Tense Markers and *-ko* Constructions in Korean

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Abstract. There have been heated debates on whether tense markers in Korean are inflectional affixes or syntactic words. One of the strongest pieces of evidence for the latter position comes from tense-related phenomena in *-ko* constructions. These constructions are usually assumed to consist of two coordinate clauses. In this paper, we will see that the tense phenomena can be accounted for naturally by correctly identifying the non-past tense marker and by seriously taking consideration of the fact that *-ko* is ambiguous between a coordinate marker and a subordinate marker. It will be shown that the tense marker in the second conjunct does not have any effect on the first conjunct when *-ko* functions as a coordinate marker, which will render the position very weak that tense markers are syntactic words.

Keywords: Tense markers, Null-form elements, Korean, *-ko* constructions, Coordinate markers, Subordinate markers, Ambiguity.

1   Introduction

The purpose of this paper is two-fold. On the one hand, we will identify the morpho-syntactic status of the tense markers in Korean. On the other, we will provide a new system for accounting for the tense-related phenomena in "*-ko* coordinate constructions." The element *-ko* is generally regarded to be a typical coordinate marker in Korean. Our analysis is based on two important observations, which are not new findings but have not been duly appreciated thus far. Firstly, the marker *-ko* is actually ambiguous between a coordinate marker and a subordinate marker. Secondly, the non-past tense marker is not *-n* or *-nun* but a null form element *-ø*. That is, the marker does not have an explicit form, contrary to the general belief. We will see that these observations lead to a natural explanation of the tense phenomena in *-ko* constructions.

As for the morpho-syntactic status of the Korean tense markers, two large groups of different analyses have been proposed: "lexical analyses" and "syntactic analyses." The tense markers are generally assumed to be inflectional affixes in the former group, while they are assumed to be "clitics" in the latter. Clitics are "grammatical units with some properties of inflectional morphology and some of independent words" ([17], [18]). They cannot stand alone phonologically just like inflectional affixes, but they are words on their own syntactically just like regular words. We can easily see that tense markers are inflectional affixes in such head-initial languages as English because the verb together with a tense marker comes before its complements. However, it has long been an issue of hot disputes to correctly identify the morpho-syntactic status of tense markers in Korean, a head-final language. It is not clear whether they are attached to the verb (V) or to the verb phrase (VP) concerned. In the former case, they should be regarded as inflectional affixes, while, in the latter case, they should be regarded as clitics.

2   Previous Analyses

The behavior of tense markers in such *-ko* constructions as (1a) has played a crucial role in arguing for their morpho-syntactic status:

(1) a. cyon-un   pap-ul   mek-ko meyli-nun   ppang-ul mek-ess-ta.
       John-Contr boiled rice-Acc eat-Conj Mary-Contr bread-Acc eat-Past-Decl
       'John ate boiled rice and Mary ate bread.'
    b. cyon-un pap-ul mek-ess-ko   meyli-nun ppang-ul mek-ess-ta.
                         eat-Past-Conj
       'John ate boiled rice and Mary ate bread.'

In sentence (a), unlike in sentence (b), the past tense marker *-ess* occurs only in the second clause but the whole sentence lies within its scope (assuming the given interpretation). As sentences like (a) seem to show that the tense marker can be attached to a unit larger than the verb, they are taken as an indisputable evidence for the clitic-hood of the tense markers (by those taking the syntactic approaches). From a lexicalist point of view, however, it has not been very comfortable to admit that tense markers are clitics because they are typically realized as inflectional affixes in many languages of the world.

In the tradition of Chomsky's Government and Binding (GB) theory, sentences like (1a) have generally been analyzed as containing a coordinate VP structure and a clitic tense marker (cf. [16]). From the end of the eighties, however, it has been argued that the first clause in the *-ko* construction is a subordinate/adjunct clause rather than a coordinate/conjunct clause ([9], [14], [11], [10]). Let us examine the following sentence:

(2) mues-ul   cyon-i   [chaek-ul   ilk-ko]   [*e* mek-ess-ni]?
    what-Acc John-Nom   book-Acc read-Conj   eat-Past-Int
    'What did John eat after reading books?'

