VP-ellipsis, Stripping, and the Functions of the Delimiter −*to* in Korean

So-Jee Kim * †
Kangwon National University

Sae-Youn Cho †
Kangwon National University

Kim, So-Jee and Cho, Sae-Youn. 2016. VP-ellipsis, Stripping, and the Functions of the Delimiter −*to* in Korean. *Language and Information 20.1, 93-110.* VP-ellipsis constructions in English can be schematized as *S* + [*NP finite-AUX* __] where the underlined part is understood to be a VP. Similarly, the pattern *S* + *NP[-to]* can be observed in Korean colloquial contexts. Though the English VP-ellipsis sentence pattern and the Korean pattern superficially seem to be similar, the Korean pattern exhibits peculiar properties: Syntactically, the NP of the pattern should have the delimiter -*to*. Semantically, it may convey ambiguous readings: VP-ellipsis-like and/or Stripping-like interpretation. To account for the pattern at issue, we propose a base-generated analysis driven by the delimiter -*to* within a construction grammar. We claim that the mother of the NP[-*to*] in this pattern is an S whose meaning is ambiguous between a VP-ellipsis-like and a Stripping-like reading. Consequently, the code of the VP-ellipsis in English is finite auxiliary verbs while that of the pattern *S* + *NP[-to]* in Korean is the delimiter -*to*. (**Kangwon National University**)

Key words: delimiter, −*to*, VP-ellipsis, Stripping, Construction Grammar, Base-generated Approach, ambiguous reading

1. Issues

Ross (1967) has suggested that English exhibits VP-ellipsis and Stripping phenomena: VP-ellipsis can be found in an elliptical construction in which a main predicate of the second conjunct is elided under Identity condition as in (1), and Stripping can be observed in the one where everything corresponding to a preceding clause is deleted in the second conjunct except for one constituent under Identity as in (2).

(1) a. Kim came, and Sue [$_{VP}$ came], too.
     b. Kim came, and Sue did [$_{VP}$ ~~come~~], too.
(2) a. Kim loves to study Korean, and [Kim loves to study] English, too.
     b. Kim loves to study Korean, and [~~Kim loves to study~~] English, too.

Specifically, (1b) can be derived from (1a) in terms of VP-ellipsis, while (2b) can be derived from (2a) via Stripping.

Unlike English, most of the previous studies claim that VP-ellipsis and Stripping phenomena are impossible in Korean (see Otani and Whitman 1991, Park 1997, Lee and Kim 2012, and Lee 2012). First of all, there are two different approaches to VP-ellipsis in Korean: Null arguments (Huang 1987, Otani and Whitman 1991) and VP-anaphora approach (Lee and Kim 2012, Lee 2012). Under the two approaches, Korean counterpart sentences such as (3) and (4) are treated as Null arguments or VP-anaphora analysis, since there is no VP-ellipsis in Korean.

(3) Jia-ka   kwaca-lul   sa-ss-ko,   Miso-to [$_{NP}$ ~~kwaca-lul~~] sa-ss-ta.
     Jia-Nom   snack-Acc   buy-Past-and   Miso-too   buy-Past-Decl
     'Jia bought a snack, and Miso did, too.'
(4) Jia-ka   kwaca-lul   sa-ss-ko,   Miso-to   [$_{VP}$ kuleha]-yss-ta.
     Jia-Nom   snack-Acc   buy-Past-and   Miso-too   do so-Past-Decl
     'Jia bought a snack, and Miso did, too.'

Under the Null arguments approach, null arguments can be allowed in Korean as in (3), and under the VP-anaphora approach, the pro-form *kuleha-ta* can be inserted into an elided VP constituent as in (4).

On the other hand, Park (1997) proposes a Pseudocleft approach to account for the VP-ellipsis and Stripping constructions in Korean as follows:

(5) a: Jia-ka   chen-chen-hi kel-ess-ta.
        Jia-Nom slowly   walk-Past-Decl
        'Jia walked slowly.'

 b: Miso-to-**ya**.
  Miso-DL(also)-Coplua+Informal
  'Miso did too.'
 b`: (chen-chen-hi kel-un-kes-un)/pro Miso-to-**ya**.
   slowly   walk-ME-what-Top Miso-DL(also)-Coplua+Informal
   'One of the people who walked slowly is Miso.'

To account for the sentence type (5b), Park (1997) argues that (5b) should be derived from a Pseudocleft construction like (5b`), since they both share with the sentence-final suffix -*ya*. The analyses above appear to be sufficient to explain the sentences (3-5), which could be the Korean counterpart VP-ellipsis sentences. However, it is easy to find the similar sentences without the verb *sa-ss-ta*, the pro-form *kuleha-yss-ta*, or the copula -*ya* as follows:

(6) a. Jia-ka   sakwa-lul sa-ss-ko,   Miso-to.
   Jia-Nom apple-Acc buy-Past-and Miso-too
   'Jia bought an apple, and Miso did, too.'
  b. Jia-ka Minswu-lul ttaylye-ss-ko, Miso-to.
   Jia-Nom Minswu-Acc hit-Past-and Miso-too
   'Jia hit Minswu, and Miso did, too.'

