A New Look at Morphosyntactic Phenomena in Korean: No Case Markers but Verbal Postpositions*

HEE-RAHK CHAE
Hankuk University of Foreign Studies

1 Introduction

In addition to affixes and words, Korean includes many 'particles'. However, the morphosyntactic status of these basic units has not yet been firmly established—whether they should be categorized as (derivational or inflectional) affixes, clitics, or regular words. Despite their significance in Korean grammar, very few studies explicitly argue for the existence of clitics in the language. This paper begins by examining the significant findings and arguments presented in Chae (2020), which seeks to clarify the morphosyntactic status of particles in Korean. In Sections 3 and 4, we revise and extend these analyses in two key respects. First, in Chae (2023a), the particles *-i/ka* and *-ul/lul*, traditionally assumed to function as nominative and accusative case markers, respectively, are reanalyzed as delimiters with identical meanings, serving as context-dependent 'lexical variants'. After reviewing this analysis, we discuss its implications for constructions typically characterized by case markers. Second, we propose introducing a lexical category of 'verbal postpositions' (vPs) for 'sentence endings' (SEs). This new category eliminates the need to analyze a sentence as a

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complement phrase (i.e. a CP), which we argue is problematic, as a complement phrase is, by definition, what is required by an element within the sentence.

2 Findings/Arguments in Chae (2020)

Chae (2020) establishes that many of the particles in Korean are clitics. In this section, we first examine some of the major findings and arguments presented in Chae (2020). Additionally, we delve into specific analyses to provide a detailed account of morphosyntactic phenomena in Korean. Building on these findings, Chae (2023b) critiques the articles in Cho and Whitman (2022) (i.e. *The Cambridge Handbook of Korean Linguistics*), highlighting undesirable practices in the analysis of Korean morphosyntax.

Korean abounds with clitics, including not only typical clitics (often referred to as 'bound words') but also less typical ones. However, the absence of clear definitions for basic linguistic units—particularly for the concepts of clitic words and regular words—has led to what Chae (2023b: 846) calls 'certain long-standing and unreasonable practices' in Korean linguistics. Clitics are typically defined as follows (see Nevis et al. 1994, Spencer & Luis 2012):

(1) Grammatical units with some properties of inflectional morphology and some of independent words (Zwicky & Pullum 1983, Zwicky 1985)

Syntactically, clitics are classified as words, meaning they must be assigned to specific lexical categories. Unlike affixes, which attach to the root or stem of a word, clitics combine with a phrase or occupy the position of a phrase (Chae 2020: 26).[1] Consider the following examples:

(2) a. [nay-ka tani-ten hakkyo]-**eyse**
I-Nom attend-Retro school-at
'at the school I used to attend'
b. [**kkaykkus**-ha-] (cf. [[kkaykkus-man]-ha-])
clean-be- -only
'to be clean' 'to be only clean'

In (2a), the clitic *-eyse*, which is a postposition (P), combines with the preceding NP. In (2b), the clitic *kkaykkus-* occupies the position of a phrase, as evidenced by its ability to be modified by delimiters such as *-man* 'only'.

It is relatively straightforward to distinguish clitic words (i.e. clitics) from regular words, as the former are phonologically dependent on their hosts. However, distinguishing clitics from (inflectional) affixes is more challenging. Let us examine the criteria for differentiating these two:

[1] Although we argue that the particles *-i/ka*, *-ul/lul*, and *-uy* are not case markers, we annotate them as Nom, Acc, and Gen, respectively, for expository purposes. The abbreviations used in this paper are as follows: Acc = accusative, Adnr = adnominalizer, Advr = adverbializer, CC = clausal connective, CIV = conjecture/inference/volition, Contr = contrast, Decl = declarative, Del = delimiter, Gen = genitive, Hon = honorific, HonAddr = honorific addressee, HonSubj = honorific subject, Inter = interrogative, M = marker, Nom = nominative, Nomr = nominalizer, NPast = nonpast, Pl = plural, Prop = propositive, Quot = quotative, Retro = retrospective, SE = sentence ending.

(3) Clitics vs. (inflectional) affixes
   a. According to Zwicky and Pullum (1983: 503–4), (i) clitics have less restricted hosts compared to the roots or stems of affixes, and (ii) the combinations of clitics and their hosts exhibit fewer exceptions in form and meaning than those of affixes and their roots or stems (Chae 2020: 25–6).
   b. While clitics are associated with specific formatives, inflectional affixes can be represented in terms of abstract features (Nevis et al. 1994: xiii, Chae 2020: 26, 87).
   c. Inflectional paradigms tend to include a relatively small number of members, one of which must appear in a designated position (Carstairs 1981: 4, Chae 2020: 26, 87).
   d. Affixes form a limited number of combinations with their roots or stems, which are words, whereas clitics have the potential to form an unlimited number of combinations with their hosts, which are phrases (Chae 2020: 26, 87).

While the outputs of affixation—being words—can be listed in the lexicon, the outputs of cliticization—being phrases—cannot. Unfortunately, however, many Korean dictionaries list clitic phrases as if they were words (Baik & Chae 2010, Chae & Baik 2011, Chae 2020: 53–5, 116–8, 125). For instance, expressions such as *kyoyuk-ka* 'educator', which include the clitic *-ka* 'person', are listed in the lexicon despite being clitic phrases rather than derived words (Chae 2020: 109–10). Of course, such clitic phrases can be included in the lexicon for practical purposes, especially when they occur frequently. However, we must bear in mind that not all of them can be included, as the number of clitic phrases containing, for example, the clitic *-ka*, is unlimited (e.g. *nantong-ka* 'rioter, agitator', [*atong kyoyuk*]*-ka* 'a person who specializes in children's education').

Let us now examine some of the major findings and arguments presented in Chae (2020). Firstly, while Korean has only a few inflectional affixes, it has many clitics, most of which are bound words (i.e. typical clitics). Clitic members can be found across various lexical categories, including nouns, verbs/adjectives, adnouns, adverbs, and conjunctions (ibid.: 66). Notably, delimiters and postpositions consist entirely of clitic members. Secondly, most vertival expressions involving *ha-* 'to do', *toy-* 'to become', or other so-called 'light verbs' are not individual words but phrases (ibid.: 157–9).[2] For instance, [*kongpwu ha-*] 'to do study' and [*kensel toy-*] 'to be constructed' are regular verb phrases rather than derived words (cf. *kongpwu(-lul) (acwu) manhi ha-* 'to study (very) much'). Similarly, [*kkaykkus-ha-*] 'to be clean', which contains the adjectival *ha-*, forms a clitic adjective phrase rather than a derived word (see (2b)). Thirdly, many expressions previously analyzed as compounds are now identified as regular phrases (ibid.: 167–70). For example, [*komwu sin*] 'rubber shoe' is not a compound but a phrase, as demonstrated by examples like [[*komwu-wa kacwuk*] *sin*] 'a shoe made of rubber and hide' or [[*so kacwuk*] *sin*] 'a shoe made of cow skin'. Fourthly, there is no need for morphotactic templates to explain the ordering of word-external particles (i.e. clitics) in nominal and verbal expressions (ibid.: 56–62). The only exception is the sequence of the three word-internal particles *-si-ess-keyss*, which are argued to be the only inflectional affixes in Korean (ibid.: 16, 47, 87). The distribution of clitics can instead be fully accounted for by syntactic rules and principles. Lastly, all 'clausal connectives' (CCs) and 'sen-