If the first clause is a coordinate clause, this sentence would be ungrammatical because the extraction of *mues-ul* 'what' only from the second conjunct would violate the "coordinate structure constraint." If, on the other hand, the first clause is a subordinate clause, the extraction would not violate any of the island constraints. In addition, even from a lexicalist point of view, in which the past tense marker is assumed to be an inflectional affix, we can easily account for the past tense interpretation of the first clause in sentence (1a). Kang ([9], [10]) and Yi ([14]) assume that the first clause in the *-ko* construction is always a subordinate clause. Kim ([11]) assumes that the first clause is a subordinate clause only when it does not bear an explicit tense marker as in (1a).

However, the first clause in the *-ko* construction does not always show the adjunct properties (even when the first clause does not have an explicit tense marker). Let us examine the following set of data:

(3) *mues-ul   cyon-i   [chaek-ul   ilk-ess-ko]   [*e* mek-ess-ni]?
     what-Acc John-Nom   book-Acc read-Past-Conj   eat-Past-Int
    '*What did John read books and eat?'
(4) cyon-un   cikum pap-ul   mek-ko meyli-nun   akka   ppang-ul   mek-ess-ta.
    John-Contr now   boiled rice-Acc eat-Conj Mary-Contr before bread-Acc eat-Past-Decl
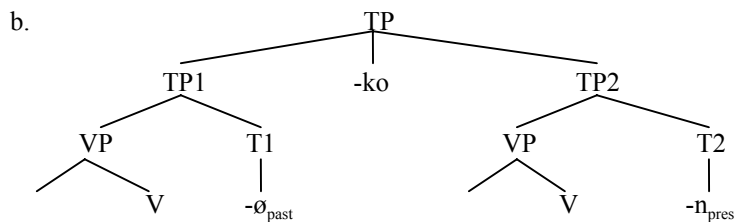   'John is eating boiled rice now and Mary ate bread a moment ago.'

Unlike sentence (2), sentence (3), which contains an explicit tense marker in the first clause, is ungrammatical. It is subject to the coordinate structure constraint. In sentence (4), each of the two clauses describes an independent event, which strongly implies that the two clauses are in a conjunct-conjunct relationship. In consideration of these conjunct properties together with the adjunct properties of the *-ko* construction, some scholars proposed that the first clause is ambiguous between adjunct and conjunct clauses ([4], [5]; [15]; [6], [7], [8]).

Cho ([4], [5]) provides a lexical analysis of such sentences as (1a) and (4). His main arguments are as follows: i) non-tensed phrases are either conjuncts or adjuncts, ii) 'V-*ko*' marks either a conjunct or an adjunct of a "sequential" reading, and iii) the across-the-board violation is allowed only when the non-final clauses are adjuncts. According to Cho, the first clause in sentences like (4) as well as those like (1a) is a non-tensed phrase (and, hence, is ambiguous between a conjunct reading and an adjunct reading). However, as we just saw, it is not plausible to assume that the clause is (always) non-tensed. As it describes an event which is independent from the event in the second clause, it has to be a unit

containing its own tense. As this important presupposition behind his arguments is not tenable, his system does not stand on a firm ground any longer.

Unlike other analyses in the GB tradition, Chung ([6], [7], [8]) argues that "tenseless VPs" can have an asymmetric tense interpretation and that sentences with an asymmetric interpretation should be analyzed as an instance of tense phrase (TP) coordination rather than VP coordination. For example, he analyzes sentence (5a) as in (5b) ([8], p. 557):

(5) a. motwu (ecey)   yehayng ttena-ko   na-man honca (cikum) cip-ul   ciki-nta.
       all   yesterday trip   leave-Conj I-only   alone now   house-Acc keep-(Pres)Decl
       'All others left on a trip (yesterday) and I am alone staying home (now).'

b.

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                              TP
              _____|_____
            TP1               -ko               TP2
          ___|___                             ___|___
        VP      T1                          VP      T2
       _|_       |                         _|_       |
      V  -Ø_past                          V  -n_pres
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He posits a null past tense marker $-\varnothing_{past}$ to account for the fact that the first clause has a past tense interpretation. However, the tense phenomenon here is not syntactic in nature. In the following sentence, the first clause has an interpretation of the past perfect:

(6) motwu yehayng ttena-ko   na-man honca cip-ul   ciki-ess-ta.
     all   trip   leave-Conj I-only   alone house-Acc keep-Past-Decl
     'All others had left on a trip and I was alone staying home.'

If we are going to account for the tense phenomenon in (5a) with reference to the marker $-\varnothing_{past}$, we would need to posit another null form tense marker, i.e. $-\varnothing_{past\ perfect}$, for the interpretation of sentence (6). Most of all, as the author himself admits ([8], p. 567), we do not have any resources in sentence (5a) to rely on to get the past tense interpretation when the adverb *ecey* 'yesterday' does not appear.