Unlike sentences (3-5) with explicit predicates, the NP with the delimiter -*to*, i.e. *Miso-to* in (6), is possible, which can be easily observed in colloquial contexts. If so, such sentence pattern invites theoretical and empirical difficulties to the previous analyses. Furthermore, sentences in (6) can be ambiguous in the sense that (6b) may be interpreted as EITHER *Jia hit Minswu and Miso hit Minswu* OR *Jia hit Minswu and Jia hit Miso*. The possibility of the ambiguity in (6) implies that the NP with -*to* could be analyzed as either Subject or Direct Object in the second conjunct, which might mean that it seems to be derived via VP-ellipsis or Stripping.

 To deal with the sentence pattern (6), *S + NP[-to]*, we claim here that the NP[-*to*] in the pattern should be regarded as an independent sentence (clause) under the Construction Grammar approach. Moreover, we argue that the functions of the delimiter -*to* enable us to get a full sentence meaning. This base-generated approach may lead us to get a right structure for the sentence pattern involving NP[-*to*] and account for why the NP[-*to*] in the pattern can be ambiguously construed as a proposition.

 In order to support our claim, we introduce some peculiar properties of the sentence pattern at issue in Section 2. On the basis of the properties, we critically review previous analyses such as VP-anaphora, Null arguments, and Pseudocleft approaches in Section 3. In Section 4, we propose a construction-based analysis of the sentence pattern with NP[-*to*], suggesting the functions of the delimiter -*to*. Based on the proposal we made, we demonstrate how to analyze the construction pattern with NP[-*to*]. In the concluding

remarks, some residual problems will be provided.

2. Peculiar properties of the pattern *S + NP[-to]*

2.1 The obligatory presence of the delimiter *-to* in the NP[*-to*]

One of the most peculiar properties of the NP in the sentence pattern *S + NP[-to]* is that it should have the delimiter (DL) *-to*. In other words, when the NP following the S contains the delimiter *-to*, the sentence pattern is allowed as in (7a) while the NP without any marker is disallowed as in (7b).

(7) a. Jia-ka   chayk-ul   sa-ss-ko,   Miso-to.
        Jia-Nom book-Acc   buy-Past-and   Miso-too
        'Jia bought a book, and Miso did, too.'
     b. *Jia-ka   chayk-ul   sa-ss-ko,   Miso.
        Jia-Nom book-Acc   buy-Past-and Miso-Ø
        'Jia bought a book, and Miso.

The only difference between (7a) and (7b) is the existence of the delimiter *-to* as can be seen above. Hence we can say that the occurrence of the delimiter *-to* in the NP is obligatory.

Though the NP without any marker is impossible in the pattern, some delimiters such as *-cocha(to)*, *-kkaci(to)*, and *-mace(to)* appear to be possible as in (8a). However, not all delimiters are allowed in the sentence pattern at issue in that the NP with the delimiter *-man* is disallowed as in (8b).

(8) a. Jia-ka   chayk-ul sa-ss-ko,   Miso-cocha(to)/-kkaci(to)/-mace(to).
        Jia-Nom book-Acc buy-Past-and   Miso-too
        'Jia bought a book, and Miso did, too.
     b. *Jia-ka   chayk-ul   sa-ss-ko,   Miso-man.
        Jia-Nom book-Acc   buy-Past-and Miso-only
        'Jia bought a book, and Miso only.'

Specifically, only when the delimiters such as *-to*, *-cocha*, *-kkaci*, and *-mace* are attached to the NP *Miso* of the second conjunct as in (7a) and (8a), they are predicted to be well-formed. But when the NP contains the delimiter *-man* like (8b), it sounds odd.

In addition to the obligatory occurrence of delimiters, it is necessary to check whether the NP can occur with case markers. It seems to be that case markers such as Nominative *-ka* or Accusative *-(l)ul* are disallowed in this pattern as follows:

(9) *Jia-ka   chayk-ul   sa-ss-ko,   Miso-ka/-lul.
    Jia-Nom   book-Acc   buy-Past-and   Miso-Nom/Acc
    'Jia bought a book, and Miso.'

When the NP *Miso* in (9) occurs with either Nominative case maker *-ka* or Accusative case marker *-lul*, the sentence is not grammatical and sounds incomplete.

As seen above, it is observed that the NP with the appropriate delimiters such as *-to*, *-cocha(to)*, *-kkaci(to)*, or *-mace(to)* are possible in the sentence pattern, while the NPs with inappropriate delimiters, case markers, or no markers are impossible. If we call the appropriate delimiters *-to* type delimiters, we may say that one of the *-to* type delimiters should be attached to the NP in the sentence pattern *S + NP[-to]*.

2.2 The semantic/pragmatic properties of the delimiters in the pattern

Another property is the semantic or pragmatic characteristics of the delimiters in the NP of the sentence pattern. There seem to be at least two usages of the delimiter *-to* in Korean (cf. Han 1981, Seo 2005): First, when the predicate of the preceding clause is different from that of the final clause, the basic meaning of the delimiter *-to* is that there is at least more than one event involved in this utterance as in (10a). Second, when the predicate of the preceding clause and that of the final clause are identical, the semantic function of the delimiter *-to* attached to the NP is to express an additional value of an argument selected by the predicate as in (10b).

(10) a. (Jia-ka) khi-ka   **khu-ko**   el-kwul-*to*   **yey-ppu-ta**.
              Height-Nom tall-and   face-too   pretty-Pst-Decl
         'Jia is tall and pretty'
     b. Jia-ka   wul-ess-ko   Miso-*to*   wul-ess-ta.
        Jia-Nom cry-Past-and   Miso-too   cry-Past-Decl
        'Jia cried, and Miso did, too.

