

Abstract

Chung (2001) claims that non-final conjuncts without overt tense morphemes which produce asymmetric tense interpretations are to be analyzed as TP; and Lee (2005) argues that the verbal honorific affix *-si-* never occurs in non-final conjuncts so honorific agreement between the subject and the verb takes place in the final conjunct only and thus the Korean gapping constructions should be analyzed as vP coordination. However, these two previous analyses seem to fail to make the generalizations on the distributional behaviors of gapping constructions, facing theoretical and empirical difficulties. To solve the problems they face, we claim that verbal gapping in Korean is allowed to occur in all non-final conjuncts when the covert predicates of the non-final conjuncts have an identical semantic relation value with that of the overt verb in the final conjunct, regardless of the consistency of the honorific and tense values between conjuncts.

1 Introduction

The Gapping Construction in natural languages attracts empirical and theoretical interests due to its complex properties. Among the properties, the licensing conditions and the interpretations of the gapped verbs seem to vary between languages. In Korean, the phonological or morphological form of the gapped verb(s) in the non-final conjunct(s) does not seem to be identical to that of the verb in the final conjunct. Furthermore, tense and honorifics are likely to induce ambiguities in the Korean gapping constructions, while semantic ambiguities in English gapping constructions seem to be due to generalized quantifiers. Specifically, verbal gapping in English appears to be allowed when the predicate in the non-initial conjuncts has an identical tense value with that in the initial conjunct, as shown in (1-2).

- (1) a. Kim went to Buffalo, and Lee, to Chicago.
b. Kim went to Buffalo and Lee went to Chicago.
- (2) a. Kim went to Buffalo last month and Lee, to Chicago yesterday.

[†]An earlier version of this paper, Kim and Cho (2012), was presented in the conference of *The Modern Linguistic Society of Korea* and *Korean Society for Language and Information*, November 2011, Gongju National University of Education, and was published as “Tense and Honorifics in Korean Gapping Construction” in *The Society of Modern Grammar*. The data and the theory have been modified and more elaborated in this version.

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- b. *Kim goes to Buffalo today, and Lee, to Chicago yesterday.

Unlike English, Korean allows verbal gapping to occur when the predicates of non-final conjuncts share the same relation value, i.e. they are approximately synonymous, with the predicate in the final conjunct even though the tense or honorific value is not identical across all conjuncts, as in (3).

- (3) a. atul-un pusan-ulo (kuliko) apeci(-kkeyse)-nun
 son-NOM Pusan-LOC (CONJ) father(-HON)-NOM
 sewul-lo ka*(-si)-ess-ta
 Seoul-LOC go*(-HON)-PAST-DECL
 ‘(The) son went to Pusan and (his) father, to Seoul.’
- b. atul-un pusan-ulo ka(-ass)-ko (kuliko)
 son-NOM Pusan-LOC go(-PAST)-CONJ (CONJ)
 apeci(-kkeyse)-nun sewul-lo ka*(-si)-ess-ta
 father(-HON)-NOM Seoul-LOC go*(-HON)-PAST-DECL
 ‘(The) son went to Pusan and (his) father went to Seoul.’

The gapped verb in the non-final conjunct of (3a) can be construed as either *ka-ko* or *ka-ass-ko* as shown in (3b). The predicate in the non-final conjunct, *ka-ko* ‘go’, does not contain the past tense marker while the predicate *ka-si-ess-ta* ‘went’ in the final conjunct has the past tense morpheme; thus the predicates of all conjuncts in (3a) do not need to share tense value for verbal gapping in Korean.

Moreover, the honorific value of the gapped predicate in the non-final conjuncts need not be identical to that of the predicate in the final conjunct. Since *ka(-ass)-ko* in the non-final conjunct has no honorific marker while *ka-si-ess-ta* in the final conjunct contains the verbal honorific marker *-si-*, there is no evidence that honorific values between the predicates in both non-final and final conjuncts must be identical for the predicate in the non-final conjunct to be gapped.

In this paper, we claim that verbal gapping in Korean is allowed in all non-final conjuncts when the covert verbs at the gap of the non-final conjuncts have the same semantic relation value as the overt verb in the last conjunct, regardless of whether the honorific and tense values of all conjuncts are consistent with each other or not. To support our claim, through examining gapping constructions in Korean, we demonstrate that the identity of semantic relational values between the covert predicates in the non-final conjuncts and the overt predicate in the final conjunct licenses verbal gapping in Korean. Based on the licensing condition for Korean verbal gapping, we propose a formalization of the Korean gapping construction, i.e. *K-gapping-cxt*, and show how gapping constructions in

Korean are generated. We further provide constraint-based accounts of the tense and honorific interpretations of the gapped predicates in the non-final conjuncts.

In section 2, we provide data about Korean gapping constructions at issue in this paper and then discuss two previous analyses of coordination in section 3, namely the TP coordination analysis by Chung (2001) and the vP coordination analysis by Lee (2005). In section 4, we postulate a licensing condition for Korean verbal gapping, and within the framework of HPSG, we propose a Construction-Based analysis, based on Beavers and Sag (2004)'s Ellipsis-Based analysis. To account for the various interpretations of gapping constructions in Korean, we give explanations of tense interpretation, following Cho (2006)'s Constraint-Based analysis and of honorific interpretation adopting Choi (2003)'s Constraint-Based approach. Finally, concluding remarks are provided in section 5.

2 Data and Issues on Gapping

In this section, we examine verb gapping constructions in Korean (4), which may have symmetric and asymmetric interpretations of tense and honorifics as in (5).

