Syntactic and Semantic Mismatches in the Korean \textit{ko}-Construction

Nayoung Kwon  
*University of California, San Diego*

1. Introduction

The goal of this paper is to argue for a special type of \textit{ko} ‘and’ construction that shows both symmetrical and asymmetrical characteristics. I analyze this structure as being semantically asymmetrical and syntactically symmetrical (\textit{ko} pseudo-coordination). The results support an autonomous syntax that is not a reflection of the semantics.

(1) John-i moca-lul ssu-ko hakkyo-ey ka-ass-ta  
    John-nom hat-acc wear-ko school-loc go-pst-decl  
    ‘John went to school wearing a hat.’

Traditional theories of coordination and subordination have focused on the syntactic structure in distinguishing the two constructions. Coordination is a structure in which two or more elements are joined in such a way that each of them can be the head of that structure. In contrast, subordination is a structure in which two elements are joined in such a way that one is dominated by the other. However, since Ross (1967), it has been observed that some coordinate sentences display typical asymmetrical characteristics (Goldsmith 1985, Postal 1993, Lakoff 1986). In explaining this, Culicover and Jackendoff (1997) proposed the possibility of syntactic and semantic mismatches. They argued that conditional and sentences, as in (2), are semantically asymmetrical while syntactically symmetrical.

(2) You drink another can of beer and I’m leaving.  
    (= If you drink another can of beer, I’m leaving.)  
    (Culicover and Jackendoff 1997: 197)

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Yuasa and Sadock (2002) showed that Japanese te coordination also instantiates a syntactic and semantic mismatch. They argued that te coordination is syntactically asymmetrical but semantically symmetrical.

The first part of this paper presents the general morphological characteristics of the ko construction and reviews previous research on ko coordination and adjunction. Then, the semantic and syntactic characteristics of the two constructions are examined. Next, the target construction is introduced and compared with coordination and adjunction. It is shown that the target construction does not conform to any of the previous analyses. Finally, I analyze the target construction as being syntactically symmetrical and semantically asymmetrical. The implications for Korean coordination theory follow.

2. Ko constructions: Coordination and adjunction

In Korean, the most productive way of conjoining two clauses is by means of a conjunctive suffix on the verb (Sohn 1999). Among other characteristics, the suffix ko shows the following morphological properties:

1) tense marking in the non-final conjunct (NFC) is optional, as in (3), and
2) mood is prohibited in the NFC and allowed only in the final conjunct (FC), as in (4).

(3) John-i cha’y-ul il’k-(ess)-ko, Mary-ka tibi-lul po-ass-ta
John-nom book-acc read-(pst)-ko, Mary-nom TV-acc see-pst-decl
‘John read a book and Mary watched TV.’

(4) sonye-ka phyenci-lul ssu-*ta-ko sonyen-i kulim-ul
girl-nom letter-acc write-decl-ko boy-nom drawing-acc
kuly-ess-ta.
draw-pst-decl
‘The girl wrote a letter and the boy drew a picture.’

Yi (1998) noted the morphological asymmetry in (3) and (4), as well as the syntactic asymmetry in (5i). This asymmetry violates the Coordinate Structure Constraint (CSC; Ross 1967) which requires across-the-board movement. Therefore, Yi (1998) argued the ko construction is adjunction.

(5) nwu-ka cwuk-ko, John-i pyeng-i na-ass-ni?
who-nom die-and, John-nom disease-nom occur-pst-Q?
i ‘After who died, John got a disease?’
ii. *‘Who died and John got a disease?’

Yoon (1997) argued that the ko construction with the sequentiality or causality interpretation is indeed adjunction. Independently, Rudnitskaja
Kwon (1998) and Kwon (2003) showed the ko construction with sequentiality is asymmetrical in both the semantics and the syntax. Yoon (1997) and Kwon (2003) also contended that there is a true coordination structure with semantically and syntactically symmetrical properties, as in (5ii). The following analyses were proposed for the two constructions (Yoon 1997).