Specifically, when there are the two different predicates, *khu-* and *yeppu-*, the delimiter *-to* in (10a) functions to express an additional event. As a result, from (10a), we may get such reading as *In addition to the fact that Jia is tall, she is pretty*. On the other hand, when the predicates of both clauses, *wul-ess-* ('cried'), are identical, the delimiter *-to* in (10b) functions to express an additional value for the given argument by the predicate. Consequently, we can get an interpretation from (10b) like *Jia and Miso cried*.

Based on the two functions of the DL *-to*, we have to decide which function is for the DL attached to the NP in the pattern *S + NP[-to]* in (11).

(11) Jia-ka   hak-kyo-ey kass-ko   Miso-to.
       Jia-Nom   school-to   go-Past-and Miso-too
       'Jia went to school, and Miso did, too.'

To decide whether *Miso-to* in (11) can be construed as the addition of a value to the given argument or an additional event, we need to consider the data as follows:

(12) (Jia-ka) khi-ka **khu-ko** el-kwul-to.
       a. Jia is tall and pretty.
       b. Jia is tall and her face is big.

In fact, the *S + NP[-to]* in (12) is intuitively understood as (12b), not (12a), which means that the DL -*to* in this pattern functions as the second usage, i.e. the addition of a value to the given argument.[1] In other words, the pattern is interpreted exactly in the same way when there is the same predicate in both clauses.

  Moreover, DLs such as -*cocha(to)*, -*kkaci(to)*, and -*mace(to)* also belong to the so-called -*to* type DL in the sense that they get the index value of the NP containing them to add the given argument by the predicate of the preceding clause (event) as follows:

(13) Jia-ka   hak-kyo-ey kass-ko   Miso-cocha(to)/-kkaci(to)/-mace(to).
       Jia-Nom   school-to   go-Past-and Miso-too
       'Jia went to school, and Miso did, too.'

Similar to the NP with -*to* in the *S + NP[-to]* pattern, the NP with -*cocha(to)*, -*kkaci(to)*, or -*mace(to)* is possible. However, as you may see, there is a slight meaning difference between the DL -*to* and -*cocha*, -*kkaci* or -*mace* in that sharing the second usage with -*to*, the latter suggest that the index value of the NP with them is almost the last element of the list value for the given argument of the predicate. Hence, though (11) and (13) both deliver the basic meaning, *Jia and Miso went to school*, (13) additionally implies that *Miso* is assumed to be a person with the lowest possibility who went to school. In short, the DLs such as -*to*, -*cocha*, -*kkaci*, and -*mace* belong to the -*to* type DL so that they can freely occur in the pattern, though they have a slightly different meaning.

  On the other hand, the semantic function of the delimiter -*man* is different from that of the -*to* type DLs. In fact, the delimiter -*man* is basically meant to be that the NP including it is the only value of the given argument by a predicate. Hence, the NP with -*man* is impossible in the sentence pattern at issue due to the semantic conflict.

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[1] As mentioned above, we assume the two different usages of the delimiter -*to*, namely, the addition of a value to the given argument or an additional event. In this paper, we mainly focus on the former where the both predicates are assumed to be identical.

(14) *Jia-ka   hak-kyo-ey kass-ko,   Miso-man.
     Jia-Nom   school-to   go-Past-and Miso-only
     'Jia went to school, and Miso only.'

In (14), the DL -*man* requires that the NP including it, *Miso-man*, is the only argument for the predicate *kass*- ('went') but the sentence has already the agent argument of the verb, *Jia-ka*, in the preceding clause. So (14) sounds awkward.

On the basis of the observations above, we may say that delimiters in Korean can be classified into two types, -*to* type DL (e.g. -*mace*) and Non -*to* type DL (e.g. -*man*). Under this classification, the functions of the delimiters can be summarized as follows:

(15) a. The -*to* type DLs such as -*to*, -*cocha*, -*kkaci*, and -*mace* function to add the value of the NP with the DL to a given argument selected by the predicate of the preceding clause.
     b. The Non -*to* type DLs such as -*man* require a single index value, so the NP with -*man* is understood as *NP-only*. Hence, such delimiter cannot occur in the NP[-*to*] of the sentence pattern due to the semantic conflict.[2]

2.3 The status of the NP[-*to*] in the pattern

Another property is related to the status of the NP[-*to*] in the pattern *S + NP[-to]*. More specifically, the NP[-*to*] can be understood as either Subject or Direct Object as shown in (16a-b).

(16) Jia-ka   Minswu-lul   ttaylye-ss-ko, Miso-to.
     Jia-Nom   Minswu-Acc   hit-Past-and   Miso-too
     a. 'Jia and Miso hit Minswu.' (='Jia hit Minswu and Miso hit Minswu.')
     b. 'Jia hit Minswu and Miso.' (='Jia hit Minswu and Jia hit Miso.')

In fact, (16) can be ambiguous in that the NP[-*to*] above, *Miso-to*, can be construed as the agent subject of the verb, *ttaylye*- ('hit'), like (16a) or understood as the patient object of the verb. The ambiguity issue here seems to pose an interesting question: how can we get the two different readings from the pattern? Following Ross (1967), we may employ the operations such as VP-ellipsis and/or Stripping. This strategy could be problematic since the operations have different conditions in their rules.[3]

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[2] Throughout this paper, we focus on an unacceptable case of the NP[-*man*] in the pattern *S + NP[-man]*. But there could be some cases construed to be natural such as *amwuto phyenci-lul mos-pat-ass-u-na, Miso-man* in (19) (intended meaning: Nobody except Miso received a letter). However, this issue will not be dealt with in detail in this paper.