- (4) a. apeci(-kkeyse)-nun sewul-lo (kuliko) atul -un
 father(-HON)-NOM Seoul-LOC (CONJ) son-NOM
 pusan-ulo ka*(-si)-ass-ta
 Pusan-LOC go*(-HON)-PAST-DECL
 ‘(The) father went to Seoul and (his) son, to Pusan.’
- b. atul-un pusan-ulo (kuliko) apeci(-kkeyse)-nun
 son-NOM Pusan-LOC (CONJ) father(-HON)-NOM
 sewul-lo ka*(-si)-ess-ta
 Seoul-LOC go*(-HON)-PAST-DECL
 ‘(The) son went to Pusan and (his) father, to Seoul.’
- (5) a. apeci(-kkeyse)-nun sewul-lo ka(-si)(-ess)-ko
 father(-HON)-NOM Seoul-LOC go(-HON)(-PAST)-CONJ
 (kuliko) atul-un pusan-ulo ka*(-si)-ass-ta
 (CONJ) son-NOM Pusan-LOC go*(-HON)-PAST-DECL
 ‘(The) father went to Seoul and (his) son went to Pusan.’
- b. atul-un pusan-ulo ka(-ass)-ko (kuliko)
 son-NOM Pusan-LOC go(-PAST)-CONJ (CONJ)
 apeci(-kkeyse)-nun sewul-lo ka*(-si)-ess-ta
 father(-HON)-NOM Seoul-LOC go*(-HON)-PAST-DECL

‘(The) son went to Pusan and (his) father went to Seoul.’

The possibility that verbal gapping constructions in Korean have both symmetric and asymmetric interpretations of tense and honorifics appears to stem from verb gapping in non-final conjuncts. According to Choi (2003), the elided verb at the gap of the non-final conjunct in (4a) can be construed as one of at least four different morphological forms in (6a-d); the gapped verb in (4b) as either (6b) or (6d).

- (6) a. ka-si-ess-ko: go-HON-PAST-CONJ
- b. ka-ass-ko: go-PAST-CONJ
- c. ka-si-ko: go-HON-CONJ
- d. ka-ko: go-CONJ

On the other hand, Lee (2005) claims that the verbal honorific affix *-si-* never appears in the gapped non-final conjuncts and honorific agreement between the subject and the verb should take place only in the final conjunct. Korean gapping constructions are then a case of vP coordination, as illustrated in (7).

- (7) [CP [TP [AgrP [vP] kuliko [vP] Agr (-si/ø)] T] C] (Lee, 2005)

Under this approach, both elided verbs in (4a) and (4b) are derived from the same morphological form as in (6d). If so, this analysis seems to be problematic in that it does not suffice to explain other possibilities: for example, the gapped verb in (4a) can be interpreted as (6a), (6b), or (6c) while the gapped verb in (4b) can be interpreted as (6b)¹.

In the following section, we introduce two previous analyses accounting for Korean coordination constructions including verbal gapping and point out some of the theoretical and empirical problems they face.

3 Previous Analyses

3.1 TP Coordination Analysis

In explaining tense interpretation of coordination constructions in Korean, Chung (2001) has argued that non-final conjuncts with no overt tense morphemes may produce asymmetric tense interpretation as well as symmetric tense interpretation. On the basis of the argument above, Chung

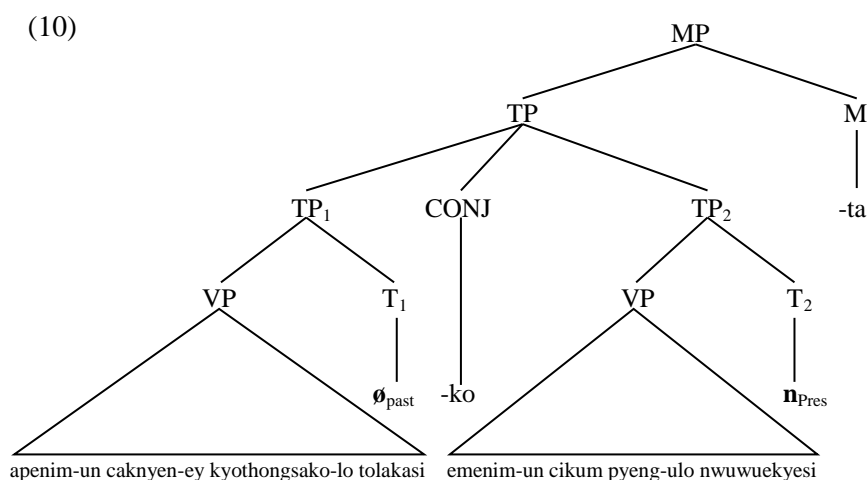
¹According to Park (1998), honorific agreement may be inconsistent as well as consistent in Korean, since honorific agreement between the subject and the verb is motivated by pragmatic factors and thus inconsistent honorific agreement is grammatical.

claims that Korean coordination constructions with asymmetric readings produced by absence of tense morpheme in non-final conjuncts are to be analyzed as cases of TP coordination where a null T is postulated in non-final conjuncts. This analysis can be schematized as follows:

- (8) [TP Subject ... V- \emptyset_{tense}]-ko [TP (Subject) ... V-Tense] ...
 ↓ ↓
interpreted interpreted
 (Chung, 2001)

Under this analysis, (9) can be represented as in (10).