[2] In Korean, both verbs and adjectives can serve as the heads of predicates. Therefore, a term is needed to collectively refer to these two categories. Since *predicate*, like *subject*, designates a grammatical function rather than a lexical category, Chae (2020: 7) introduced the term *vertive*, derived from *ver(b)* and *(adjec)tive*, for this purpose.

tence endings' (SEs) are argued to be clitics (ibid.: 102, 128–33, 190–7). Among the CCs, nominalizers (e.g. *-(u)m* and *-ki*), adnominalizers (e.g. *-nun* and *-(u)n*), and adverbializers (e.g. *-ese* 'because') are assigned to the lexical categories of N (noun), Adn (adnoun), and Adv (adverb), respectively.

Chae (2020) reconsiders many specific issues regarding Korean morphosyntax. Firstly, among nominal particles, the honorific marker *-nim* (e.g. in *sensayng-nim* 'teacher') is shown to be a clitic noun rather than a derivational affix (ibid.: 83–6). Secondly, the (genuine) plural marker *-tul* (e.g. in *salam-tul* 'people') is also argued to be a clitic noun rather than a derivational or inflectional affix (ibid.: 91–4). Thirdly, among vertival particles, two tense morphemes are identified: the past *-ess/ass/yess* and the nonpast *-ø* (ibid.: 16, 87–8). If there is a third tense morpheme, it would be the 'discontinuous past' *-essess/assess/yessess*. Fourthly, the morpheme *-keyss* is not a (future) tense marker but a modality marker, indicating conjecture, inference, or volition (e.g. *(pap-ul) mek-ess-keyss-ta* 'would have eaten (a meal)') (ibid.: 89–90). Fifthly, the string *(nu)n*, often considered a separate nonpast tense marker, is not an independent morpheme but part of the portmanteau morph *-(nu)nta* (cf. *mek-ess-keyss-ta* vs. **mek-nun-keyss-ta*) (ibid.: 90, 159–61). Sixthly, the adnominalizers *-nun*, *-(u)n*, *-(u)l*, and *-ten*, analyzed as clitic adnouns, are also argued to be portmanteau morphs, as they encode both tense or modality and the function of nominal modification (ibid.: 119–20, 215). Lastly, all expressions containing the retrospective *te* (e.g. *-tela* and *-teni*), which function as SEs or CCs, are likewise assumed to be portmanteau morphs (ibid.: 162–3).

Based on the findings and arguments above, Chae (2020: 66) proposes a new classification of lexical categories in Korean, which encompasses both regular words and clitic words.

(4) A new classification of lexical categories in Korean (Chae 2020: 66)

Category	Member
Nouns	Regular words; Clitics: *-ccali*, *-nay*, *-ssik,* etc.
Pronouns	Regular words
Numerals	Regular words
Verbs	Regular words; Clitics: *-keli-, -tay-*, etc.
Adjectives	Regular words; Clitics: *-i-*, *-ha-*, *-kath-*, *-tap-*, etc.
Adnouns	Regular words; Clitics: *cey-*, *cen-*, *kwu-*, etc.
Adverbs	Regular words; Clitics: *nayli-*, *toy-*, *tuli-*, etc.
Delimiters	Clitics: *-man*, *-cocha*, *-kkaci*, *-to*, etc.
Postpositions	Clitics: *-ey*, *-eyse*, *-(u)lo*, etc.
Conjunctions	Regular words; Clitics: *-kwa/wa*, *-mich*, *-nayci*, etc.
Interjections	Regular words

Note that SEs (sentence endings) are not assigned to any lexical categories, even though they are analyzed as clitics (see Section 4).

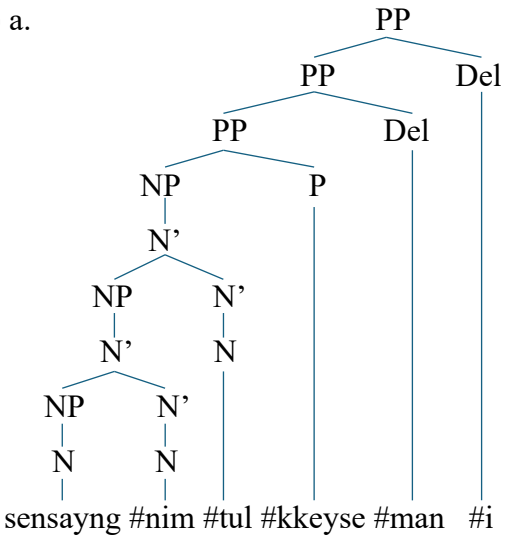
To summarize the discussion so far, we refer to the following examples of nominal and verbal complexes:

(5) a. sensayng-nim-tul-kkeyse-man-i
teacher-Hon-Pl-HonSubj-only-Nom
'only (honorable) teachers'
b. cap-hi-si-ess-keyss-ta-ko-yo
catch-Pass-HonSubj-Past-CIV-Decl-Quot-HonAddr
'(it is said) that (he/she) might have been caught'

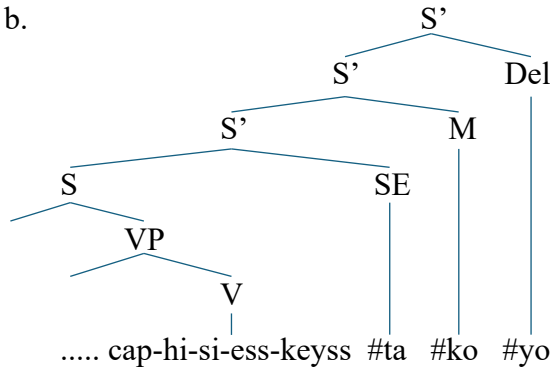
Regarding (5a), the book demonstrates the following: (i) The honorific marker *-nim* is a clitic rather than a derivational affix; (ii) The (genuine) plural marker *-tul* is a clitic rather than an inflectional affix; and (iii) The marker *-i/ka* is also a clitic rather than an inflectional affix (see Section 3). Additionally, it is evident that not only postpositions, including the honorific-subject marker *-kkeyse*, but also delimiters are clitics. Regarding (5b), the book establishes the following: (i) The passive marker *-hi* is a derivational affix; (ii) The honorific-subject marker *-si*, the past-tense marker *-ess*, and the CIV marker *-keyss* are inflectional affixes; and (iii) The sentence ending *-ta* is a clitic rather than an inflectional affix. Furthermore, elements such as the quotative marker *-ko* and the honorific-addressee marker *-yo* are clitics, as they can appear after the sentence ending clitic. This observation aligns with Zwicky and Pullum's (1983: 503–4) assertion that 'clitics can attach to material already containing clitics, but affixes cannot'.

