affixation is not the categorial makeup of the host, but whether the host is free or bound. The fact that free-form adverbials (which are clearly not nominals) accept nominal affixes is an argument supporting this conclusion.

¹¹ For most speakers, the more colloquial Conj *-(i)lang* serves as a better host for *-nun* than *-hako*. The generalization about possible attachment sites remains the same, however:

- (i) a Ne-lang-**un** na-lang-**un** kkut-kkaci chinkwu ha-ca
 You-Conj-Top me-Conj-Top end-To friend do-Prop
- b. Ne-lang na-lang-**un** kkut-kkaci chinkwu ha-ca
 You-Conj me-Conj-Top end-To friend do-Prop
- c. *Ne-lang-**un** na-lang kkut-kkaci chinkwu ha-ca
 You-Conj-Top me-Conj end-To friend do-Prop
- 'Let's you and me remain friends till the very end.'

¹² TYPE theory also serves as a (partial) theory of constituent ordering in syntax, however. I do not think that anything is lost by employing a different mechanism, such as Linear Precedence statements, to restrict constituent ordering. The advantage that a TYPE-based theory of constituent ordering has over the alternatives is that on this view, syntactic ordering would be "lexically anchored", a conceptually attractive view if it can be worked out. I will not dwell further on this issue.

REFERENCES

- Anderson, Steven (1986) "Disjunctive Ordering in Inflectional Morphology," *Natural Language and Linguistic Theory* 4, 1–32.
- Cho, Jae-Ohk (1988) "Suffixed Verb Forms and Compound Verb Constructions," in Eung-Jin Baek (ed.), *Papers from the Sixth International Conference on Korean Linguistics*, International Circle of Korean Linguistics, pp. 77–106.
- Cho, Jae-Ohk and Jerry Morgan (1988) "Case and Coordination in Korean," *Korean Linguistics* 5, 1–30.
- Inkelas, Sharon (1993) "Nimboran Position Class Morphology," *Natural Language and Linguistic Theory* 11, 559–624.
- Kang, Beom-Mo (1988) *Functional Inheritance, Anaphora, and Semantic Interpretation*, PhD dissertation, Brown University.
- Kim, Seok-Duk (1992) *Wulimal Hyengthaylon* [Korean Morphology], Thap Press, Seoul.
- Kiparsky, Paul (1982) "Lexical Morphology and Phonology," in I.-S. Yang (ed.), *Linguistics in the Morning Calm*, Hanshin, Seoul, pp. 3–91.
- Lee, Han-Gyu (1992) *The Pragmatics and Syntax of Pragmatic Morphemes in Korean*, PhD dissertation, University of Illinois.
- Lieber, Rochelle (1980) *On the Organization of the Lexicon*, Indiana University Linguistics Club, Bloomington.
- Lieber, Rochelle (1992) *Deconstructing Morphology*, University of Chicago Press, Chicago.
- Muysken, Pieter (1986) "Approaches to Affix Order," *Linguistics* 24, 629–643.
- Myers, Scott (1984) "Zero Derivation and Inflection," in M. Speas and R. Sproat (eds.), *MIT Working Papers in Linguistics*, volume 7, MIT, pp. 53–69.
- Rice, Keren (1993) "The Structure of the Slave (Northern Athapaskan) Verb," in S. Hargus and E. Kaisse (eds.), *Studies in Lexical Phonology*, Academic Press, San Diego, pp. 145–172.
- Sadock, Jerrold (1990) *Autolexical Syntax*, University of Chicago Press, Chicago.
- Selkirk, Elizabeth (1982) *The Syntax of Words*, MIT Press, Cambridge.
- Sells, Peter (1995) "Korean and Japanese Morphology from a Lexical Perspective," *Linguistic Inquiry* 26, 277–325.
- Speas, Margaret (1990) *Phrase Structure in Natural Language*, Kluwer Academic Publishers, Dordrecht.
- Stump, Gregory (1991) "On the Theoretical Status of Position Class Restrictions on Inflectional Affixes," *Yearbook of Morphology* 4, 211–241.
- Yang, In-Seok (1972) *Korean Syntax: Case Marking, Delimiters, Complementation and Relativization*, Paekhapsa, Seoul.
- Yoon, James Hye Suk (1992) "Inflectional Structures in Korean and Headedness," *Studies in the Linguistic Sciences* 21:2, 179–192.
- Yoon, James Hye Suk (1994a) "Korean Verbal Inflection and Checking Theory," in H. Harley and C. Phillips (eds.), *The Morphology-Syntax Connection*, volume 22, MIT Working Papers in Linguistics, pp. 251–270.
- Yoon, James Hye Suk (1994b) "Lexical Integrity and the Morphosyntax of Verbal Inflection in Korean Coordination," ms., University of Illinois.
- Yu-Cho, Young-Mee and Peter Sells (1995) "A Lexical Account of Inflectional Suffixes in Korean," *Journal of East Asian Linguistics* 4, 119–174.

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