In dealing with sentences like (1a), Lee ([12], p. 616) proposes a set of criteria for distinguishing finite TP conjuncts form nonfinite VP conjuncts:

(7) a. When the conjunct contains a null non-past tense morpheme, this is an example of real TP coordination.
    b. When the conjunct is c-commanded by a tense morpheme that has scope over the entire coordination, … the non-final conjunct is … a VP.
    c. When there is a temporal adverb in the conjunct, the conjunct is … a VP.

These criteria, however, are neither homogeneous nor exclusive of each other. For example, the first conjunct of sentence (4) can be either a TP or a VP, depending on whether we use (7a) or (7c). The problem becomes more serious when the conjunct contains both an explicit tense marker and a temporal adverb:

(8) cyon-un   akka pap-ul   mek-ess-ko meyli-nun ecey   ppang-ul mek-ess-ta.
     John-Contr before boiled rice-Acc eat-Past-Conj Mary-Contr yesterday bread-Acc eat-Past-Decl
     'John ate boiled rice a moment ago and Mary ate bread yesterday.'

As the first conjunct has an explicit tense marker, it can only be a TP. However, it becomes a VP when we use the criterion (7c) because it has a temporal adverb *akka* 'before.' As a related problem, it is not clearly defined where we can apply each of the criteria. For example, there is no way of telling whether we should apply (7a) or (7b) or both to sentences like (1a).

We have examined some major works dealing with -*ko* constructions with an explicit tense marker only in the second clause. The first clause in these constructions has either conjunct or adjunct

properties. To account for this phenomenon, some scholars have proposed that the clause is ambiguous between conjunct and adjunct phrases. However, they do not seem to be very successful in elucidating all the complicated issues regarding the constructions.

3   A New Analysis

We agree with the position, initiated by Cho ([4], [5]), that the first clause in such *-ko* constructions as the following is ambiguous between adjunct clauses and conjunct clauses.

(1a) cyon-un   pap-ul   mek-ko meyli-nun   ppang-ul   mek-ess-ta.
     John-Contr boiled rice-Acc eat-Conj Mary-Contr bread-Acc eat-Past-Decl
     'John ate boiled rice and Mary ate bread.'

However, clear answers to such questions as the following have not been provided in previous analyses: why such ambiguity arises and what are the differences between the two types of clauses. We argue that the ambiguity arises as a result of interactions of two independent factors. One would fail to come up with appropriate answers to the questions if one relies only on one of them.
   We can find one reason for the ambiguity by correctly identifying the morpho-syntactic status of the non-past tense marker in Korean. It has usually been assumed that the marker is *-n/nun* in view of such expressions as those in (9):

(9) a. cip-ey   ka-nta,   b. pap-ul   mek-nunta
      house-to go-(Pres)Decl   boiled rice-Acc eat-(Pres)Decl
      'go/goes to the house'   'eat/eats boiled rice'
(10) a. ka(*-n)-(nu)nya, mek(*-nun)-(nu)nya; ka(*-n)-kela, mek(*-nun)-ela; ka(*-n)-ca, ...
                Interrogative   Directive   Propositive
     b. ka(*-n/^{ok}-ass)-a, mek(*-nun/^{ok}-ess)-e; ka(*-n/^{ok}-ass)-(su)pnita, mek(*-nun/^{ok}-ess)-supnita; ...

Contrary to the general assumption, careful observations reveal that the marker is -ø rather than *-n/nun* ([9], [13]). Korean verbal endings have different forms according to the speech level and the sentence type. There are five or six different speech levels and four different sentence types. Among dozens of different possible combinations of these two grammatical categories, only one combination requires the element *-n* or *-nun*: that of the plain level and the declarative sentence, examples of which we can see in (9). The element does not appear in the other combinations. As we can see in (10a), it cannot combine with the interrogative, directive or propositive ending even when the speech level concerned is the plain level. In addition, as we can see in (10b), it cannot combine with any of the other speech level endings. It would be very difficult to account for the distributions of *-n/nun* if we assume that it is a present tense marker. Notice that, as is shown in (10b), the past tense marker *-ass/ess* can occur in the position where *-n/nun* is not allowed to occur. We can easily solve this problem if we assume that the non-past tense marker is -ø. The element *-n* or *nun* is just a part of the (present) declarative ending in the plain speech level.
   If the non-past tense marker in Korean is a null element, the possibility is open that the first clause in sentence (1a) can be regarded either as a tenseless non-finite clause or as a tensed finite clause. The possibility of this dual interpretation of -ø is a reason behind the ambiguity of the clause. The other reason for the ambiguity is that the marker *-ko* itself is ambiguous between a coordinate marker and a subordinate marker. In the following sentence *-ko* functions as a typical subordinate marker:

(11) cyon-un   tongsayng-ul   an(*-ass)-ko   tali-ess-ta.
     John-Top/Contr younger brother-Acc embrace(-Past)-Conj run-Past-Decl
     'John ran holding his younger brother in his arms.'