The examples in (5) can be represented in tree diagrams, where clitics are indicated with a preceding number sign '#', and affixes with a hyphen '-'.

(6) a.



b.



In (6a), all the particles are clitics and, consequently, claim a lexical category. Here, *sensayng* is both a word and the smallest phrase. In (6b), *cap-hi-si-ess-keyss* constitutes a single word because the four attached particles are all derivational or inflectional affixes, whereas the remaining particles are clitics.

Building on observations like these, Chae (2023b) critically examined the articles in Cho and Whitman (2022) and identified the following problematic practices. First, all the articles assume that [VN + *ha-/toy-*] expressions (e.g. *kongpwu-ha-* 'to study', *kiso-toy-* 'to be prosecuted') are words rather than phrases (Chae 2023b: 846). Second, most, if not all, of the articles treat *-ss* as an allomorph of the past tense marker, as in *hay-ss-* 'did', *ka-ss-* 'went', and *ponay-ss-* 'sent' (ibid.: 846–7). However, if *-ss* is indeed an allomorph of the past tense marker, *hay-ss-* would presuppose the existence of a verb stem *hay-* 'do', which does not exist in Korean. Instead, the occurrence of *-ss* follows (lexically conditioned) phonological patterns and is therefore predictable. The examples above are contracted forms containing one of the three allomorphs of the marker (i.e. *-ess*, *-ass*, *-yess*): /*ha-yess-*/ ⇒ [*hayss*], /*ka-ass-*/ ⇒ [*kass*], /*ponay-ess-*/ ⇒ [*ponayss-*].

3 The Identity of *-i/ka* and *-ul/lul*

Chae (2023a) argues that the particles *-i/ka* and *-ul/lul* are not case markers but delimiters, with *-i/ka* occurring exclusively in stative contexts and *-ul/lul* restricted to dynamic contexts.[3] It is demonstrated that *-i/ka* has been (wrongly) analyzed as a nominative marker because the subject always appears in a stative context, and *-ul/lul* as an accusative marker because the object always appears in a dynamic context. From this perspective, we examine phenomena and constructions typically assumed to involve case markers, such as 'case alternation', 'case stacking', 'multiple nominative/accusative constructions', and 'multiple verbal noun constructions'. We focus on the fact that these phenomena and constructions maintain their identities not only when they contain *-i/ka* or *-ul/lul* but also when they include other delimiters.

3.1 The Analysis of Chae (2023a)

The particles *-i/ka* and *-ul/lul* are generally regarded as nominative and accusative case markers, respectively. However, they occur not only in argument positions but also in various nonargument positions. To account for this distributional fact, they are often assumed to be ambiguous between

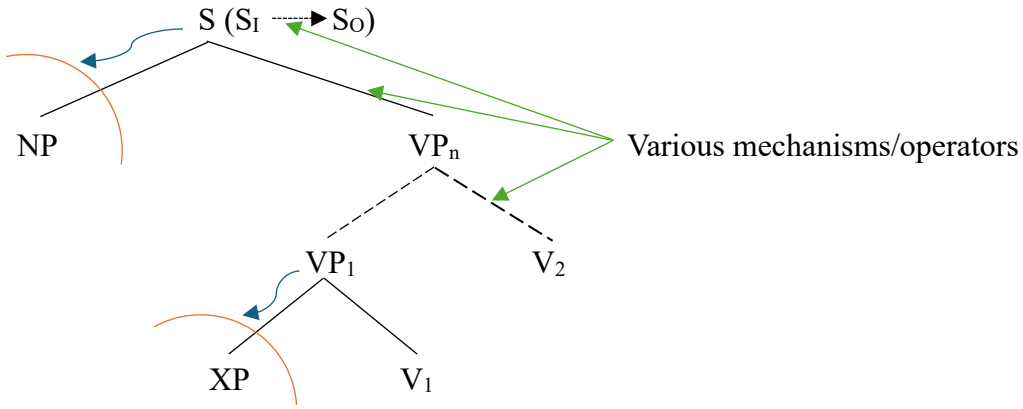
[3] The allomorphs *-i* and *-ul* appear after entities ending in a consonant, while the allomorphs *-ka* and *-lul* occur after entities ending in a vowel.

case markers and non-case markers and/or to carry different meanings (when functioning as non-case markers). Nonetheless, existing analyses have not successfully established objective criteria for distinguishing case markers from non-case markers or for defining their differing meanings. Although some analyses argue that these particles are not case markers, they fail to explain why, between the two, only *-i/ka* can appear after subjects, and only *-ul/lul* can appear after objects.

To address the issues with previous approaches, Chae (2023a) offers a unique perspective, which can be summarized as follows. The particles, as context-dependent lexical variants, function as delimiters with the same meaning.[4] Lexical variants are pairs of distinct words in complementary distribution, meaning they occur in different environments. For example, the postpositions *-eykey* and *-ey* both mean 'to', but the former occurs only after words referring to animate entities, while the latter occurs only after words referring to inanimate entities. Similarly, the particle *-i/ka* occurs only in stative contexts, and the particle *-ul/lul* only in dynamic contexts. Only *-i/ka* can appear after subjects because subjects are always in stative contexts, and only *-ul/lul* can appear after objects because objects are always in dynamic contexts.

The stativity context of a category is primarily determined by the stativity of its mother category. If the mother category is stative or dynamic, the category itself is in a stative or dynamic context, respectively (Chae 2023a: 233–7).[5]

(7)



The subject NP, as a daughter of S, is influenced by S, while the XP, as a daughter of VP_1, is influenced by VP_1. The XP realizes the object NP or other sister elements of V_1. We assume that semantic operators can function within the syntactic category S. When semantic operators apply to the semantic input (S_I), this category is transformed into the semantic output (S_O), which will ultimately correspond to the syntactic category S.

To determine the stativity of the subject NP's context, it is first necessary to identify the stativity of S (Chae 2023a: 235–6). First, mechanisms operating between VP_1/V_2 and VP_n include progressive and perfective constructions. These constructions yield stative predications even when the verb involved is dynamic (Herweg 1991, de Swart 1998, Michaelis 2011). Second, mechanisms operating at the level between VP_n and S, or between S_I and S_O, include the present/nonpast and past tenses. The nonpast tense of stative verbs, unsurprisingly, produces stative readings. Moreover,

[4] Delimiters form a lexical category that includes *-un/nun* 'Topic/Contr', *-to* 'also', *-man* 'only', etc. (see (4); Chae 2020: 67, 139–41).

[5] Chae (2023a: 234–6) argues that the predicate VP also places its subject NP in a stative context.

the nonpast tense of dynamic verbs also yields stative readings, such as habitual or generic interpretations, through 'stative coercion' (Michaelis 2011: 1384–6). Similarly, the past tense produces stative readings even when the input is dynamic, as 'an event that occurred in the past, seen from the present viewpoint, has a fixed unchanging temporal and spatial span' (Chae 2023a: 236). Although tense-related operators may function semantically at a level between S_I and S_O, this does not affect our analysis, as the syntactic category S includes all information derived from the output of these operators (i.e. the information from S_O). Thus, we can conclude that S is always stative because all mechanisms and operators functioning between VP_1/V_2 and S produce a stative output, regardless of the stativity of the input VP_1. Notably, all sentences feature either a nonpast or a past tense. Recall that the context of the subject NP is determined by the stativity of S. Since S is always stative, we can now understand why the subject can be marked with *-i/ka*, which occurs only in stative contexts, but never with *-ul/lul*, which occurs only in dynamic contexts.

