

THE STATUS OF THE CONNECTIVE -KO IN THE ALTAIC COORDINATION CONSTRUCTION IN KOREAN

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Abstract : The paper investigates the Korean Altaic Coordination construction which involves the connective *-ko*. The goal is to find out in which cases this construction shows syntactic coordinate vs. subordinate properties. The Coordinate Structure Constraint is used as the main test for its status. The following factors determine its status: the presence of a tense marker in the first constituent, the same/different subject parameter and the possibility of successive interpretation. I consider the interaction of these factors, i.e. which combinations of these factors imply the coordinate or the subordinate status. The crucial factor which is implicitly involved in both of the grammatical factors is the interpretation factor. Since this is so, there is no reason to claim that the “subordination/coordination” distinction in Korean is syntactic.

Keywords: coordination, subordination, Altaic, syntax, factor, grammatical, interpretation

1. THE ALTAIC COORDINATION CONSTRUCTION IN KOREAN: BACKGROUND INFORMATION AND THE PROBLEM

The construction of a complex clause in Korean can follow the “European” or the “Altaic” pattern (following the terminology by Podlesskaya (1993)). In the “European” pattern, two clauses with finite verbs are connected by a conjunction. In the “Altaic” pattern, the verb of the

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first conjoined clause is non-finite; an affix with a conjunction-like meaning² (henceforth, a connective or a converb marker) is attached to it. Example (1) is an instance of the European Coordination construction in Korean. In (1) (example from Yoon (1994)), two finite verbs are connected by the conjunction **kuliko** “and”:

(1) John-i pap-ul mek-ess-ta kulilo
 John-NOM meal-ACC eat-PAST-IND and
 Mary-ka kulus-ul chiu-ess-ta³
 Mary-NOM dishes-ACC clean-PAST-IND
 “John ate the meal, and Mary cleaned the dishes”

As we see from (1), a finite verb in Korean must have a tense and a mood affix, such as **mek-ess-ta** “eat-PAST-IND” and **chiu-ess-ta** “clean-PAST-IND”. It is problematic whether the “European” pattern illustrated in (1) can be considered as similar to European coordination patterns with conjunctions **and**, **or** etc. The Korean connective **kuliko** contains a resumptive element **ku** “it, this”. A possible translation of **kuliko** is “also, besides that”. According to native speaker judgements and to Podlesskaya’s (1997) conclusions about Japanese connectives with resumption, constructions such as (1) correspond rather to two sentences than to one complex sentence. I do not discuss this pattern in detail.

In this paper, the “Altaic” coordination sentences are studied. The unmarked word order in Korean is SOV, and also the subordinate clause must precede the matrix clause. In the “Altaic” pattern, only the verb of the final clause of the sentence (which is the main clause) is finite, but all the other verbs are non-finite. Therefore, subordinate clause verbs are non-finite. Examples of complex sentences with a reason adverbial clause are (2)-(3). A non-finite verb may either have a tense, but no mood affix, such as **pyengina-ss-umulo** “be-sick-PAST-BECAUSE” in (2)⁴, or have no tense and no mood affix, as **pyengina-mulo** “be-sick-BECAUSE” in (3)⁵.

(2) Swun Mi-ka pyengina-ss-umulo
 Sun Mi-NOM be-sick-PAST-BECAUSE
 Hak Swu-ka achim-ul yoliha-ss-ta
 Hak Su-NOM breakfast-ACC cook-PAST-IND
 (3) Swun Mi-ka pyengina-mulo
 Sun Mi-NOM be-sick-BECAUSE
 Hak Swu-ka achim-ul yoliha-ss-ta
 Hak Su-NOM breakfast-ACC cook-PAST-IND
 “Hak Su cooked breakfast because Sun Mi was sick”

Altaic Coordination sentences with the affix **-ko** are formed according to the same pattern as adverbial sentences; (4) and (5) have the same pattern as (2)-(3).

(4) Swun Mi-nun yenge-lul kaluchy-ess-ko
 Sun Mi-TOP English-ACC teach-PAST-CONV

² I regard such non-finite verbs as converbs in the sense of Haspelmath & König (1995).

³ I use Yale Romanization as transcription in my examples.

⁴ The tense marker of the non-finite verb, as in (2), is not anaphoric. The grammatical (and semantic) tense of the subordinate (or non-final) clause may be different from the tense of the main clause.

⁵ When the subordinate clause verb has no tense marker, as in (3), the scope of the main clause tense affix, such as **-ss-** in **yoliha-ss-ta**, has scope over the subordinate clause (the tense operator is shared).

Hak Swu-nun samwusil-eyse ilhay-ss-ta
 Hak Su-TOP office-LOC work-PAST-IND
(5) Swun Mi-nun yenge-lul kaluchi-ko
 Sun Mi-TOP English-ACC teach-CONV

Hak Swu-nun samwusil-eyse ilhay-ss-ta
 Hak Su-TOP office-LOC work-PAST-IND
 "Sun Mi taught English, and Hak Su worked in an office"

Since the Altaic Coordination construction is formed according to the same pattern as a canonical subordinate construction, the following problem arises: what is the syntactic status of this construction? Is this construction syntactically subordinate or does it have properties different from a subordinate structure?

In section 2, a number of approaches to the status of the pattern under consideration in various languages are compared; in section 3, my approach is outlined and the syntactic status of the **-ko** construction is discussed. In section 4, I present Korean data which supports the statements of section 3. I also give the table in the end that shows which combinations of the factors influencing the status of the **-ko** construction. In section 5, I discuss the interaction of the factors pointed out in sections 3-4. In section 6, I give my conclusions.