(6) a. ko Adjunction: with sequentiality/causality interpretation
Subject [tenseless V–ko]_{FC} (Subject) [tensed V]_{FC}

b. ko Coordination: without sequentiality/causality interpretation
i) Subject [tenseless V–ko]_{FC} (Subject) [tensed V]_{FC}
ii) Subject [tensed V–ko]_{FC} (Subject) [tensed V]_{FC}

Next, I examine the semantic and syntactic characteristics of ko coordination and ko adjunction.

3. Characteristics of ko coordination

3.1. Semantic characteristics

In coordination, permutation does not lead to meaning change. This indicates that this construction is semantically symmetrical.

(7) John-i Jane-ul cohaha-ko Mary-lul salangha-n-ta
John-nom Jane-acc like-ko Mary-acc love-pres-decl
‘John likes Jane and loves Mary.’

= John-i Mary-lul salangha-ko Jane-ul choaha-n-ta

3.2. Syntactic characteristics

The following facts lend themselves to a syntactically symmetrical analysis of ko coordination. Backward pronominalization\(^1\) is not allowed in coordination, as in (8), and iteration is possible, as in (9).

(8) *cakii-ka silswu-lul ha-ass-ko John-i na-eykey
self-nom error-acc do-past-ko John-nom I-dat
hwa-lul nay-ass-ta
anger-acc give-past-decl
‘Himself made errors and John got mad at me.’

---

\(^1\) This syntactic feature is related to the conceptual structure (Culicover and Jackendoff 1997). Therefore, the fact that backward pronominalization is not allowed suggests that this construction is semantically symmetrical.
   ‘John likes Mary, hates Jane, and respects Bob.’

CSC violations, such as scrambling of conjuncts, extraction out of a conjunct and wh-questions in one conjunct lead to ungrammaticality in coordination. The example of wh-questions is presented in (10). The results for scrambling and extraction are the same.

like-pst-Q
   ‘Who did John like and Tom liked Mina?’

Korean has a topic marker -(n)un ‘as for, concerning’ that encodes ‘topichood’ (Sohn 1999). In coordination, topicalization is not allowed in one conjunct, as in (11) and (12). Similarly, relativization is not allowed, as in (13) and (14). Coordinate sentences allow topicalization only when it occurs in both conjuncts, as in (15).

   ‘As for Jane John likes and Tom loves Mary.’

   ‘As for Mary, John likes Jane and Tom loves.’

(13) *[Mina-ka [t]i pwul-ess-ko, hakkyo-ey ka-n] [nolay], Mina-nom sing-pst-ko school-loc go-rel song
   ‘A song that Mina sang and (she) went to school.’

(14) *[Mina-ka nolay-lul pwul-ess-ko [t]i ka-n] [hakkyo], Mina-nom song-acc sing-pst-ko go-rel school
   ‘A school that Mina sang and (she) went to’

   ‘As for Jane, John likes (her), and as for Mary, Tom likes (her).’

In this section, thus far, it was shown that ko coordination is both semantically and syntactically symmetrical.
4. Characteristics of ko adjunction

4.1. Semantic Characteristics

Unlike coordination, permutation changes the meaning in ko adjunction. This suggests that ko adjunction is semantically asymmetrical.

(16) John-i ca-ko(se) Mary-ka ca-ass-ta
    John-nom sleep-ko(se) Mary-nom sleep-pst-decl
    ‘After John slept, Mary slept.’

≠ Mary-ka ca-ko(se) John-i ca-ass-ta
    ‘After Mary slept, John slept.’

4.2. Syntactic Characteristics

The following facts lend themselves to a syntactically asymmetrical analysis of ko adjunction. Backward pronominalization is possible in ko adjunction.

(17) caki-ka silswu-lul ha-ko(se) Bob-i na-ekey hwa-lul nayss-ta
    self-nom error-acc do-ko(se) Bob-nom I-dat anger-acc gave-decl
    ‘Bob got mad at me after he made errors himself.’

Yoon (1997) pointed out that when adjuncts are iterated, the sentences are interpreted either as successively embedded or conjoined.