John's running is the main event in this sentence and John's holding his brother is a subordinate concomitant event. This subordinate *-ko*, unlike its coordinate counterpart in such sentences as (1b),

cannot combine with a verb stem with a tense marker, as we can see in (11)[1]. This fact is a specific property of the subordinate marker *-ko* itself. Other subordinate markers like *-ciman* 'although' can combine with a tense marker.

Now we are ready to answer the questions raised above regarding the ambiguity of the *-ko* construction: why such ambiguity arises and what are the differences between the conjunct and adjunct clauses. Basically, the ambiguity of the construction arises from the ambiguity of the marker *-ko*. However, we cannot fully account for the ambiguity of the whole construction with the behavior of this marker alone, because the marker does not allow a tense marker to be preceded only when it functions as a subordinate marker. Let us make our answers to the questions with reference to sentence (1a).

(1a) cyon-un   pap-ul   mek-ko meyli-nun   ppang-ul   mek-ess-ta.
     John-Contr boiled rice-Acc eat-Conj Mary-Contr bread-Acc eat-Past-Decl
     'John ate boiled rice and Mary ate bread.'

To begin with, we assume that the conjuncts in a Korean verbal coordinate structure should have the same finiteness status with respect to whether they are tensed or tenseless. That is, all the conjuncts in a coordinate structure should be tensed/finite or all of them should be tenseless/non-finite.

Sentence (1a) can be a coordinate structure only when the first clause is tensed, because the second conjunct is tensed with the past tense marker *-ess*. In our approach, the clause can be analyzed as containing the non-past tense marker -ø. Here the hypothesis that the non-past marker has a null form plays an important role. On the other hand, the first clause in sentence (1a) can be an adjunct when it does not contain any tense marker. As we can see in (11), *-ko* as a subordinate marker cannot combine with a verbal stem containing a tense marker. Consequently, the sentence can be analyzed into two different structures of the following:

(12) a. The conjunctive reading (cf. (3-4)):
        [cyon-un   pap-ul   mek-ø-ko]   meyli-nun ppang-ul mek-ess-ta.
         John-Contr boiled rice-Acc eat-Pres-Conj Mary-Contr bread-Acc eat-Past-Decl
         'John eats boiled rice and Mary ate bread.'
     b. The adjunctive reading:
        [cyon-un   pap-ul   mek-ko] meyli-nun   ppang-ul   mek-ess-ta.
         John-Contr boiled rice-Acc eat-Conj Mary-Contr bread-Acc eat-Past-Decl
         'John ate boiled rice and Mary ate bread.'

We can clearly see that the ambiguity arises due to two different factors: the properties of the marker *-ko* and the inaudible/invisible non-past tense marker -ø. When the first clause has an adjunctive reading, the clause is non-finite and its time reference is determined, just like in any other subordinate sentences, by the tense marker of the main clause *-ess*, which indicates the past time. When the first clause has a conjunctive reading, the clause is finite and its time reference is determined by its own tense marker -ø, which indicates the present time.

We assumed that the first clause of sentence (1a) can be a subordinate clause. One might argue against this assumption on the basis of the fact that the contrastive marker *-un/nun* appears in both clauses. Notice that *cyon* in the first clause and *meyli* in the second clause are both marked with the contrastive marker. It is true that two elements which are in contrast are more likely to appear in coordinate structures rather than in subordinate-matrix structures. However, contrastive elements can appear very naturally in some subordinate-matrix structures:

(13) a. cyon-un   khi-ka   cak-ciman   meyli-nun khi-ka   khu-ta.
        John-Contr height-Nom be small-although Mary-Contr height-Non be big-(Pres)Decl
        'Although John is small, Mary is tall.'