To determine the stativity of the object NP's context, it is necessary to first identify the stativity of VP_1 (Chae 2023a: 236–7). The primary factor in determining the stativity of a VP is its head vertive (i.e. its head verb or adjective). The stativity context of XP (the object and other dependents) is derived from the stativity of VP_1, which, in turn, depends on the stativity of V_1. Thus, if V_1 is stative, XP will be marked with *-i/ka*. Conversely, if V_1 is dynamic, XP will be marked with *-ul/lul*.

It has been argued that Korean vertives can be classified into three groups (see Lee 2017: 6–7, Lee 2019: 60–79, Chae 2023a: 219–20):

(8) Three groups of vertives in Korean
   a. Group A: Agentive dynamic vertives (unergative, transitive, causative verbs; some adjectives)
   b. Group B: Non-agentive dynamic vertives (unaccusative, passive verbs; some adjectives)
   c. Group C: Stative vertives (adjectives)

According to this classification, all verbs are dynamic and therefore induce a dynamic context. However, some VPs containing Group B verbs can induce a stative context if certain factors increase the degree of stativity. Factors contributing to increased stativity in VPs include inanimate (vs. animate) subjects, indefinite (vs. definite) subjects, and frequency (vs. duration) adverbials (Chae 2023a: 224–8). Additionally, negation has the effect of 'neutralizing' stativity (Chae 2021, Chae 2023a: 230). Specifically, negation not only makes dynamic expressions more stative but also makes stative expressions more dynamic compared to their affirmative counterparts. In contrast, all adjectives are inherently stative and induce a stative context. However, some adjectives are ambiguous. For instance, *aphu-* 'to be sick' is ambiguous between Groups C and B, while *coyong-ha-* 'to be silent' is ambiguous between Groups C and A (Chae 2023a: 229).

3.2 Constructions Characterized by 'Case Markers'

If the particles *-i/ka* and *-ul/lul* are not case markers, as argued in Chae (2023a), it raises the question of how we can account for the phenomena typically associated with these particles. In this section, we address this issue by examining the phenomena of 'case alternation' and 'case stacking' as well as those involving 'multiple nominative/accusative' and 'multiple verbal noun' constructions.

(9) Phenomena/constructions involving *-i/ka* and *-ul/lul*

a. Case alternation

i) minswu-nun hakkyo-**ey** ka-ass-ta. (cf. … hakkyo-ø ka-ass-ta.)
Minsoo-Topic school-to go-Past-Decl
'Minsoo went to school.'

ii) minswu-nun hakkyo-**lul** ka-ass-ta.
-Acc

b. Case stacking

i) [swuci-**eykey**-**ka**] ton-i manh-ø-ta.
Susie-to-Nom money-Nom be much-NPast-Decl
'Susie has a lot of money.'

ii) swuci-ka [hakkyo-**ey**-**lul**] tani-ø-nta
school-to-Acc attend-NPast-Decl
'Susie attends school.'

c. Multiple nominative constructions

khokkili-**ka** kho-**ka** kil-ø-ta.
elephant-Nom nose-Nom be long-NPast-Decl
'Elephants have long noses.'

d. Multiple accusative constructions

swuci-ka kwail-**ul** kkepcil-**ul** mek-ess-ta.
Susie-Nom fruit-Acc peel-Acc eat-Past Decl
'Susie ate the fruit peel.'

e. Multiple verbal noun constructions

cengpwu-ka swuip-**ul** heka-**lul** ha-yess-ta.
government-Nom import-Acc permission-Acc do-Past-Decl
'The government granted permission for imports.'

According to the traditional view, *-i/ka* and *-ul/lul*, as case markers, play an essential role in characterizing these phenomena/constructions.

Before considering the case alternation and case stacking phenomena in (9a–b), it is important to note that both *-ey* 'to' and *-eykey* 'to' are not dative markers but postpositions (Ahn 1988: 4, O'Grady 1991: 6–8, Chae 2020: 25, 134). Similarly, *-i/ka* and *-ul/lul* are not case markers but delimiters. Consequently, they are not directly related to case. Regarding the data in (9a), it has been traditionally assumed that the two 'case markers' *-ey* and *-ul/lul* alternate freely between the two sentences. However, this alternation can be more accurately analyzed as an accidental result of the deletion of the postposition *-ey* and the addition of the delimiter *-ul/lul*, which functions as a modifier. First, *-ey* in (9a.i) can be deleted, resulting in [*hakkyo-ø ka-ass-ta*]. Second, *-ul/lul*, as a modifier, can then be added to modify its head phrase *hakkyo*. Its role as a modifier is confirmed by the fact that it can also modify *hakkyo-ey*, as in […*hakkyo-ey-lul ka-ass-ta*]. In short, the apparent alternation between the two particles arises because the postposition *-ey* can be deleted, and the delimiter *-ul/lul* can be added to the resulting position.[6] For the data in (9b), Kay (2024) has

[6] EunJin Kay (2024) has demonstrated a strong correlation between the deletability of the relevant postposition and the possibility of the delimiter *-ul/lul* occurring. She discusses this in her draft, 'An Alternative Analysis of "Case Alternation" Phenomena in Korean'.

shown that 'case stacking' is simply the combination of a postposition and a delimiter. In other words, the constructions in question involve PPs that happen to be modified by the delimiter *-i/ka* or *-ul/lul*. It is noteworthy that in these sentences, *-i/ka* and *-ul/lul* can be replaced with other delimiters such as *-un/nun* 'Topic/Contr', *-to* 'also', or *-man* 'only'. Even with these substitutions, the sentences maintain the same properties of 'case alternation' or 'case stacking' as those with *-i/ka* or *-ul/lul*.

For all the other constructions in (9) as well, their identity remains intact even when the particles *-i/ka* and *-ul/lul* are replaced by other delimiters.

(10) The nonexistence of 'multiple nominative constructions'
a. khokkili-ka/-nun/-to/-man [kho-ka/-nun/-to/-man kil-ø-ta].
elephant-Nom/Contr/also/only nose be long-NPast-Decl
b. [khokkili(-uy) kho]-ka kil-ø-ta.
elephant-Gen nose-Nom be long-NPast-Decl
'The nose of elephants is long.'

(11) The nonexistence of 'multiple accusative constructions'
a. swuci-ka [kwail-ul/-un/-to/-man [kkepcil-ul/-un/-to/-man mek-ess-ta]].
Susie-Nom fruit-Acc/Contr/also/only peel eat-Past Decl
b. swuci-ka [kwail(-uy) kkepcil]-ul mek-ess-ta.
Susie-Nom fruit-Gen peel-Acc eat-Past Decl
'Susie ate the peel of the fruit.'