- (9) [MP [TP [VP apenim-un caknyen-ey kyothongsako-lo
 father-NOM last year traffic accident-due to
 tolakasi]- $\emptyset_{[\text{past}]}$]-ko [TP [VP emenim-un cikum
 pass away-CONJ mother-NOM now
 pyeng-ulo nwuwuekyesi]-**n**_[Pres]]-ta]
 illness-due to lie in bed-PRES-DECL
 ‘My father passed away in a traffic accident last year and my mother
 is lying in bed due to an illness now.’ (Cho, 2006)



Since T_1 and T_2 project tense values independently under this approach, the predicate of the non-final conjunct, *tolakasi-ko*, whose null T value is PAST yields a past interpretation for the non-final conjunct, producing an asymmetric tense interpretation of the sentence in (9).

The TP analysis, however, gives rise to a question: what determines the tense value of a null T in non-final conjuncts? That is, the question on

how the PAST value of the null T in the non-final conjunct in (10) is licensed is not explainable by this analysis.

Furthermore, against Chung (2001)'s TP analysis, Cho (2006) argues that the predicate of the non-final conjuncts with or without time adverbs may have various temporal interpretations and the interaction between the tense value of the predicate in the final conjunct and that of the time adverbs in the non-final conjunct determines correct temporal interpretations of Korean coordination constructions. According to Cho (2006), the following gapping construction (11a) can be construed as (11b).

- (11) a. apenim-un olhay kyothongsako-lo (kuliko)
 father-NOM this year traffic accident-due to (CONJ)
 emenim-un caknyen-ey pyeng-ulo
 mother-NOM last year illness-due to
 nwuwue-kyesi-ess-ta
 lie in bed-HON-PAST-DECL
 Lit. 'My father, in a traffic accident this year and my mother lay
 in bed due to an illness last year.'
- b. apenim-un **olhay** kyothongsako-lo
 father-NOM this year traffic accident-due to
 nwuwue-kyesi(-ess)-ko (kuliko)
 lie in bed-HON(-PAST)-CONJ (CONJ)
 emenim-un **caknyen-ey** pyeng-ulo
 mother-NOM last year illness-due to
 nwuwue-kyesi-ess-ta
 lie in bed-HON-PAST-DECL
 'My father is lying/lay in a traffic accident **this year** and my
 mother lay in bed due to an illness **last year**.'

The gapped verb in the non-final conjunct of (11a) may be interpreted as *nwuwue-kyesi-ess-ko* with a past tense morpheme, requiring the non-final conjunct to be understood as a past event, yielding a symmetric tense interpretation of the entire sentence; it can also be interpreted as *nwuwue-kyesi-ko* with no tense morpheme, which conveys not only a present reading but also a past reading of the non-final conjunct, producing either symmetric or asymmetric tense interpretations.

As mentioned above, the TP analysis faces empirical difficulties in that it fails to incorporate the generalization that in Korean the predicate with no tense morpheme in the non-final conjunct can be interpreted diversely with respect to tense.

3.2 vP Coordination Analysis

Honorific agreement phenomena have been taken as providing strong evidence for the vP coordination analysis of gapping constructions in Korean. Lee (2005) claims that Korean gapping constructions are to be analyzed as vP coordination with ATB (Across The Board) movement since honorific agreement between the subject and the verb never occurs in the gapped non-final conjuncts. Under this vP analysis, (12a) and (13a) can be analyzed as illustrated in (12b) and (13b), respectively.

- (12) a. Mary-ka sakwa-lul kuliko
 Mary-NOM apple-ACC and
 emeni-ka panana-lul sa-si-ess-ta
 mother-NOM banana-ACC buy-HON-PAST-DECL
 ‘Mary (bought) apples and (her) mother bought bananas.’
- b. [CP [TP [AgrP [vP Mary sakwa v_i] kuliko
 [vP emeni panana v(sa)] Agr(-si)] T(-ess)] C(ta)] (Lee, 2005)
- (13) a. emeni-ka panana-lul kuliko
 mother-NOM banana-ACC and
 Mary-ka sakwa-lul sa-ass-ta
 Mary-NOM apple-ACC buy-PAST-DECL
 ‘(Mary’s) mother (bought) banana and Mary bought apples.’
- b. [CP [TP [AgrP [vP emeni panana v_i] kuliko
 [vP Mary sakwa v(sa)] Agr(∅)] T(-ass)] C(ta)] (Lee, 2005)

According to Lee (2005), in Korean gapping constructions, the subject NP in the non-final conjuncts never agrees with the verbal honorific affix *-si-* while the subject NP in the final conjunct must agree with it². Under this analysis, (13a) can be construed as (14).

- (14) emeni-ka panana-lul sa-ass-ko (kuliko)
 mother-NOM banana-ACC buy-PAST-CONJ (CONJ)
 Mary-ka sakwa-lul sa-ass-ta
 Mary-NOM apple-ACC buy-PAST-DECL
 ‘(Mary’s) mother bought banana and Mary bought apples.’

²Following Niinuma and Park (2003), Lee (2005) assumes that honorific agreement between the subject and the verb operates depending on the notion of closeness where in the head final language the second conjunct is closer to T and hence c-commands the first conjunct.

Specifically, the non-final conjunct in (13a) receives a non-honorific (neutral) reading as in (14) since the verbal honorific affix *-si-* never appears in the non-final conjuncts of gapping constructions and honorific agreement between the subject and the verb never occurs in the non-final conjuncts according to Lee (2005)'s vP coordination analysis.

However, it seems that (13a) may have more than one interpretation since it may have symmetric or asymmetric interpretations of tense and honorifics as in (15).