[3] In Section 4, we suggest a full picture of the sentence pattern on the basis of a base-generated

In addition, the possibility of the ambiguity appears to depend on contexts. For example, we might have a difficulty in getting ambiguous readings from sentences like (17). However, it can be ambiguous.

(17) Jia-ka   chayk-ul   sa-ss-ko,   Miso-to.
    Jia-Nom book-Acc   buy-Past-and Miso-too
    a. 'Jia and Miso bought a book.'
    b. ??'Jia bought a book and Miso.'

The NP[-*to*] in (17), *Miso-to*, can be easily understood as the Subject of the predicate, *sass-* ('bought'), like (17a). On the other hand, we might have difficulties getting the reading (17b), where *Miso-to* is construed as the Direct Object of the predicate, from (17). It is so because we try to interpret the person, *Miso-to*, to be the Purchased role of the buying action, However, this is not syntactic or sematic but pragmatic. If (17) is uttered in Chosun Dynasty and *Miso* is a slave, then the reading (17b) can be obtained without any difficulty.

Hence, the NP[-*to*] in the pattern, in principle, can be ambiguously understood, though there could be a preferable reading in the pattern depending on contexts.

2.4 The status of the S in *S + NP[-to]*

The final property of the sentence pattern that we should consider is the status of the S followed by the NP[-*to*]. Like English VP-ellipsis and Stripping constructions, the S seems to be all kinds of conjunctions as following:

(18) a. Jia-ka   Minswu-lul   ttaylye-ss-**ko**, Miso-to.
      Jia-Nom   Minswu-Acc hit-Past-and   Miso-too
      'Jia hit Minswu, and Miso did, too.'
    b. Jia-ka   pap-ul   mek-e-**se**,   Miso-to.
      Jia-Nom   rice-Acc   eat-Past-because Miso-too
      'Because Jia ate rice, Miso did, too.'
    c. Jia-ka   nolay-lul pwul-less-ta-**myen**, Miso-to.
      Jia-Nom   song-Acc sing-Past-if   Miso-too
      'If Jia sang, Miso did, too.'

Whether the S of the sentence pattern is realized as a coordinate or a subordinate structure does not have something to do with grammaticality as can be seen above. The S realized as a conjunct with – *ko* ('and') like (18a) or a subordinate clause with – *se* ('because') and – *myen* ('if') like (18b-c) can be well-formed.

Unlike the examples in the pattern (18a-c), when the delimiter -*man* is attached to the NP

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approach without any transformational operations like 'delete'.

of the *S + NP*, the grammaticality of the pattern can be varied with respect to the status of S as follows:

(19) a. *Jia-ka   chayk-ul   sa-ss-ko,   Miso-man.
        Jia-Nom   book-Acc   buy-Past-and   Miso-only
        'Jia bought a book, and Miso only.'
     b. pilok   amwuto phyenci-lul mos-pat-ass-u-na,   Miso-man.
        although anyone   letter-Acc   not- receive-Past-but Miso-only
        'Although no one received a letter, Miso only received a letter.'

The NP with *-man* cannot occur in the coordinate clause as in (19a), but it can appear in the subordinate clause as in (19b) which can be naturally understood as *only Miso received a letter*. The grammatical difference between the two follows from the fact that the delimiter *-man* requires that the NP with it should be the only argument selected by the predicate. Specifically, (19a) is bad because the actor of the buying action is already anchored as *Jia* in the preceding clause whereas (19b) is good since the actor of the receiving action is not anchored in the preceding clause.

Based on the findings above, we might say that the S of the pattern *S + NP[DL]* in principle can be all types of clauses in Korean unless there is any semantic conflict between the delimiters of the NP and the S in the pattern.

So far we have provided peculiar properties of the pattern *S + NP[-to]* in Korean. The properties can be summarized as follows:

(20) Observation 1: One of the *-to* type delimiters should be attached to the NP in the sentence pattern *S + NP[-to]*.

Observation 2: The *-to* type DLs such as *-to*, *-cocha*, *-kkaci*, and *-mace* function to add the value of the NP with them to a given argument selected by the predicate of the preceding clause.

Observation 3: The NP[*-to*] in the pattern, in principle, can be ambiguously understood, though there could be a preferable reading depending on contexts.

Observation 4: The S of the pattern *S + NP[DL]* in principle can be all types of clauses in Korean unless there is any semantic conflict between the delimiters of the NP and the S in the pattern.

3. Previous approaches

3.1 VP-anaphora approach

Proposing a VP-anaphora analysis for Korean sentences which are similar to VP-ellipsis construction in English. Lee and Kim (2012) and Lee (2012) claim that unlike English, Korean does not have VP-ellipsis but VP-anaphora phenomena such as the following examples:

(21) a. Chelsoo-ka   o-ass-ko,   Younghee-to   [$_{VP}$o]-ass-ta.
          Chelsoo-Nom   come-Past-and Younghee-too come-Past-Decl
          'Chelsoo came, and Younghee came, too.
      b. Chelsoo-ka   o-ass-ko,   Younghee-to   [$_{VP}$kuleha]-yss-ta.
          Chelsoo-Nom   come-Past-and Younghee-too   come-Past-Decl
          'Chelsoo came, and Younghee came, too.'   (Lee, 2012: 273-274)

According to their analysis, the VP of the second conjunct in (21a) can be substituted by the pro-form *kuleha-ta* as in (21b). Because the pro-form *kuleha-ta* in this sentence refers to the antecedent VP *o-ass-ta* ('come'), they argue that Korean has such VP-anaphora instead of English VP-ellipsis.