(12) The irrelevance of *-ul/lul* in multiple verbal noun constructions
a. cengpwu-ka [swuip-ul/-un/-to/-man [heka-lul/-nun/-to/-man ha-yess-ta]].
government-Nom import-Acc/Contr/also/only permission do-Past-Decl
b. cengpwu-ka [swuip(-uy) heka]-lul ha-yess-ta.
government-Nom import-Gen permission do-Past-Decl
'The government granted import permission.'

Let us now compare the (a) and (b) sentences in (10)–(12). The (a) sentences demonstrate that not only *-i/ka* and *-ul/lul* but also other delimiters can appear in the same position. In contrast, the (b) sentences lack any delimiter following the first NP among the NPs that characterize the construction in question.

Even with delimiters other than *-i/ka* and *-ul/lul*, all the constructions in the (a) sentences retain their identity. In (10a), *khokkili* 'elephant' and *kho* 'nose' constitute two separate NPs and maintain the same relationship, whatever that may be, regardless of the delimiter they combine with. Furthermore, both NPs function as subjects of (different) predicates.[7] That is, there are two entities being described, namely the elephant and the nose. The only difference among the sentences with different delimiters arises from the properties of the delimiters themselves. For instance, [*khokkili-*

[7] The status of the multiple NPs in 'multiple nominative constructions' remains controversial. Among various proposals, we assume, for example, that *kho-ka* is the subject of *kil-ta* and that *khokkili-ka* is the subject of [*kho-ka kil-ta*], which is traditionally referred to as a 'predicate clause' (see Chae & Kim 2008: 877–8, 886). Chae (2020: 198) introduces the 'vertivalizer -ø' to explain the 'reanalysis' of the predicate clause as a VP.

ka kho-ka …] and [*khokkili-man kho-man* …] differ in the following way: While *khokkili* and *kho* are 'uniquely specified' in the former,[8] they are qualified as 'only' in the latter. As shown in the (b) sentences, the constructions lose their identity only when no delimiter appears after the first NP. In (10b), for example, [*khokkili(-uy) kho*] 'the nose of the elephant' forms a single NP, with *khokkili(-uy)* functioning as a modifier NP for the following head N'. The presence or absence of the adnominalizer *-uy* does not affect this relationship (Chae 2020: 122–3). As a result, there is only one subject and, consequently, only one entity being described in the sentence (i.e. the nose).

The situation is the same in (11) and (12). In (11a), there are two separate NPs and two objects of *mek-* 'to eat', regardless of the particle attached. In contrast, (11b) contains only one NP and one object. Similarly, in (12a), there are two verbal noun phrases (i.e. those headed by *swuip* and *heka*), each with its own subcategorization requirements (Chae 2002: 122–3). However, in (12b), there is only one verbal noun phrase, headed by *heka*.

From the observations above, we can conclude that all the (a) sentences in (10)–(12) represent realizations of the same constructions. There is no evidence to differentiate those sentences with *-i/ka* or *-ul/lul* from those with other delimiters. This indicates that the particles *-i/ka* and *-ul/lul* are not integral elements of these constructions. Consequently, the constructions are not tied to 'case markers', regardless of whether *-i/ka* and *-ul/lul* are considered case markers. Thus, the claim that Korean has 'multiple nominative/accusative constructions' cannot be sustained. Instead, despite ongoing debates about the roles of the multiple NPs involved, these constructions are more accurately described as 'multiple subject/object constructions'. As demonstrated in (10) and (11), the so-called 'case markers' are also irrelevant to characterizing the constructions in (12).

4 Positing Verbal Postpositions (vPs)

Sentence endings (SEs) are clitics, but they do not belong to any existing lexical category. Although they combine exclusively with matrix clauses, none of the categories in (4) exhibit this property. The observation that traditional '(nominal) postpositions (or prepositions)' (nPs) combine solely with NPs, PPs, and AdvPs leads us to propose that SEs are better understood as 'verbal postpositions (or prepositions)' (vPs). Given that vPs and nPs are in complementary distribution, we can infer that they collectively constitute a broader category of extended adpositions.

An important implication of this analysis is that we do not need to assume the sentence to be a complement phrase—a claim that would result in internal contradictions.[9] It is widely accepted that the extracted element in English interrogative (and topic) constructions occupies the complementizer (C) position, thereby rendering the entire sentence a 'complementizer phrase' (CP). Despite its popularity, this analysis is problematic because, conceptually, the sentence is an independent linguistic unit and, therefore, cannot be a unit that has a complementizer. The function of a

[8] Among various interpretations of the meaning of *-i/ka*, Kim (2013: 47) argues that its (pragmatic) meaning can be characterized as 'unique specification' (see Chae 2023a: 213–4).

[9] We distinguish between 'sentences' and 'clauses' as follows: Sentences are self-standing, independent units, whereas clauses are dependent or, at the very least, non-independent. Note that although a sentence may contain only a single clause, even that clause cannot stand alone without a sentence ending (SE). Sentences consist of one or more clauses, which are classified into a matrix clause and zero or more subordinate clauses. While simple sentences, such as (9a.i), consist of a single matrix clause, complex sentences, such as (13a), contain one main clause and one or more subordinate clauses. Regardless of whether they are simple or complex, all sentences must have an SE. We represent clauses as Ss and sentences as S's, CPs, or vPPs.

complementizer is to indicate that the string it combines with is dependent on some other element. However, in our analysis, the extracted element occupies the vP position outside the matrix clause, not the C position. This perspective avoids the conceptual difficulties associated with treating the sentence as a CP. In this section, we explore the idea that SEs are best classified as a new (sub-)category of verbal postpositions (vPs).

In Chae (2020: 102, 128–33, 190–7), clausal connectives (CCs) and sentence endings (SEs) are analyzed as clitics and, therefore, must be assigned to lexical categories. Following the arguments in Chae (ibid.: 131–3), we assume that both CCs and SEs combine with the preceding clause. Before characterizing the nature of SEs, let us first compare the distribution of CCs and SEs.

(13) a. [[minswu-ka haksayng-i]-**m**-i pwunmyeng-ha-ø]-**ta**.
Minsoo-Nom student-Cop-Nomr-Nom be evident -NPast-Decl
'It is evident that Minsoo is a student.'
b. [[[ø pap-ul mek]-**nun**] salam-i manh-ø]-**ni**?
meal-Acc eat-Adnr person-Nom be many-NPast-Inter
'Are there many people eating a meal?'
c. [[nalssi-ka chwup]-**uni** pang-ey tul-e ka-ø]-**ca**.
weather-Nom be cold-because room-to enter -NPast-Prop
'Since it is cold, let's enter the room.'