(18) John-i pap-ul mek-ko(se) kulus-ul chiu-ko(se)
    John-nom meal-acc eat-ko(se) dish-acc clean-ko(se)
    TV-lul po-ass-ta
    TV-acc watch-pst-decl
    ‘After washing the dishes after his meal, John watches TV.’

Moreover, CSC violations do not lead to ungrammaticality. Scrambling of conjuncts, extraction out of one conjunct, and wh-questions in one conjunct do not result in ungrammaticality. A wh-question in one conjunct is illustrated in (19). The results for scrambling and extraction are the same.

(19) John-i nwukwu-lul manna-ko(se) hakkyo-ey ka-ass-ni?
    John-nom who-acc meet-ko(se) school-loc go-pst-Q
    ‘After meeting who, John went to school?’

Adding –se after ko clearly indicates the sequentiality interpretation of the sentence and therefore, Yoon (1997) used –se as a test to distinguish ko coordination and adjunction structures.
In adjunction, topicalization and relativization are allowed only out of the final clause, as in (20) and (22). The non-final conjunct does not allow topicalization and relativization, as in (21) and (23) due to the Condition on Extraction Domains (CED). Therefore, the non-final conjunct is an adjunct.

(20) [Taycen-ulο-nun] John-i hankwuk-ey
    Taycen-loc-top John-nom Korea-loc
    ipkwukha-ko(se) Tom-i [t] isaha-ass-ta
    enter-ko(se) Tom-nom move-pst-decl

    ‘As for Taycen, after John entered Korea, Tom moved to Taycen.’

(21) [hankwuk-eyi-nun] John-i [t] ipkwukha-ko(se),
    Korea-loc-top John-nom enter-ko(se),
    Tom-i Taycen-ulο isahay-ass-ta
    Tom-nom Taycen-loc move-pst-decl

    *‘As for Korea, after John entered, Tom moved to Taycen.’

(22) [Mina-ka pheynci-lul ssu-ko(se) [t] ka-n] [hakkyo],
    Mina-nom letter-acc write-ko(se) go-rel school

    ‘A school that Mina went to after she wrote a letter’

(23) *[Mina-ka [t] ssu-ko(se) hakkyo-ey ka-n] [pheynci],
    Mina-nom write-ko(se) school-loc go-rel letter

    ‘A letter that Mina wrote and went to shool’

A summary of the semantic and syntactic characteristics of coordination and adjunction is provided below.

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<thead>
<tr>
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<td>F Conjunct</td>
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</table>
5. **Ko pseudo-coordination**

*Ko* pseudo-coordination is a structure that shows both symmetrical and asymmetrical properties. The *ko* construction with a causality and concurrence interpretation shows properties of pseudo-coordination.

a. Causality

(24) Payksel kongcwu-ka sakwa-lul mek-ko cwuk-ess-ta
   white_snow princess-nom apple-acc eat-ko die-pst-decl
   ‘Princess Snow White ate an apple and died.’
  ☞ The reason that Princess Snow White died is because she ate the apple.

b. Description of state concurrent with action

    John-nom hat-acc wear-ko school-loc go-pst-decl
    ‘John went to school wearing a hat.’
   ☞ When John went to school, he was wearing a hat.

When tense is specified in the non-final conjunct, the intended meaning is lost. This is illustrated in (26) and (27).

(26) #Payksel kongcwu-ka sakwa-lul mek-ess-ko cwuk-ess-ta
    white_snow princess-nom apple-acc eat-pst-ko die-pst-decl
    ‘Princess Snow White ate an apple and died.’ (no causality)

(27) #John-i moca-lul ssu-ess-ko hakkyo-ey ka-ass-ta
    John-nom hat-acc wear-pst-ko school-loc go-pst-decl
    ‘John wore a hat and went to school.’ (no concurrent state)

Therefore, the proposed *ko* pseudo-coordination has the morpho-syntactic configuration in (28).