As mentioned previously, the sentence type *S + NP[-to]* like (22), where there is no predicate of the second conjunct, is possible especially when it is uttered in colloquial contexts.

(22) Jia-ka   Minswu-lul ttaylye-ss-ko, Miso-(mace)to/*-man (kuleha-yss-ta).
     Jia-Nom Minswu-Acc hit-Past-and   Miso-too   do so-Past-Decl
     a. 'Jia and Miso hit Minswu.'
     b. 'Jia hit Minswu and Miso.'

There seem to be empirical and theoretical problems to adopt this VP-anaphora analysis so as to explain the sentence type: Empirically, when the delimiter of the NP in the pattern is realized as one of the *-to* type DLs such as *-mace*, it is allowed but when it is not, it is disallowed, as in (22). This constraint on the types of DLs cannot be accounted for, under this analysis, it is needless to say that this analysis cannot predict that the pattern can be allowed in colloquial contexts. Theoretically, since (22) is ambiguous, this analysis is hard to explain why the pro VP *kuleha-* can refer to the VP *Minswu-lul ttaylye-* or the seemingly non-constituent expression *Jia-ka ttaylye-*.

Hence, the VP-anaphora analysis is insufficient to account for the sentence type *S + NP[-to]* theoretically and empirically.

3.2 Null argument & Pseudocleft approach

Otani and Whitman (1991) argue that Korean VP-ellipsis should be analyzed as null arguments as illustrated in (23).

(23) Mary-ka   Bill-ul   manna-ass-ta kuliko Sue-to __   manna-ass-ta.
     Mary-Nom Bill-Acc meet-Pst-Dec and   Sue-Also   meet-Pst-Decl
     'Mary met Bill and Sue met (Bill).'   (Park, 1997: 630)

They claim that sentence (23) is a kind of the Korean VP-ellipsis construction on the basis of the fact that it yields a sloppy reading like the English one. However, Park (1997) argues that the Null arguments analysis as VP-ellipsis may not be suitable for Korean by demonstrating that the sloppy reading requires a c-command relation but Korean does not have such c-command relation. Instead, Park (1997) proposes that assuming that VP-ellipsis does not occur in Korean, the underlined part of the construction in (23) should be regarded as null pronominal *pro*. Further, he proposes the so-called Pseudocleft approach to deal with VP-ellipsis and Stripping constructions in Korean as follows:

(24) a: John-i   Mary-lul   manna-ass-e.
        John-Nom Mary-Acc   meet-Past-Informal
        'John met Mary.'
     b: (Mary-lul   manna-n   salam-un)/pro Bill-to-ya.
        Mary-Acc meet-ME   person-Top   Bill ALSO-Coplua+Informal
        'The person who met Mary is Bill too.'
     b´: (John-i   manna-n   salam-un)/pro Bill-to-ya.
         John-Nom meet-ME   person-Top   Bill-ALSO-Coplua+Informal
         'The person who John met is Bill too.'   (Park, 1997: 641-642)

In short, Park (1997) claims that the sentences (24b-b') should be analyzed to be the Psuedocleft construction schematized like **(Relative Clause)/pro + NP[-*to*]+*ya*.** This might be a candidate to account for the example sentences above.

However, this Psuedocleft analysis faces various difficulties, either. Similar to the VP-anaphora analysis, when the delimiter of the NP in the pattern is realized as one of the -*to* type DLs, it is allowed but when it is not, it is disallowed, as in (25). This constraint on the types of DLs cannot be explained under this analysis.

(25) John-i   Mary-lul   man-nass-ko Bill-to/*-man-(i)ya.
     John-Nom Mary-Acc   meet-Past-and Bill-too/only-Coplua+Informal
     'John met Mary, and Bill did, too.'

Furthermore, assuming that the pattern *S + NP[-to]* in (26a) can be derived from *Relative Clause/pro + NP[-to]-ya* in (26b), this Psuedocleft analysis wrongly predicts that both sentences in (26) exhibit the same grammaticality. But it is not the case.

(26) a. John-i   Mary-eykey yen-phi-lul cwu-ess-ko **Bill-to/-eykeyto/*-eykey**.
         John-Nom Mary-Dat   pencil-Acc gave-and   Bill-too/Dat+too/Dat
         'John gave a pencil, and Bill did, too.'
     b. John-i   yen-phi-lul cwu-n-kesun   **Bill-to/-eykeyto/-eykey-ya**.
         John-Nom pencil-Acc   gave-who   Bill-too
         'What John gave a pencil is Bill.'

When the NP of the pattern *S + NP[-to]* contains *-eykey* (Dat), it is disallowed as in (26a), whereas when the NP of *Relative Clause/pro + NP[-to]-ya* has *-eykey* (Dat), it is allowed as in (26b). If so, we may say that the two constructions cannot be the same. Though this Psuedocleft analysis seems to give a simple way to account for the pattern *S + NP[-to]*, it is not enough to provide a complete explanation of the sentence pattern at issue.

4. Our Analysis of *S + NP[-to]*: A Construction-Based Approach

Assuming that English exhibits VP-ellipsis construction like (27a), Boas & Sag (2012) propose the so-called English VP-ellipsis construct under the framework of the Construction Grammar as in (27b), based on the observation that the construction tends to leave a finite auxiliary verb in the sentence-final position.