While CCs combine with subordinate clauses (Ss), SEs combine with matrix clauses (Ss). Among CCs, nominalizers such as *-(u)m*, *-ki*, and *-nunci*; adnominalizers such as *-nun*, *-(u)n*, *-(u)l*, and *-ten*; and various types of adverbializers like *-(u)ni* 'because' are assigned to nouns, adnouns, and adverbs, respectively (Chae 2020: 190–7).[10] That is, a subordinate S combined with a nominalizer, an adnominalizer, or an adverbializer becomes an NP, an AdnP, or an AdvP, respectively. In contrast, SEs such as the declarative *-ta*, the interrogative *-ni*, and the propositive *-ca* have not yet been assigned to any lexical category. Both CCs and SEs combine with Ss, but they do so at different syntactic levels.

The exclusive combination of CCs and SEs with Ss prompts us to consider their relationship with postpositions (Ps), as Ps never combine with Ss in Korean. It is well known that if two entities exhibit complementary distribution, they are highly likely to belong to the same category. Ps demonstrate the following distribution:

(14) Distribution of Ps
a. Combine with an NP:
[ce hakkyo]-eyse (cf. *in that school*)
that school-in/from
'in/from that school'
b. Combine with a PP:
[ce hakkyo-eyse]-pwuthe (cf. *from under the bed*)
-from
'from that school'

[10] Not only 'subordinate conjunctions' but also 'coordinate conjunctions' are classified as adverbializers, as we assume that Korean lacks coordinate conjunctions, at least at the syntactic level (Chae 2020: 147–9).

c. Combine with an AdvP:
[(achim) ilccik]-pwuthe (cf. *from early in the morning*)
morning early-from
'from early on (in the morning)'

Ps can cooccur with NPs, PPs, and AdvPs, much like their counterparts in English. Based on this distribution, we can infer that CCs/SEs and Ps are truly in complementary distribution.

It remains unclear, however, whether Ps can follow S', a unit consisting of an S plus an additional element, such as a complementizer or conjunction:

(15) a. [[cha-ey tha]-myense]-pwuthe (cf. *from when I got into the car*)
car-at/in get in/into-while-from
'from when … got into the car'
b. *[cha-ey tha]-ey/eyse/pwuthe/kkaci/…
-at/in/from/until/...

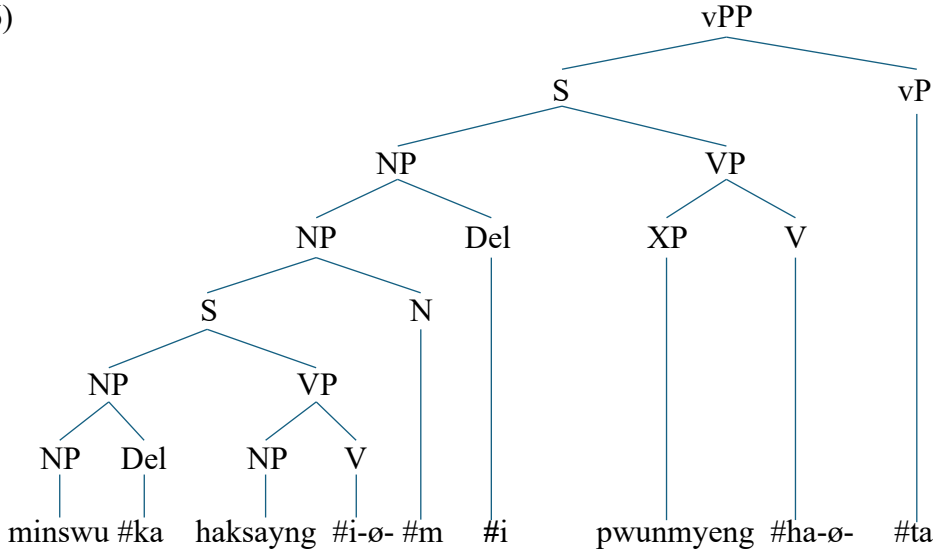
In (15a), the P *-pwuthe* is attached to a unit comprising an S and the adverbial CC *-(u)myense*. In our analysis, *-(u)myense* is an Adv, which means that [S-*(u)myense*] is an AdvP. In contrast, the traditional analysis treats *-(u)myense* as a (subordinate) conjunction. If the traditional analysis is correct, *-pwuthe* in (15a) could be interpreted as being attached to an S'. What is crucial for our argument, however, is that Ps cannot attach to (subordinate or matrix) Ss in Korean, as demonstrated in (15b). The phenomenon in English, however, is somewhat more complex. Examples like [*from how she reacted*] suggest that the P *from* can combine with an S'. Moreover, cases such as [*after/before/since/until she came*] add further complexity. If *after, before, since,* and *until* are analyzed as Ps, as argued by Bruton-Roberts (2022: 179, 181), then Ps can, in some instances, combine with Ss in English. For our purposes, however, it is sufficient to note that Ps cannot combine with matrix Ss in English, either.

Summarizing our observations on Korean, Ps combine with NPs, PPs, or AdvPs, while CCs and SEs combine with Ss, regardless of whether Ps can be regarded as combining with an S' or not. Based on this, we can conclude that Ps and CCs/SEs are in complementary distribution. Furthermore, CCs and SEs themselves are in complementary distribution, combining with subordinate Ss and matrix Ss, respectively. It is important to focus specifically on SEs, as CCs have already been assigned to specific lexical categories.[11] Thus, our task is to identify the entities that combine with matrix Ss (i.e. SEs). Additionally, it should be noted that Ps cannot combine with matrix Ss in either Korean or English. Given the distributional relationship between SEs and Ps, we can infer that SEs belong to a lexical category encompassing both traditional Ps and SEs. If we classify traditional Ps as 'nominal Ps' (nPs), then SEs can be labeled as 'verbal Ps' (vPs). The overarching category that includes these two subcategories can be conceptualized as an extended category of Ps.

[11] Although CCs and SEs belong to different lexical categories, the fact that they share the same host (S) suggests that they may have historically undergone '(de-)grammaticalization' from a common source. In fact, some CCs, such as *-(u)ni* 'because', *-(u)nikka* 'because', *-(u)mye* 'while', *-(u)myense* 'while', and *-ko* 'and' can also function as SEs (Chae 2005: 587–8, 601).

According to our assumption that SEs belong to the lexical category of vPs, sentence (13a) can be analyzed as follows (see (6)):

(16)

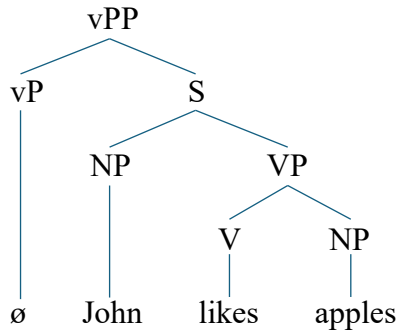


While the CC *-(u)m*, which is a noun, combines with the subordinate S to form an NP, the SE *-ta*, which is a vP, combines with the matrix S to form a vPP. This vPP corresponds to S' or CP in previous analyses. The adjectival *ha-*, identified as a clitic (Chae 2020: 30, 115), takes an XP as its complement. Although its complement can be an NP, as in *kenkang#ha-* 'to be healthy', non-nominal elements such as *ssikssik* are also permitted (e.g. *ssikssik#ha-* 'to be energetic').