(28) *ko* pseudo-coordination: with a causality/concurrence interpretation
    Subject [tenseless V–*ko*]_{NFC} (Subject) [tensed V]_{FC}

6. **Ko pseudo-coordination as adjunction**

The asymmetrical properties of *ko* pseudo-coordination come from permutation, iteration, backward pronominalization, and the CSC.

6.1. Permutation

Permutation changes the associated meaning in pseudo-coordination, as it did in *ko* adjunction.
i) Concurrent State
(29) Nonkay-ka cekcang-ul kkyean-ko
    Nonkay-nom enemy_general-acc hug-ko
    kang-ey thwusinha-ass-ta.
    river-loc throw_self-pst-decl
    ‘Nonkay threw herself into the river hugging the enemy general.’
    ‘Nonkay threw herself and hugged the enemy general.’

ii) Causality
(30) Mina-ka banana kkepcil-ul palp-ko nemecy-ess-ta
    Mina-nom banana peel-acc step_on-ko fall-pst-decl
    ‘Mina stepped on a banana peel and fell.’
≠ Mina-ka nemeci-ko banana kkepcil-ul palp-ass-ta
    ‘Mina fell and stepped on a banana peel.’

6.2. Iteration

In pseudo-coordination with causality, the clauses are interpreted as successively embedded. In pseudo-coordination with a concurrent state, the clauses are interpreted to be conjoined with the preceding conjunct.

i) Causality
(31) John-i mayak-ul mek-ko cengsin-ul
    John-nom drug-acc eat-ko mind-acc
    ilh-ko salam-ul cwuky-ess-ta
    lose-ko person-acc kill-past-decl
    ‘Losing his mind because he took drugs, John killed a person.’

ii) Concurrent State
(32) John-i yakwu moca-lul ssu-ko, kacwuk
    John-nom baseball cap-acc wear-ko, leather
    hyektti-lul may-ko, kyohoy-ey ka-ass-ta
    belt-acc wear-ko, church-loc go-pst-decl
    ‘Wearing a baseball cap and wearing a leather belt, John went to church.’

6.3. Backward Pronominalization

Similar to adjunction, pseudo-coordination allows backward pronominalization.
i) Causality
(33) caki-ka kyothong sako-lul nay-ko,
    self-nom traffic accident-acc cause-ko
Mary-ka pohemkum-i olaka-ass-ta
Mary-nom insurance_fee-nom rise-pst-decl
‘Mary caused a car accident at her fault and got her insurance fee raised.’

ii) Concurrent State
(34) caki-ka catongcha-lul mol-ko
    self-nom car-acc drive-ko
Mary-ka hakkyo-ey ka-ass-ta
Mary-nom school-loc go-pst-decl
‘Mary went to school driving.’

6.4 Coordinate Structure Constraint

CSC violations, such as scrambling of a conjunct, extraction out of conjuncts, and wh-questions in one conjunct do not lead to ungrammaticality for \textit{ko} pseudo-coordination. The case of \textit{wh}-questions is shown below, and the results are the same for scrambling and extraction.

i) Causality
(35) Mina-ka mwues-ul palp-ko sikwungchang-ulo nemecy-ess-ni?
    Mina-nom what-acc step_on-ko ditch-loc fall-pst-Q
‘What did Mina step on and she fell into a ditch?’

ii) Concurrent State
(36) Mary-ka mwues-ul ip-ko hakkyo-ey ka-ass-ni?
    Mary-nom what-acc wear-ko school-loc go-pst-Q
‘What did Mary wear and went to school??’

Thus far, it was shown that pseudo-coordinate \textit{ko} sentences are semantically subordinate and they pattern with adjunction regarding iteration, backward pronominalization, and the CSC. In the next section, it is shown that \textit{ko} pseudo-coordination is different from adjunction, as well as coordination.