(27) a. John will go to the school and Mary will.
     b. A Finite Auxiliary Verb Undergoes VP-Ellipsis

(Boas & Sag, 2012: 156)

The key idea of their proposed rule above is that if English finite auxiliary verbs such as *will* has the two subcategorized elements, NP and VP (tagging ① and ②), in the VAL(ence) list, they further allow only one element, NP, in the VAL, which is the case for English VP-ellipsis. This means that when the seemingly elided VP is interpreted like the VP in the preceding clause, the second element in the ARG(ument)-ST(ructure) of the mother as a pro-VP may work to get such interpretation. Hence, the syntactic and semantic constraints in (27b) can explain why (27a), a case of VP-ellipsis, can be syntactically generated and delivers the full sentence meaning, *John will go to the school and Mary will go to the school*.

Unlike English, Korean seems to get VP-ellipsis or Stripping-like readings from the sentence pattern *S + NP[-to DL]*, which is mainly driven by the functions of delimiters such as *-to*. To deal with the sentence pattern *S + NP[-to]*, we, first of all, provide the functions of the delimiters, *-to* and *-man*, assuming the classification of Korean delimiters as follows:

(28)

K-DL(Korean Delimiters)

-to type   Non-*to* type

-to   *- kkaci*   *- cocha*   *- mace*   ....   *-man*   *-pakkey*   ....
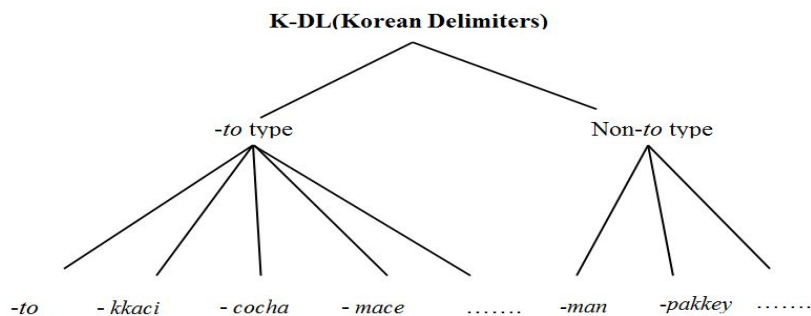
The type hierarchy above shows that Korean delimiters as pragmatic markers can be classified into the two different types which may have various subtypes: *-to* and Non-*to* DL type. Specifically, while the *-to* DL type includes *-to, -cocha, -kkaci* or *-mace*, the DLs, *-man* and *-pakkey,* belong to Non – *to* type.

As specified in (20), the *-to* DL attached to an NP syntactically plays an important role generating a S mother node, semantically adding an individual value of the NP to a given argument by the predicate of the preceding event. On the other hand, the DL *-man* declares that the NP with it should be the only argument value of the given predicate all the time semantically. On the basis of the peculiar functions of each DL type, we propose a rule for *-to* DL construction similar to Boas & Sag (2012) for English VP-ellipsis construct, delivering VP-ellipsis or Stripping-like readings:

(29) *-to* DL construction[4]

$$
\begin{bmatrix}
to-cx \\
\text{SYN} \quad s \\
\text{SEM}\begin{bmatrix}\text{FRAMES} \quad < \boxed{K}, \ \boxed{L}\ \{\begin{bmatrix}\text{RELN} & x \\ \text{ARG1} & \boxed{1}\oplus i \\ & \vdots \end{bmatrix}\ V\cdots V\ \begin{bmatrix}\text{RELN} & x \\ \text{ARGn} & n\oplus i\end{bmatrix}\}> \end{bmatrix} \\
\text{DTRS} < \left(\ \ s\ \begin{bmatrix}\text{SEM}\ \boxed{K}\begin{bmatrix}\text{RELN} & x \\ \text{ARG1} & \boxed{1} \\ \cdot & \cdot \\ \cdot & \cdot \\ \text{ARGn} & \boxed{m}\end{bmatrix}\end{bmatrix}\ \right),\ s\ \begin{bmatrix}\text{SEM} \quad \boxed{L} \\ \text{DTRS} \quad \text{NP}i\ \begin{bmatrix}-to\ \text{type}\end{bmatrix}\end{bmatrix}\ > \\
\text{CONTX} \quad \text{SAL}-\text{UTTR} \quad \{\ \cdots \boxed{K}\cdots\ \}
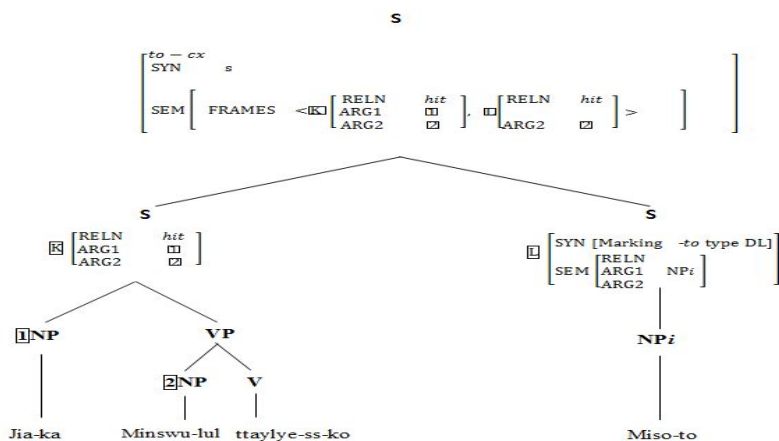\end{bmatrix}
$$

The key idea of the construct above consists of two parts: syntactically an NP with the *-to* DL can be an only daughter of an S as illustrated in the value of the DTRS (daughters) while the index value of the NP is construed to be a given argument of the predicate in the preceding clause as seen in the SEM(antics) and CONTX (context) value semantically or pragmatically. In fact, the observed properties of the sentence pattern *S + NP[-to]* in (20) are formalized into a Construction-based Grammar which holds a base-generated approach (cf. Ginzburg and Sag 2000, Boas and Sag 2012, Kim 2015). This enables us to provide a simple analysis of the sentence pattern.