- (15) emeni-ka panana-lul sa(-si)(-ess)-ko
 mother-NOM banana-ACC buy(-HON)(-PAST)-CONJ
 (kuliko) Mary-ka sakwa-lul sa-ass-ta
 (CONJ) Mary-NOM apple-ACC buy-PAST-DECL
 '(Mary's) mother buys/bought banana and Mary bought apples.'

The gapped verb in (13a) can be construed as *sa-si-ess-ko*, *sa-ass-ko*, *sa-si-ko*, or *sa-ko*. When the gapped verb is interpreted as *sa-si-ess-ko*, (13a) has an asymmetric honorific interpretation with symmetric past tense. If it is construed as *sa-ass-ko*, non-honorific (neutral) interpretation with past tense is produced symmetrically from the both conjuncts. On the other hand, *sa-si-ko* interpreted in the gapped verb can result in an asymmetric interpretation of tense and honorifics³. When the gapped verb is interpreted as *sa-ko*, (13a) has an asymmetric tense interpretation with a symmetric non-honorific (neutral) interpretation⁴. Accordingly, the vP coordination analysis cannot account for all these possible interpretations.

As mentioned above, the vP analysis is empirically problematic in that this approach does not predict all possible interpretations Korean gapping constructions may have. It also faces theoretical difficulties in accounting for various interpretations as a syntactic treatment which is based on the syntactic honorific agreement analysis by Ahn (2002) where there is a syntactic agreement between a verb and its argument⁵. From this point of view, it is assumed that the subject has some honorific feature inherited from the verb. To cope with these difficulties, in section 4.3 we argue that a

³According to Cho (2006), in NTC (Non-Tensed Verbal Coordination Structure) with no time adverb the tense value of the predicate in the final conjunct shares with that of non-final conjuncts where the tense value should be 'default'. Under this analysis, when the gapped verb is realized as *sa-si-ko*, (8) may also have a symmetric past tense interpretation 'bought' with an asymmetric honorific interpretation, like *sa-si-ess-ko*.

⁴Under Cho (2006)'s analysis, when the gapped verb is realized as *sa-ko*, past tense interpretation with non-honorific (neutral) interpretation 'bought' may be produced symmetrically from the both conjuncts, like *sa-ass-ko*.

⁵Ahn (2002) analyzed argument honorification, which is referent honorifics such as subject or object honorifics, as an instance of agreement between a verb and the argument, regarding it as a syntactic phenomenon analogous to the subject-verb agreement.

pragmatic approach will be more feasible than the syntactic treatment in order to deal with honorifics.

4 A Construction-Based (ConB) Analysis of V-Gapping

4.1 Constraints on Gapping

To account for all the possible interpretations Korean gapping constructions may have, we propose that verbal gapping in all non-final conjuncts may occur if the covert verb at the gap of the non-final conjuncts has the same semantic relation value as the overt verb in the last conjunct, regardless of whether the tense and honorific values of all conjuncts are consistent with each other or not. The Verbal Gapping Principle in Korean can be postulated as follows:

(16) The Verbal Gapping Principle (Korean Version)

In Korean, verbal gapping is allowed in all conjuncts except the last conjunct if the covert verbs at the gap of the non-final conjuncts have the same semantic key-relation value as the overt verb in the last conjunct, regardless of the tense and honorific values of all conjuncts.

Similar to the coordination construction presented by Beavers and Sag (2004), we posit a Korean gapping construction, i.e. *K-gapping-cxt*, based on the principle in (16) as illustrated in (17).