The present analysis has an important implication. In '*wh*-fronting languages' like English, the extracted *wh*-phrase is traditionally assumed to occupy the complementizer (C) position, rendering the entire sentence a 'complementizer phrase' (CP). This approach has also been extended to '*wh*-in-situ languages' such as Japanese and Korean, based on the notion of 'implicit movement'. However, this analysis is problematic both conceptually and empirically. Conceptually, the matrix clause cannot logically have a C. The function of C is to indicate that the string it combines with is dependent on a head that requires the string. By definition, however, a matrix clause cannot be dependent on any other element. Empirically, there is no clear evidence that the category employed for extracted elements is truly a complementizer. It is merely assumed to be a complementizer based on its similarity to the behavior of complementizers in subordinate clauses. In contrast, our analysis avoids the need to interpret the sentence as a CP. Instead, it can be analyzed as a phrase headed by a vP (i.e. a vPP), with the extracted element occupying its vP position. While English lacks explicit vPs, Korean provides clear evidence for this category.

In Korean, since all sentences contain an SE, they necessarily include an explicit vP. This means that no other element can occupy the vP position, as it is already filled. In contrast, English sentences lack an element corresponding to the Korean SE, and therefore, do not have an explicit vP. As a result, the vP position in English remains available for other elements. This difference appears to correlate with the distinction between *wh*-in-situ languages and *wh*-fronting languages. In *wh*-in-situ languages, the presence of an explicit vP leaves no room for a fronted element. In *wh*-fronting languages, however, the absence of an explicit vP creates space for a fronted element. Based on this assumption, English sentences can be analyzed as follows:

(17)



The category vP precedes S, as English, unlike Korean, is a head-initial language (cf. (16)). The vP position is taken by the zero element *ø*, since English, unlike Korean, lacks an explicit vP.

If our analysis is correct, there appears to be a close correlation between the following two factors: (i) whether a language has an implicit or explicit vP, and (ii) whether a language allows extraction of *wh*-elements or not. Since English has an implicit vP, it permits *wh*-phrase extraction in questions. Subject-auxiliary inversion in English questions may also be related to the presence of an implicit vP, assuming that the vP position can accommodate more than one fronted element. In contrast, Korean, with its explicit vP, does not permit *wh*-extraction. However, further research is required to confirm this correlation. The first step toward this goal is establishing clear criteria for determining whether a language has an explicit vP. Japanese is an example of a language with an explicit vP, as evidenced by its use of distinct SEs for declarative, directive, and propositive sentences. For instance, the verb *tabe-* 'to eat' takes the SEs *(tabe)-ru*, *(tabe)-ro*, and *(tabe)-you*, respectively.[12] Given that Japanese and Korean share the feature of having an explicit vP, the initial focus should be on Asian languages, many of which rely on sentence-final particles as a key component of their grammar. Panov (2020) provides a typological study on sentence-final particles across 53 Asian languages. Similarly, Yurayong and Szeto (2020: 7) report that all 66 Northeast Asian languages and dialects in their survey exhibit the use of sentence-final question particles.

The following fact may require a special explanation: Not only English but also Korean has topic constructions.

(18) sakwa-nun […[minswu-ka ___ coh-a ha-nta]-ko mal ha-yess-ta].
apple-Topic Minsoo-Nom like -Decl(NPast)-Quot say -Past-Decl
'Apples, (people) said that Minsoo likes ___.'

In this sentence, the topic phrase *sakwa-nun* is extracted from a subordinate clause. If the topic phrase in English, like *wh*-phrases, occupies the position of the implicit vP, it raises the question of where the topic phrase is positioned in Korean, which has an explicit vP and thus no available space for it. However, it is important to note that Korean topicalization is not related to the (position of) vPs at all. While the vP appears at the end of the sentence, as shown in (16), the topic phrase is positioned at the beginning of the sentence, as shown in (18). Moreover, unlike in English, the topic phrase in Korean is marked explicitly with a special marker, *-un/nun*. Therefore, topic

[12] As for interrogative SEs like *(tabe)-runo* and *(tabe)-ruka*, it is unclear whether they are simple (inseparable) SEs or complex SEs composed of the declarative SE *-ru* and the interrogative SE *-no* or *-ka*.

constructions in Korean require a rule or mechanism that operates independently of vPs. By contrast, English topic constructions may be closely related to *wh*-extraction constructions, as both can be analyzed as utilizing the position of an implicit vP.

In addition to the distinction between explicit and implicit vPs, Korean and English also differ in the level of their hosts. In Korean, vPs seem to attach only to the matrix clause, whereas in English, vPs can attach not only to the matrix clause but also to coordinate clauses:

(19) a. Apples I like ___, but oranges I don't like ___.
b. Are you ___ a teacher, and is your son ___ a student?

As shown in (19a), each of the two coordinate clauses can function as a separate topic construction. Similarly, in (19b), each coordinate clause can form an independent question construction.

The difference in host levels may suggest that Korean lacks a true verbal coordinate construction, as argued by Chae (2020: 147–9). In so-called 'coordinate constructions', the two clauses are not formally equal in status: (i) The first clause cannot have a vP, whereas the second must have a vP; and (ii) The first clause may lack tense, but the second must contain tense.

(20) a. thom-un ilpone-lul kaluchi-ko cyon-un hankwuke-lul paywu-ess-ta.
Tom-Contr Japanese-Acc teach-and John-Contr Korean-Acc learn-Past-vP
'Tom taught Japanese, and John learned Korean.'
b. *thom-un ilpone-lul kaluchi(-ess)-**ta**-ko cyon-un hankwuke-lul paywu-ess-ta.
c. *thom-un ilpone-lul kaluchi(-ess)-ko cyon-un hankwuke-lul paywu-ess-**[ ]**.
d. *thom-un ilpone-lul kaluchi(-ess)-ko cyon-un hankwuke-lul paywu-**[ ]**-ta.

Sentence (20b) is ungrammatical because the first clause contains a vP, whereas sentence (20c) is ungrammatical because the second clause lacks a vP. Sentece (20d) is ungrammatical because the second sentence lacks tense. Note that in (20a), the first clause lacks tense under the given interpretation.

In contrast, in English, the two clauses are of equal status, and both the first and second clauses must carry tense.

(21) a. Tom teaches/*teach Japanese, and John learns/*learn Korean.
b. John learns/*learn Korean, and Tom teaches/*teach Japanese.

Based on the observations in (19)–(21), we may initially generalize that vPs attach only to matrix clauses in Korean, whereas in English, they attach to both matrix and coordinate clauses. However, a more precise generalization is that vPs attach to both matrix and coordinate clauses in both languages. The reason they do not appear to attach to coordinate clauses in Korean is that the language lacks true coordinate constructions altogether.