To enhance your readability, we demonstrate how our theory works for the sentence pattern *S + NP[-to]* with some representative data. First of all, the sentence *Jia-ka Minswu-lul ttaylyr-ss-ko, Miso-to* in (30) is predicted to be well-formed under this analysis. As mentioned previously, the given sentence can be understood ambiguously which can be either the VP-ellipsis-like reading, *Jia and Miso hit Minswu*, or the Stripping-like reading, *Jia hit Miso and Minswu*. As for the first, the sentence can be represented under this analysis as follows:

(30) Jia-ka   Minswu-lul   ttaylyr-ss-ko,   Miso-to.
       Jia-Nom   Minswu-Acc   hit-Past-and   Miso-too

---

[4] This construction rule, we believe, can be extended and modified to explain some fragment answer constructions in Korean (cf. Kim (2015)).

(31)

$$
\begin{bmatrix}
to-cx \\
\text{SYN} \quad s \\
\text{SEM} \begin{bmatrix} \text{FRAMES} & <\boxed{K} \begin{bmatrix} \text{RELN} & hit \\ \text{ARG1} & \boxed{1} \\ \text{ARG2} & \boxed{2} \end{bmatrix}, \boxed{L} \begin{bmatrix} \text{RELN} & hit \\ \text{ARG2} & \boxed{2} \end{bmatrix} > \end{bmatrix}
\end{bmatrix}
$$

- S
  - S : $\boxed{K}\begin{bmatrix}\text{RELN} & hit \\ \text{ARG1} & \boxed{1} \\ \text{ARG2} & \boxed{2}\end{bmatrix}$
    - $\boxed{1}$NP — Jia-ka
    - VP
      - $\boxed{2}$NP — Minswu-lul
      - V — ttaylye-ss-ko
  - S : $\boxed{L}\begin{bmatrix}\text{SYN [Marking} & -to \text{ type DL]} \\ \text{SEM}\begin{bmatrix}\text{RELN} \\ \text{ARG1} & \text{NP}i \\ \text{ARG2}\end{bmatrix}\end{bmatrix}$
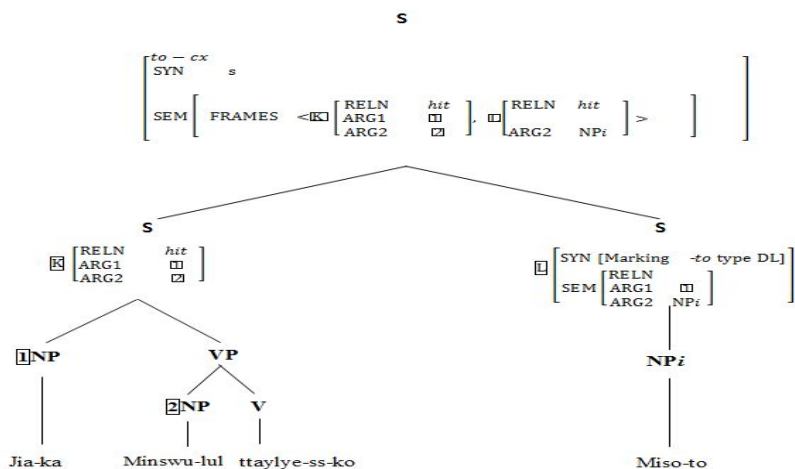   - NPi — Miso-to

In this tree configuration, the NP with -*to* guarantees that its mother should be an S syntactically and its index value should be added to the value of ARG1, resulting the VP-ellipsis-like reading *Jia and Miso hit Minswu*, in terms of the construction rule (29).

On the other hand, the rule (29) also enables us to predict the representative sentence to be grammatical and to get the Stripping‑like reading as follows:

(32)

$$
\begin{bmatrix}
to-cx \\
\text{SYN} \quad s \\
\text{SEM} \begin{bmatrix} \text{FRAMES} & <\boxed{K} \begin{bmatrix} \text{RELN} & hit \\ \text{ARG1} & \boxed{1} \\ \text{ARG2} & \boxed{2} \end{bmatrix}, \boxed{L} \begin{bmatrix} \text{RELN} & hit \\ \text{ARG2} & \text{NP}i \end{bmatrix} > \end{bmatrix}
\end{bmatrix}
$$