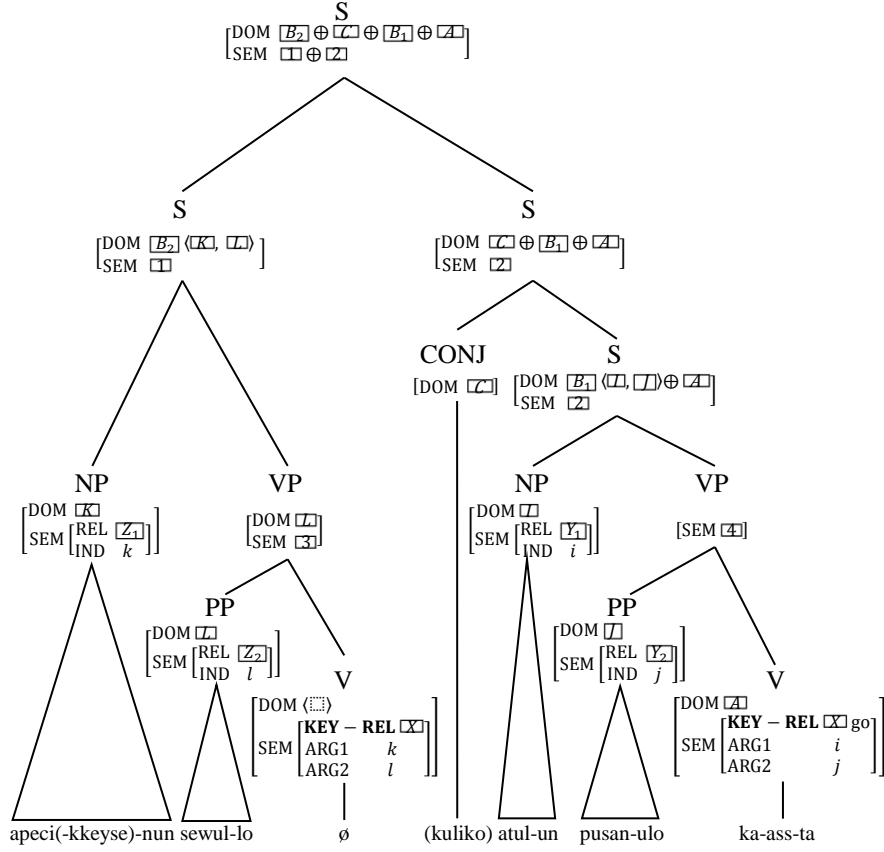
(17) *K-gapping-cxt* \Rightarrow

$$\left[\begin{array}{l} \text{MTR} \left[\begin{array}{l} \text{DOM } [B_2] \oplus [C] \oplus [B_1] \oplus [A] \\ \text{SYN } [\emptyset] \end{array} \right] \\ \\ \left[\begin{array}{l} \text{DOM } [B_2]_{ne-list} \oplus \left\langle \begin{array}{l} \text{verb} \\ \text{HD } [H_1]: \text{VFORM } [V_n] \\ \text{SEM } [\text{KEY} - \text{REL } [X_1]] \end{array} \right\rangle, \dots \right\rangle \\ \text{SYN } [\emptyset] \\ \text{CRD } - \end{array} \right], \\ \\ \text{DTRS } \left\langle \begin{array}{l} \text{DOM } [C] \left\langle \left(\left[\text{SYN } conj \right] \right) \right\rangle \oplus [B_1]_{ne-list} \oplus \\ \\ [A] \left\langle \begin{array}{l} \text{verb} \\ \text{HD } [H_1]: \text{VFORM } [V_m] \\ \text{SEM } [\text{KEY} - \text{REL } [X_1]] \end{array} \right\rangle, \dots \right\rangle \\ \text{SYN } [\emptyset] \\ \text{CRD } + \end{array} \right\rangle \end{array} \right]$$

As shown in (17), the domain of the mother begins with some unique material $[B_2]$ from the left conjunct. (Cf. Reape (1992)) The mother's DOM list next contains the right conjunct's coordinator, *kuliko*, (if present ($[C]$) since it is optional), some unique material $[B_1]$ from the right conjunct, and finally the material $[A]$ whose corresponding material in the left conjunct's DOM list is elided and hence it is not preserved in the mother's DOM list. Note that our use of the KEY-REL(ation) value ensures that elided elements involve the same semantic relations as their licensing counterparts. In English, the form of the gapped verb in the non-initial conjunct should be almost identical to that of the verb in the first conjunct; especially, the tense values are involved in English gapping. On the other hand, in Korean, *mek-ta*, *tul-ta*, *tu-si-ta*, and *capsu-si-ta* are phonologically and morphologically distinct but have the identical semantic key-relation ('eat') so the one in the non-final conjunct can be elided when they are coordinated. In other words, the elements that are elided must share at least their KEY-REL values with the constituent in the rightmost conjunct, i.e. the predicate in the final conjunct.

In terms of *K-gapping-cxt* in (17), (4a) can be represented as in (18).

(18)



In the domain of the mother of (18), $[B_2]$ from the left conjunct consists of the NP_k *apeci(-kkeyse)-nun* and the PP_l *sewul-lo* in the non-final conjunct and the optional right conjunct's coordinator $[C]$ consisting of *kuliko* is followed by $[B_1]$ from the right conjunct which is comprised of the NP_i *atul-un* and the PP_j *pusan-ulo* in the final conjunct. The final element $[A]$ in the mother's DOM list is composed of V *ka-ass-ta* whose corresponding material in the left conjunct's DOM list is elided and thus is not preserved in the mother's DOM list. By the definition of the Verbal Gapping Principle for Korean in (16), the KEY-REL value $[X]$ of the verb in the non-final conjunct is identical to that of the verb *ka-ass-ta* in the final conjunct so the verb in the non-final conjunct can be elided.

So far, we have shown how the ConB analysis accounts for the gapping phenomenon in Korean. As discussed above, a gapping sentence as in (18) may have diverse interpretations with respect to tense and honorifics. In the following sections, we will provide explanations on how gapping

constructions may have various interpretations with respect to tense and honorifics.

4.2 Tense

To give simple explanations on how to get both symmetric and asymmetric tense interpretations of gapping constructions in Korean, we adopt Cho (2006)'s CB analysis of Non-Tensed Verbal Coordination Structure (NTC), pinpointing the fact that the tense value of the non-final conjunct of NTC can be determined by the interaction between the tense value of the verb in the final conjunct and that of the time adverbs in the non-final conjunct (Cho, 2006, p. 204), as illustrated in (19).

(19) A Hypothesis of Tense Interpretation in NTC
by the Constraint-Based (CB) Analysis

1. When the conjunct contains a null Present tense morpheme *-nun*, this is an example of real TP coordination.
2. When there is no time adverb in NTC, the tense value of the predicate in the final conjunct shares with that of non-final conjuncts where the tense value should be 'default'.
3. When there is a temporal adverb in NTC, the tense value of NTC is the intersection of that of the adverb and that of the predicate in the non-final conjunct.

(Cho, 2006, pp. 204-205)

The hypothesis in (19) can be implemented in HPSG, as shown in (20).

(20) Tense Agreement Principle

- I. The TENSE value of a time adverbial and that of its head (predicate) are determined by the intersection of the two TENSE values.
- II. The TENSE value of the predicate in the non-final conjunct and that of the final conjunct are identical but the former must be 'default'.