5 Conclusion

We have reviewed the key findings and arguments from Chae (2020), which seeks to identify the morphosyntactic status of the numerous particles in Korean. The study demonstrates that many

particles previously analyzed as affixes are, in fact, clitics. Building on this, we revised and extended the analysis in two ways. First, following Chae (2023a), we argued that *-i/ka* and *-ul/lul* function as delimiters rather than case markers. In this regard, we also showed that constructions previously assumed to involve case markers can be more accurately analyzed as containing delimiters instead. Second, we introduced the lexical category of verbal postpositions (vPs) for sentence endings. The introduction of this category allowed us to analyze sentences as vPPs rather than CPs, the latter of which is not a logically or empirically appropriate category for sentences.

We hope this paper motivates a reconsideration of morphological and morphosyntactic phenomena in Korean, particularly given the persistence of many long-standing yet problematic analytical practices (see Chae 2023b). Recognizing clitics as a distinct linguistic unit allows us to systematically address many of these issues. Most importantly, it helps us understand that many so-called 'derived words' in Korean are, in fact, clitic phrases. For example, the elements *ha-* and *i-* in *ssikssik-ha-* 'to be energetic' and *haksayng-i-* 'to be a student' are clitics, both categorized as adjectives. Thus, *ssikssik#ha-* and *haksayng#i-* should be analyzed as adjective phrases rather than derived adjectives. These phrases consist of a head (*#ha-* or *#i-*) and a complement (*ssikssik* or *haksayng*, respectively). If they were truly derived words, they would need to be listed in the lexicon. However, two key observations contradict this assumption. First, they do not behave as words, since they can be interrupted by external elements—something that is generally impossible for words (e.g. *ssikssik#man#ha-* 'to be only energetic' and *haksayng#man#i-* 'to be a student only'). Second, they cannot be listed in the lexicon because the number of possible expressions is virtually unlimited. For instance, *haksayng* in *haksayng#i-* is an NP, meaning that an infinite number of NP#*i-* expressions can be generated.

In short, many of the problematic analytical practices stem from the traditional misanalysis of clitic phrases as derived words. Furthermore, these practices blur the distinction between morphology and syntax. If the expressions in question were derived words, they would fall under morphology; if they are clitic phrases, they belong to syntax. It is important to note that the fundamental units of morphology and syntax differ. While the input and output of the morphological component are morphemes and words, respectively, the input and output of the syntactic component are words and sentences. Moreover, despite some similarities, morphological and syntactic rules and/or principles are not identical.

References

Ahn, H.-D. 1988. Preliminary Remarks on Korean NP. *Papers from the International Conference on Korean Linguistics 6*, ed. E.-J Baek, 1–15. Seoul: Hanshin.

Baik, S. and H.-R. Chae. 2010. A Morpho-Syntactic Evaluation of Korean Dictionary Headwords: Focusing on Nominal Entries. *The 2010 Seoul International Conference on Linguistics: Abstracts*, eds. Y.-S. Kang, J.-S. Wu, D.-H. Choi, J.-Y. Yoon, S. Rhee, K.-H. Kim, J. Hong, K.-A. Kim, and H.-K. Kang, 90–1. Seoul: Hankookmunhwasa. [A 10-page paper is included on the accompanying CD.]

Burton-Boberts, N. 2022. *Analyzing Sentences: An Introduction to English Syntax*, 5th ed. Oxon: Routledge.

Carstairs, A. 1981. *Notes on Affixes, Clitics and Paradigms.* Bloomington, IN: Indiana University Linguistics Club.

Chae, H.-R. 2002. Predicate Nominals and Light-er Verbs in Korean: An Indexed PSG Approach. *Proceedings of the 2002 LSK International Summer Conference*, vol. 1, 115–25. Seoul: Linguistic Society of Korea.

Chae, H.-R. 2005. Hankwuke-uy Sotanwie: Tongsalyu Sotanwie-lul Cwungsim-ulo (Particles in Korean: Focusing on Verbal Particles). *Language Research* 41: 569–604.

Chae, H.-R. 2020. *Korean Morphosyntax: Focusing on Clitics and Their Roles in Syntax*. Oxon: Routledge.

Chae, H.-R. 2021. Stativity and Negation: With reference to *-i/ka* and *-ul/lul*. *Proceedings of the 2021 Summer Conference of Linguistic Society of Korea*, 63–70. Seoul: Linguistic Society of Korea.

Chae, H-R. 2023a. On the Identity and Distribution of 'Case Markers' in Korean. *Korean Journal of Linguistics* 48: 199–258.

Chae, H.-R. 2023b. Review of *The Cambridge Handbook of Korean Linguistics* (ed. by S. Cho and J. Whitman. 2022. Cambridge University Press). *Language* 99: 844–50.

Chae, H.-R. and I. Kim. 2008. A Clausal Predicate Analysis of Korean Multiple Nominative Constructions. *Korean Journal of Linguistics* 33: 869–900.

Chae, H.-R. and S. Baik. 2011. A Morpho-Syntactic Evaluation of Korean Dictionary Headwords: Focusing on Predicative Entries. *Inquiries into Korean Linguistics IV*, eds. J. H.-S. Yoon, Y. Kang, J.-Y. Han, and C.-K. Shi, 61–73. Seoul: Thaehaksa.

Cho, S. and J. Whitman (eds.). 2022. *The Cambridge Handbook of Korean Linguistics*. Cambridge: Cambridge University Press.

Herweg, M. 1991. Perfective and Imperfective Aspect and the Theory of Events and States. *Linguistics* 29: 969–1010.

Kay, E. 2024. 'Kyek Cwungchwul' Hyensang-ey Taehan Tayancek Bunsek (An Alternative Analysis of 'Case-Stacking' Phenomena). *Studies in Linguistics* 73: 117–52.

Kim, I. 2013. *Korean -(n)un, Salience, and Information Structure*. Doctoral dissertation, Yale University.

Lee, E. 2017. Case Alternation in Duration and Frequency Adverbials in Korean: A Semantic-Pragmatic Explanation. *Lingua* 189/190: 1–18.

Lee, E. 2019. *Korean Syntax and Semantics*. Cambridge: Cambridge University Press.

Michaelis, L. 2011. Stative by Construction. *Linguistics* 49: 1359–99.

Nevis, J. A., B. D. Joseph, D. Wanner, and A. M. Zwicky (eds.). 1994. *Clitics: A Comprehensive Bibliography 1892–1991*. Amsterdam: Benjamins.

O'Grady, W. 1991. *Categories and Case*. Amsterdam: Benjamins.

Panov, V. 2020. Final Particles in Asia: Establishing an Areal Feature. *Linguistic Typology* 24: 13–70.

Spencer, A. and A. R. Luis. 2012. *Clitics: An Introduction*. Cambridge: Cambridge University Press.

de Swart, H. 1998. Aspect Shift and Coercion. *Natural Language and Linguistic Theory* 16: 347–85.

Yurayong, C. and P. Y. Szeto. 2020. Altaicization and de-Altaicization of Japonic and Koreanic. *International Journal of Eurasian Linguistics* 2: 108–48.

Zwicky, A. M. 1985. Clitics and Particles. *Language* 61: 283–305.

Zwicky, A. M. and G. K. Pullum. 1983. Cliticization vs. Inflection: English *n't*. *Language* 59: 502–13.