7. Pseudo-coordination: not adjunction and different from coordination

Although \textit{ko} pseudo-coordination shows critical properties of adjunction, as was evident in the preceding section, the construction in question also differs both from adjunction and coordination in the following respects: topicalization and relativization.
7.1. **Topicalization**

In the preceding sections, it was shown that *ko* adjunction is grammatical with topicalization in the final conjunct but not in the non-final conjunct. Coordination does not allow topicalization in either conjunct. Conversely, pseudo-coordination is grammatical with topicalization in any conjunct.

a) **Topicalization in the FC**

i) Causality

(37) [Johni-un], Mary-ka somwun-ul phettuli-ko
John-top Mary-nom rumor-acc spread-ko
motun salam-tul-i [t], silhehakey toy-ess-ta
all person-pl-nom hate become-pst-decl

‘As for John, Mary spread a rumor and (as a result of it) all the people began to hate him.’

ii) Concurrent State

(38) [nolayi-nun] Mary-ka tureysu-lul ip-ko [t], pwul-ess-ta.
song-top Mary-nom dress-acc wear-ko sing-pst-decl

‘Regarding the song, Mary sang (it) wearing a dress’

b) **Topicalization in the NFC**

i) Causality

(39) [somwuni -un] Mary-ka [t], phettuli-ko motun
rumor-top Mary-nom spread-ko all
salam-tul-i John-ul silhehakey toay-ass-ta
person-pl-nom John-acc hate become-pst-decl

‘As for the rumor, Mary spread it and (as a result of it) all the people began to hate John.’

ii) Concurrent State

(40) [ku tuleysui-nun] Mary-ka [t], ip-ko hakkyo-ey ka-ass-ta
that dress-top Mary-nom wear-ko school-loc go-pst-decl

‘Regarding the dress, she went to school wearing it.’

Additionally, unlike coordinate sentences, pseudo-coordination sentences do not allow topicalization in both conjuncts simultaneously.

(41) [somwun,un] Mary-ka [t], phettuli-ko Johni-un
rumor-top Mary-nom spread-ko John-top
motun salam-tul-i [t], silhehakey toay-ass-ta
all person-pl-nom hate become-pst-decl

*‘As for the rumor, Mary spread it and (as a result of it), as for John, all the people began to hate him.’*
7.2. Relativization

Pseudo-coordinate sentences allow relativization out of both the non-final and final conjuncts, unlike adjunction and coordination.

a) Relativization out of the NFC
i) Causality
(42) [Mina-ka [t], palp-ko sikkwungchang-ulo nemecin] [banana kkepcil],
Mina-nom step-on-ko ditch-loc fall-rel banana peel
‘The banana peel that Mina step on and fell’

ii) Concurrent State
(43) [Nonkay-ka [t], kkyean-ko kang-ey thwusinha-n] [cekcang],
Nonkay-nom hug-ko river-loc throw-body-rel enemy-general
‘The enemy general who Nonkay hugged and threw herself into river’

b) Relativization out of the FC
i) Causality
(44) [Mina-ka banana kkepcil-ul palp-ko [t], tteleci-n] [sikkwungchang],
Mina-nom banana peel-acc step-ko fall-rel ditch
‘The ditch that Mina fell into stepping on a banana peel’

ii) Concurrent State
(45) [Nonkay-ka cekcang-ul kkyean-ko [t], thwusinha-n] [kang],
Nonkay-nom enemy-general-acc hug-ko throw-body-rel river
‘The river that Nonkay hugged the enemy general and threw herself into’

Summary of the Results

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*Crd.: coordination, Adj.: adjunction, P-Crd.: pseudo-coordination

In summary, *ko* pseudo-coordination is semantically asymmetrical. It patterns with adjunction in several phenomena, including meaning change after permutation, iteration, backward pronominalization, and CSC violations. However, *ko* pseudo-coordination differs from both adjunction
and coordination. Adjunction does not allow topicalization and relativization in the non-final conjunct, while ko pseudo-coordination does. On the other hand, coordination does not allow relativization in any conjunct. Moreover, topicalization is allowed in coordination only when it occurs in both conjuncts. In contrast, ko pseudo-coordination does not allow topicalization in both conjuncts simultaneously.