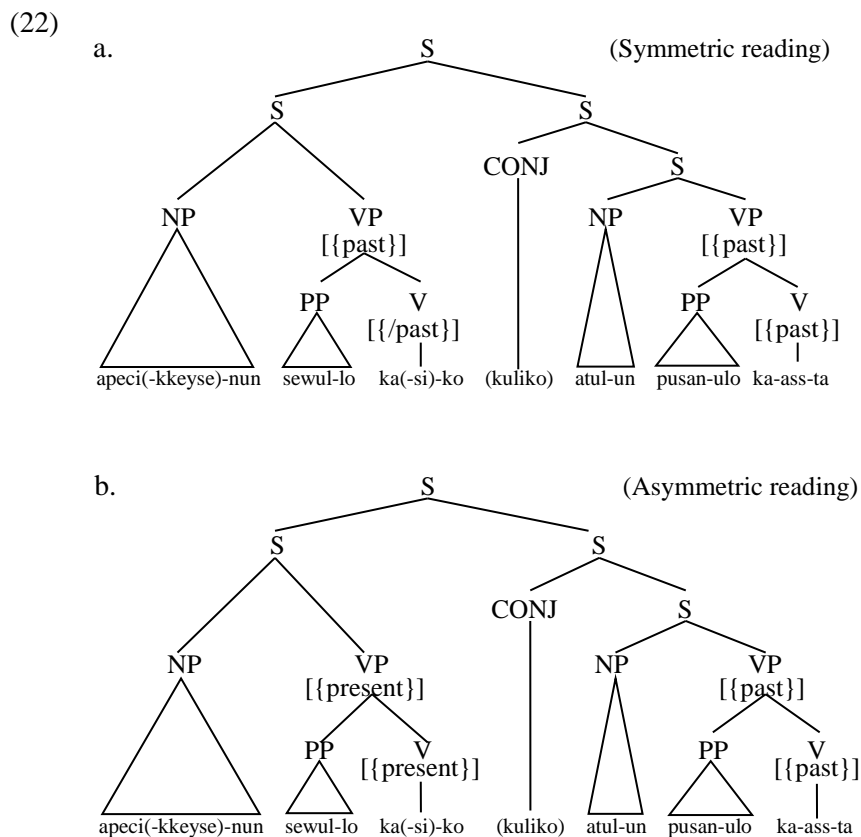
(Cho, 2006, p. 206)

The CB analysis can account for both symmetric and asymmetric tense interpretations of the NTCs in gapping constructions. The verbs with no tense morpheme as in (6c-d) lead the NTCs as in (21b), which may deliver

a past or present event, yielding a symmetric or asymmetric tense interpretation. The verb gapping sentence in (21a) (= (4a)) can be interpreted as the NTC in (21b).

- (21) a. apeci(-kkeyse)-nun sewul-lo (kuliko)
 father(-HON)-NOM Seoul-LOC (CONJ)
 atul-un pusan-ulo ka-ass-ta
 son-NOM Pusan-LOC go-PAST-DECL
 Lit. 'Father to Seoul and son went to Pusan.'
- b. [apeci(-kkeyse)-nun sewul-lo ka(-si)-ko] (kuliko)
 father(-HON)-NOM Seoul-LOC go(-HON)-CONJ (CONJ)
 [atul-un pusan-ulo ka-ass-ta]
 son-NOM Pusan-LOC go-PAST-DECL
 '(The) father goes/went to Seoul and (his) son went to Pusan.'

Under this CB analysis, the NTC in (21b) can be represented as in (22).



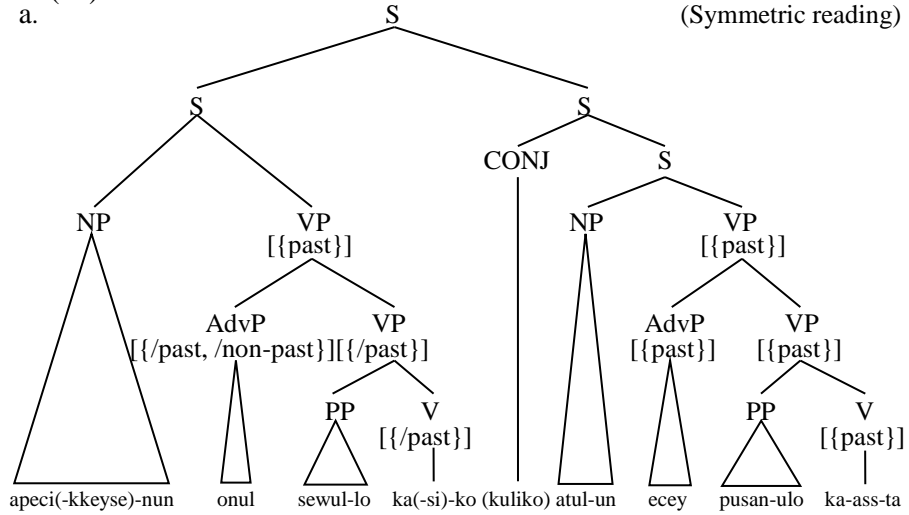
By the definition of the Tense Agreement Principle in (20), the TENSE value of the non-final conjunct in (22a) is given by the verb in the final conjunct and hence the non-final conjunct can be construed as a past event, producing a symmetric interpretation. A present reading of the non-final conjunct in (22b) can be obtained from the hypothesis in (19-1), which yields an asymmetric interpretation.

Gapping constructions may contain time adverbs as in (23). When a time adverb occurs in the non-final conjunct of a gapping construction, the time adverb affects the interpretation of the conjunct. The NTCs containing time adverbs in the non-final conjunct can be well accounted for by this CB analysis. The verb gapping construction with time adverbs (23a) can be construed as (23b).