- S
  - S : $\boxed{K}\begin{bmatrix}\text{RELN} & hit \\ \text{ARG1} & \boxed{1} \\ \text{ARG2} & \boxed{2}\end{bmatrix}$
    - $\boxed{1}$NP — Jia-ka
    - VP
      - $\boxed{2}$NP — Minswu-lul
      - V — ttaylye-ss-ko
  - S : $\boxed{L}\begin{bmatrix}\text{SYN [Marking} & -to \text{ type DL]} \\ \text{SEM}\begin{bmatrix}\text{RELN} \\ \text{ARG1} & \boxed{1} \\ \text{ARG2} & \text{NP}i\end{bmatrix}\end{bmatrix}$
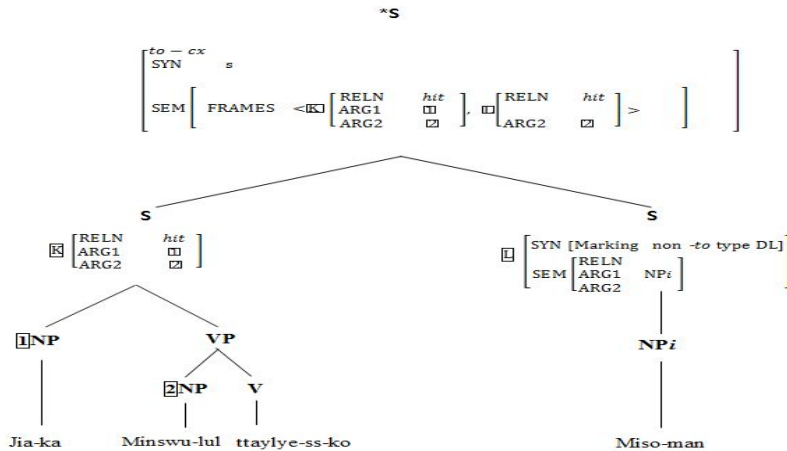   - NPi — Miso-to

By the same fashion, the tree structure above is predicted to be well-formed under this analysis syntactically. The only difference in semantics between (31) and (32) is that the index value of the NP with -*to* is added not to the ARG1 but to the ARG2. This leads us to

get the Stripping-like reading *Jia hit Miso and Minswu*. Hence, our analysis can get ambiguous readings from the representative sentence.

Furthermore, our analysis correctly predicts that the sentence **Jia-ka Minswu-lul ttaylye-ss-ko Miso-man* is impossible. This sentence represented as in (33), in fact, simply cannot be licensed in the sense that the NP with the DL *-man* cannot be applied to the *-to* DL construction.[5]

(33)

$$
\text{*S}
$$

$$
\begin{bmatrix}
to-cx \\
\text{SYN} \quad s \\
\text{SEM} \begin{bmatrix} \text{FRAMES} \; <\text{K} \begin{bmatrix} \text{RELN} & hit \\ \text{ARG1} & 1 \\ \text{ARG2} & 2 \end{bmatrix}, \; \text{L} \begin{bmatrix} \text{RELN} & hit \\ \text{ARG2} & 2 \end{bmatrix} > \end{bmatrix}
\end{bmatrix}
$$

S

K $\begin{bmatrix} \text{RELN} & hit \\ \text{ARG1} & 1 \\ \text{ARG2} & 2 \end{bmatrix}$

S

L $\begin{bmatrix} \text{SYN [Marking} \quad non\text{ -to type DL]} \\ \text{SEM} \begin{bmatrix} \text{RELN} \\ \text{ARG1} & NP_i \\ \text{ARG2} \end{bmatrix} \end{bmatrix}$

1 NP   VP

NP_i

2 NP   V

Jia-ka   Minswu-lul ttaylye-ss-ko

Miso-man

According to the rule (29), the DL *-man* attached to the NP does not belong to the *-to* DL type, and as a result, the NP with *-man* cannot be applied to the rule. Hence, the sentence is ruled out.

5. Concluding remarks

It is well-known that English exhibits the so-called VP-ellipsis construction. One of the characteristics of the VP-ellipsis construction is that there is a finite auxiliary verb in the sentence-final position as a trigger to get a full sentential reading from such construction. To account for such constructions, transformational approaches tend to adopt various operations such as 'delete' while non-transformational approaches like construction grammars pursue a base-generated analysis.

Unlike English, the *S + NP[-to]* pattern in Korean appears to be quite similar to English VP-ellipsis construction except for the fact that there is no finite auxiliary verb in the final

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[5] The rule (29) can be modified to accommodate Non *-to* type DLs such as *-man*. However, we will not deal with this issue in this paper.

position. Even so, the NP[-*to*] can deliver a sentential reading which is ambiguous between a VP-ellipsis-like and a Stripping-like reading. To explain such sentence pattern, we carefully look into the pattern and then propose a base-generated analysis driven by the functions of the -*to* DLs. Based on this proposal, we argue that the mother of the NP in the *S + NP[-to]* pattern should be an S whose meaning can be ambiguous in terms of the semantic function of the DL -*to*. As you may notice, though this base-generated analysis does not adopt any transformational operations such as 'delete', we have demonstrated that this analysis formalized into the Construction Grammar sufficiently gives a neat explanation on the sentence pattern syntactically and semantically. In doing so, we could find an interesting fact that finite auxiliary verbs are a key factor in order to get a sentential reading from the VP-ellipsis construction in English, while the -*to* DLs play a crucial role to obtain ambiguous readings from the *S + NP[-to]* pattern.

 Though this analysis we proposed here may account for the pattern, there seem to be more issues to research. First of all, we have introduced the Korean DL type hierarchy only for the sentence type at issue, which is obviously not the final version of the DL hierarchy. Moreover, the NP in the pattern appears to exhibit seemingly similar behaviors with the NPs in fragment answers though there are some slight differences between the two. Such issues here will leave for further study.

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