The results show that neither the adjunction analysis nor the coordination analysis of ko pseudo-coordination is adequate. Furthermore, this construction cannot be analyzed as a “mixture” of ko-coordination and ko-adjunction. Therefore it is a fundamentally different construction.

8. Discussion

Major differences between adjunction and the target construction arise from whether topicalization and relativization are allowed in the NFC. It was suggested that the reason that relativization and topicalization are not allowed in the non-final conjunct in ko adjunction is due to the CED. Then, one possible explanation of the different patterns could be that the target construction is a subtype of adjunction such that the appearance of relativization and topicalization in both conjuncts are due to the presence of pro. Therefore, no movement occurs, and it does not violate the CED. This, however, leads to the conclusion that Korean has two kinds of relativization and topicalization: i) one involves movement and therefore leads to ungrammaticality, as in after relativization in ko-adjunction, ii) the other involves pro, as in the target construction. There is no independent evidence, however, that Korean has two types of relativization and topicalization. Even so, inserting an overt pronoun in place of the assumed pro position in ko pseudo-coordination leads to ungrammaticality with the intended reading, as in (46).

(46) Mina-ka (*kukes-ul) po-ko kicelha-n kwuysin
    Mina-nom that-acc see-and faint-rel ghost
    *‘The ghost that Mina saw (it) and fainted.’

Therefore, the pro analysis cannot be maintained. Instead, I propose that ko pseudo-coordination is symmetrical in the syntax, while it is asymmetrical in the semantics, adding a sub-type of the ko construction.

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<tr>
<td>ko pseudo-coordination</td>
<td>Asymmetrical</td>
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</table>
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Culicover and Jackendoff (1997) argued that the CSC is a semantically motivated effect. If so, CSC violations in pseudo-coordination are accounted for. In other words, the construction is semantically asymmetrical. Conversely, the CED is a syntactic constraint. *Ko* adjunction violates the CED, as evidenced by ungrammaticality after topicalization or relativization in the non-final conjunct. However, *ko* pseudo-coordination does not violate the CED, as shown by grammaticality after topicalization and relativization in the non-final conjunct. This implies that *ko* pseudo-coordination is symmetrical in the syntax. On the other hand, *ko* coordination does not allow topicalization and relativization in any conjunct because of a CSC violation not because of a CED violation.

Topicalization and Relativization in the NFC

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<tr>
<td><em>ko</em> pseudo</td>
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This analysis, however, should be further examined in conjunction with English CSC violations in allowing relativization.

(47) The food that John went to the store, ate and died, cost ten dollars.

In addition, the current analysis provides insight into the analysis of the coordination structure in general in Korean. Following Whitman (1989) and Kim (1993), in that topicalization in Korean is licensed by Mood in Spec, CP, the presented data imply that *ko* coordination does not have to apply at the VP level only (cf. Yoon 1994). Grammaticality after topicalization in both conjuncts of coordination suggests that the tenseless *ko* clause can be attached higher than VP (Chung 2001, Kwon 2003). On the other hand, the fact that *ko* pseudo-coordination allows topicalization in both conjuncts but not simultaneously suggests that pseudo-coordination is coordinated at a level lower than CP. If the conjuncts were coordinated at CP, topicalization in both conjuncts could be allowed simultaneously.

9. Conclusion

In this paper, a sub-type of the *ko* construction is identified that is semantically asymmetrical and syntactically symmetrical. Therefore, Korean *ko* constructions instantiate three different structures: coordination (Yoon 1997, Kwon 2003), adjunction (Yi 1998, Yoon 1997, Rudnitskaja 1998, Kwon 2003) and pseudo-coordination. This finding adds Korean to list of languages that show syntactic and semantic mismatches, such as
English (Culicover and Jackendoff 1997), Japanese (Yuasa and Sadock 2002) and Tsez (Polinsky 2002, 2003). This finding supports Culicover and Jackendoff in that the CSC is a semantic condition while the CED is a syntactic condition. In addition, the level of coordination is proposed to be higher than VP.

References