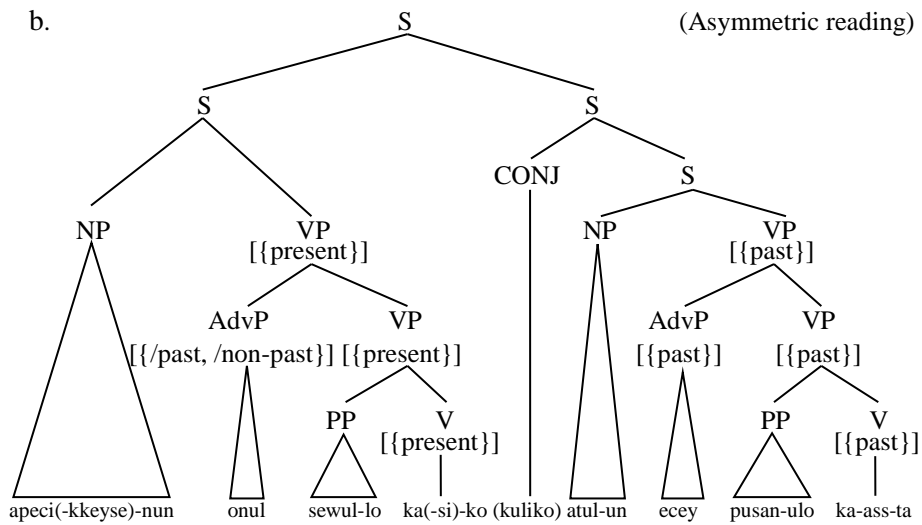
- (23) a. apeci(-kkeyse)-nun **onul** sewul-lo (kuliko)
 father(-HON)-NOM today Seoul-LOC (CONJ)
 atul-un **ecey** pusan-ulo ka-ass-ta
 son-NOM yesterday Pusan-LOC go-PAST-DECL
 Lit. 'Father to Seoul **today** and son went to Pusan **yesterday**.'
- b. [apeci(-kkeyse)-nun **onul** sewul-lo ka(-si)-ko]
 father(-HON)-NOM today Seoul-LOC go(-HON)-CONJ
 (kuliko) [atul-un **ecey** pusan-ulo ka-ass-ta]
 (CONJ) son-NOM yesterday Pusan-LOC go-PAST-DECL
 '(The) father goes/went to Seoul **today** and (his) son went to
 Pusan **yesterday**.'

The NTC with time adverbs in (23b) can be analyzed under the CB analysis, as illustrated in (24).

a. (24)



b.



In (24a), by the definition of (20- I), the intersection of $\{/past, /non-past\}$ value of the adverb *onul* ‘today’ and $\{past\}$ value of the head *ka-ass-ta* ‘went’ is $\{past\}$. This $\{past\}$ value operates with $\{/past\}$ of the head in the non-final conjunct in terms of the Tense Agreement Principle (20- II); hence the non-final conjunct conveys a past reading, resulting in a symmetric past tense interpretation. In (24b), the hypothesis in (19-1) posits that the head of the non-final conjunct has $\{present\}$ value, which intersects with $\{/past, /non-past\}$ value of the adverb, yielding $\{present\}$

value of the non-final conjunct and thus producing an asymmetric tense interpretation.

So far, we have provided explanations on how the CB analysis can account for various interpretations that the NTCs of gapping constructions may produce. The CB analysis is preferable to the TP analysis, in that the CB analysis can account for all the readings that gapping constructions may produce while the TP analysis can account only for a subset of the tense interpretations that gapping constructions may have.

4.3 Honorifics

In order to deal with honorific interpretations of Korean gapping constructions, we argue that pragmatic approaches such as Park (1998) are more plausible than the vP analysis by Lee (2005). Various analyses have been proposed to oppose syntactic agreement-based accounts of honorification. Kim and Sells (2007) claims that Korean honorific agreement is constrained pragmatically rather than syntactically. Korean subject honorifics are encoded by the consistency of honorific information between the subject and the verb, rather than by a sort of syntactic subject-verb agreement. Choi (2003) also opposes to the syntactic analysis and instead proposes the constraint-based approach to so-called partial honorific agreement which is based on the pragmatic analysis by Pollard and Sag (1994)⁶. The honorific agreement principle proposed by Choi (2003) can be illustrated as follows:

(25) Korean Honorific Agreement Principle

The subject and the verb should specify the same honorific information in their CONTEXT feature.

$$\left[\begin{array}{l} \text{verb} \\ \text{SUBJ} < NP [\text{CONTEXT} : \text{HON} \square\square] > \\ \text{CONTEXT} : \{[\text{HON} \square\square]\} \end{array} \right]$$

(Choi, 2003)

As shown in (25), the verb should specify honorific information which is identical to that of its subject in order to license the honorific information of the subject. Choi (2003) claims that, though the HON value of the verb is mostly provided by Morphology, it is resolved by a feature-sharing process or a pragmatic constraint unless it is assigned by Morphology. That

⁶Pollard and Sag (1994) claimed that the background information from the subject NP agrees with the background information from the verb.