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[1] Although the first clause of sentence (1a) is ambiguous between a conjunctive and a subjunctive reading, that of sentence (1b) is not because it bears a tense marker explicitly.

b. cyon-un   khi-ka   cak-un   panmeyn(-ey) meyli-nun   khi-ka   khu-ta.
    John-Contr height-Nom be small-Rel contrary(-at)   Mary-Contr height-Non be big-(Pres)Decl
    'While John is small, Mary is tall.'

The verbal ending -*ciman* 'although' in sentence (a) is a subordinate marker. In addition, it is indisputable that the first clause in sentence (b) is a subordinate clause. The clause *cyon-un khi-ka cak-* is a relative clause and modifies the noun *panmyen* 'contrary.' Here an element in the relative clause is contrasted with one in the matrix clause.

In section 2, we saw that previous analyses have difficulties in dealing with the following data. Let us consider how we can get over these difficulties in our new system.

(4) cyon-un   cikum pap-ul   mek-ko meyli-nun   akka   ppang-ul   mek-ess-ta.
    John-Contr now   boiled rice-Acc eat-Conj Mary-Contr before bread-Acc eat-Past-Decl
    'John is eating boiled rice now and Mary ate bread a moment ago.'
(5a) motwu (ecey)   yehayng ttena-ko   na-man honca (cikum) cip-ul   ciki-nta.
     all   yesterday trip   leave-Conj I-only alone now   house-Acc keep-(Pres)Decl
     'All others left on a trip (yesterday) and I am alone staying home (now).'
(8) cyon-un   akka pap-ul   mek-ess-ko meyli-nun   ecey   ppang-ul   mek-ess-ta.
    John-Contr before boiled rice-Acc eat-Past-Conj Mary-Contr yesterday bread-Acc eat-Past-Decl
    'John ate boiled rice a moment ago and Mary ate bread yesterday.'

Cho ([4], [5]) cannot account for the fact that the first clause of sentence (4) has only a conjunctive reading. He wrongly assumes that the clause is ambiguous between a conjunctive reading and an adjunctive reading. In our analysis, however, it cannot have an adjunctive reading because the adverb *cikum* 'now' is in conflict with the tense interpretation it would have as a subordinate clause. Chung's system ([6], [7], [8]) posits a null-form past tense marker for the first clause in sentence (5a) and, hence, the clause has a past tense reading regardless of whether it contains the adverb *ecey* 'yesterday' or not. However, the sentence is actually ambiguous between a past tense and a present tense reading when it does not have the adverb[2]. Under our system, it has a present tense reading when the first clause is a conjunct, which contains -ø. When it is an adjunct, it obtains a past tense reading on the basis of the semantic/pragmatic relations between a subordinate clause and its matrix clause. Remember that Chung's system, which accounts for the fact syntactically that the first conjunct has a past tense reading, does not have any sources to rely on to get the past tense reading. In defining the categorial status of the first clause in (8), our system, unlike Lee's ([12]), does not have any inconsistencies resulting from the application of different criteria. The clause is a conjunct regardless of whether it contains an adverb or not, because it contains an explicit tense marker.

According to our analysis, each conjunct in a coordinate structure carries its own tense marker (when the last conjunct is tensed). Hence, the tense marker in the second conjunct in sentences like (1a) does not have any effect over the first conjunct. It exerts its effect over the first clause only when the first clause is a subordinate clause. Therefore, we have no reason to believe that the tense marker in the second conjunct of a coordinate structure has its scope over the whole sentence including the first conjunct. Then, as for the morpho-syntactic status of the tense markers, those who assume that the tense markers in Korean are clitics do not have any convincing evidence for their assumption. Although they appear to be clitics in view of such sentences as (1a), a more careful observation of them reveals that this appearance is just an illusion.

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[2] When the sentence contains the adverb, it has only the past tense reading because the adverb *ecey* 'yesterday' is in conflict with the present tense reading.

4   Conclusion

In this paper, we have provided a new system to account for the tense phenomena in -*ko* constructions with no explicit tense markers in the first clause. After examining some major works on these constructions in section 2, we have shown, in section 3, that their problems can be overcome under our own framework. The main issue in dealing with the constructions was to effectively account for the ambiguity of the first clause between a conjunctive reading and an adjunctive reading. We argued that the ambiguity arises as a result of interactions of two independent factors: the ambiguity of -*ko* and the formal property of the non-past tense marker. We saw why such ambiguity arises and figured out the differences between the two types of clauses concerned. Most of all, we could show that the tense markers in Korean are more likely to be inflectional affixes than clitics.

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