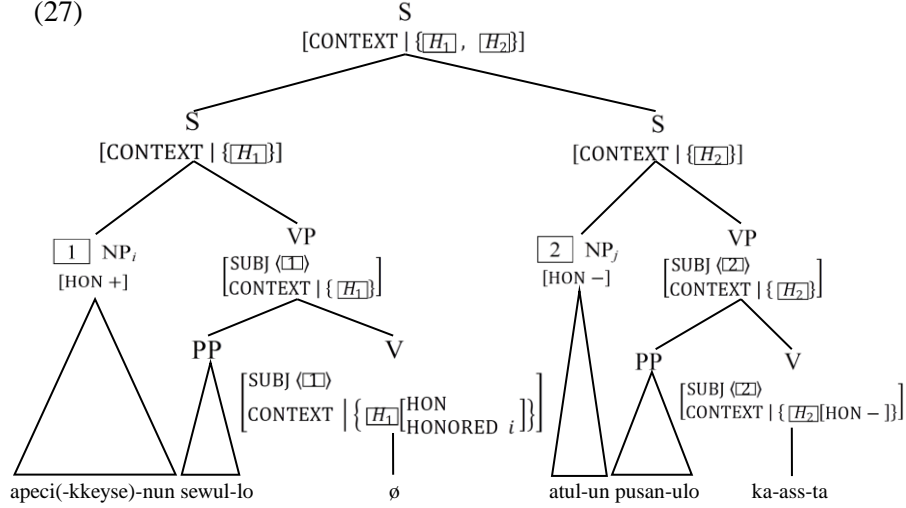
is, the HON feature value of the verb which is unresolved by Morphology is shared with that of its subject by a feature-sharing process or a pragmatic rule.

Based on Choi (2003)'s CB analysis, we provide explanations of honorific interpretations of the non-final conjunct in Korean gapping constructions. The gapping sentence in (26a) can be construed as (26b)⁷.

- (26) a. apeci(-kkeyse)-nun sewul-lo (kuliko)
 father(-HON)-NOM Seoul-LOC (CONJ)
 atul-un pusan-ulo ka(*-si)-ass-ta
 son-NOM Pusan-LOC go(*-HON)-PAST-DECL
 Lit. 'Father to Seoul and son went to Pusan.'
- b. apeci(-kkeyse)-nun sewul-lo ka(-si)(-ess)-ko
 father(-HON)-NOM Seoul-LOC go(-HON)(-PAST)-CONJ
 (kuliko) atul-un pusan-ulo ka(*-si)-ass-ta
 (CONJ) son-NOM Pusan-LOC go(*-HON)-PAST-DECL
 Lit. 'Father went to Seoul and son went to Pusan.'

The gapped verb in the non-final conjunct of (26a) is construed as either *ka-si(-ess)-ko* or *ka(-ass)-ko* with respect to honorificity. In Korean, honorific information is encoded by the verbal honorific affix *-si-*, e.g. the HON+ value of *ka-si(-ess)-ko* is provided by Morphology. But *ka(-ass)-ko* does not contain the verbal honorific affix *-si-* so it is impossible for the non-final conjunct to be assigned an HON value by Morphology. Instead, the HON value of the non-final conjunct without an honorific morpheme can be provided by a pragmatic rule, as illustrated in (27). Under this analysis, (26a) can be represented as in (27).

⁷From now on, * refers not to ungrammatical sentences but to pragmatically odd sentences in this paper.



In (27), the gapped verb in the non-final conjunct does not specify any morphological honorific information, while the verb in the final conjunct specifies HON-. The value of HONORED of the non-final conjunct is *i* whereas the final conjunct has no HONORED value because its honorific value is HON-. Since the subject of the non-final conjunct is different from that of the final conjunct, i.e. the subjects refer to different referents, the honorific features between two conjuncts cannot be shared⁸. Hence, the underspecified honorific feature $[H_1]$ is specified by neither morphology nor feature-sharing, but it is pragmatically resolved by background discourse information such that the speaker owes honor to *apeci* ‘father’.

So far, we have given an account of honorific interpretations of the non-final conjunct in gapping constructions on the basis of Choi (2003)’s CB analysis where honorific information is provided not only by morphology but also by pragmatics. The pragmatic analysis is more preferable than the morpho-syntactic analysis since the honorific information of the non-final conjunct, which is unresolved by morphological or syntactic processes, can be provided by the pragmatic constraint above.

⁸Based on Pollard and Sag (1994) where there is an agreement of background information between the subject and the verb, Choi (2003) suggests the feature-sharing approach in which, if the subject referents in both conjuncts are identical, the HON feature value of the non-finite verb in the non-final conjunct is resolved by a feature-sharing process when it is not resolved by Morphology.

5 Conclusion

There have been a variety of attempts to analyze coordination constructions. One of them is the TP analysis by Chung (2001) where Korean coordination constructions containing non-final conjuncts without a tense morpheme can have asymmetric tense interpretations and are to be analyzed as TP coordination in which a null T is postulated in non-final conjuncts. Another is the vP analysis by Lee (2005) in which the verbal honorific affix *-si-* never appears in non-final conjuncts and honorific agreement occurs only in the final conjunct so the Korean gapping constructions should be analyzed as vP coordination. Though the two previous analyses are theoretically different in accounting for the linguistic phenomena at issue, they seem to fail to provide an account of tense and honorific interpretations of non-final conjuncts of coordination constructions.

To solve the problems that the previous analyses face, we claim that verbal gapping in Korean can occur in all non-final conjuncts when the predicate of the non-final conjuncts shares the identical semantic relation value with that of the predicate in the final conjunct, regardless of the consistency of the honorific and tense values of all conjuncts. To support our claim, we have proposed a constraint- and construction-based analysis within the HPSG framework, similar to Beavers and Sag (2004)'s Ellipsis-Based analysis and provided simpler explanations for a variety of tense and honorific interpretations of gapping constructions in Korean on the basis of Constraint-Based analyses by Cho (2006) and Choi (2003). The CB analysis employed in this paper enables us to integrally analyze Korean gapping constructions with respect to tense and honorifics. Therefore, we believe that it is more preferable and feasible than the previous analyses because it captures significant generalizations on the various linguistic behaviors of gapping constructions in Korean.

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