2. THE MAIN APPROACHES TO ALTAIC COORDINATION

The issue of Altaic Coordination has been widely discussed in the literature. Main problems concerning the syntactic properties of this construction, which found various solutions in different approaches, are the following:

- 1) Which factors may influence the syntactic status of the Altaic Coordination construction?
- 2) Is the distinction "coordinate/subordinate" bipartite or are there constructions with "intermediate" status?
- 3) If the construction involves a connective (or a converb marker), is the status of the construction determined by a feature of this connective, such as "+/- coordinate"?

In their study of Altaic languages, Cheremisina, et al. (1986:143) consider the morphological factor as crucial for the status of the construction. Since the verb form in the first constituent is non-finite, this constituent is regarded as a gerund-like clause. Consequently, the whole sentence is a subordinate structure. This analysis is assumed for the markers **-p** and **-a** in Turkic languages, **-ja**, **-aad**, **-n** in Buryat and others.

Within the framework of the generative grammar, it is assumed that the syntactic status of a sentence is determined by formal (syntactic) tests (i.e. J. Ross's (1967) Coordinate Structure Constraint⁶ (the CSC) which is represented by a number of movements and transformations such as relative clause formation, wh-question formation, topicalization, clefting; other tests such as extraposition of the (first) conjoined constituent, nesting, etc.). Another assumption is that a connective in a complex sentence has a feature "+" or "- coordinate", and the

⁶ The Coordinate Structure Constraint says that no extraction is allowed out of either of the conjoined constituents in a coordinate structure if there is no extraction out of the other constituent. According to Haiman (1985), this Constraint is due to the fact that a coordinate structure does not allow transformations which break the original position symmetry of conjoined constituents.

construction with this connective is coordinate or subordinate depending on this feature. This approach is adopted in Yi's (1994, 1995) papers on the **-ko** construction in Korean. The CSC tests applied to this construction show that **-ko** sentences do not always obey the CSC. Yi's conclusion in this case is that **-ko** is a “- coordinate” connective, therefore the **-ko** construction is subordinate.

Foley and Van Valin (1984), Van Valin (1993: 102) investigate switch-reference constructions which include conjoined structures. In their approach, the CSC tests are regarded as important but not the only factor which determines the status of switch-reference constructions. Another factor is also considered to be relevant: the first conjoined clause cannot be finite, and the two clauses always share tense, mood and negation operators. Therefore, the clauses in the conjoined construction are dependent. Foley and Van Valin regard such constructions as “intermediate” between coordinate and subordinate, namely cosubordinate⁷.

Another approach which assumes that “intermediate” constructions are possible is that by Podlesskaya (1993: 126) and Alpatov and Podlesskaya (1995). Podlesskaya points out that subordinate/coordinate properties of the Altaic Coordination construction in Japanese are not unitary and depend on the semantic relation between the conjoined constituents. If this relation is “and”, as in (6), a transformation which violates CSC, such as relativization in the main (final) clause, is impossible. If this relation is of adverbial type, such as “reason-consequence” in (7), relativization in (7a) is possible⁸.

(6) **Taroo ga Amerika ni ik-i,**
 Taro SUBJ America TO go-CONV
Hanako-ga Huransu ni it-ta
 Hanako SUBJ France TO go-PAST
 “Taro went to America, [and] Hanako went to France”

(7) **bukka ga agar-i, minna ga komat-et i-ru**
 price SUBJ rise-CONV all SUBJ suffer-CONV be-PRES
 “Prices rising, all are suffering”
 a. **bukka ga agar-i, komat-te i-ru hirotacki**
 price SUBJ rise-CONV suffer-CONV be-PRES persons
 “People who, prices going up, are suffering”

Podlesskaya proposes that coordination/subordination is not a bipartite distinction, but a continuous scale. Morphological, syntactic and semantic factors are relevant for the placement of a particular sentence on this scale. Altaic Coordination constructions are in the middle part of the scale. By the morphological factor (non-finiteness of the first constituent), they are not entirely coordinate (cf. the conclusion by Foley and Van Valin). However (6) is more coordinate than (7) by the semantic relation factor. Then, different instances of a construction involving one connective (**-i**) are not unitary with respect to their coordinate/subordinate status.

Testelets (1996, 1997: 154) studies formal properties of conjunctionless coordination in Tsakhur. He assumes a bipartite coordinate/subordinate distinction and shows that the main factors relevant for the Tsakhur construction status are the same/different-subject parameter and the semantic relation factor.

⁷ In the constituent structure of a sentence, “intermediate” constructions are impossible because constituents may be either coordinated or one may be included into the other one: it is not clear how the “intermediate” relation may be represented (Ja. Testelets, p.c.).

⁸ Examples (9a-b) and (10) are from Alpatov and Podlesskaya (1995: 472).

To conclude, the studies described give the following answers to the questions about the Altaic Coordination construction formulated above:

- 1) Cheremisina et al. regard the morphological factor as the only one relevant for its status. In other approaches, formal tests such as the CSC are regarded as crucial for its syntactic status. Yi just applies these tests, while Podlesskaya and Testelets point out various factors which may determine the results of these tests. The semantic relation factor turns out to be relevant for Japanese, Tsakhur and also Korean (see below).
- 2) The generative grammar framework does not allow any “intermediate” constructions because it assumes the constituent sentence structure (see note 6); other approaches allow such constructions. Foley & Van Valin have formal criteria for regarding a construction as intermediate (cosubordinate); Podlesskaya claims that there are a number of criteria which allow us to consider a sentence as more or less coordinate.
- 3) Unlike the Government and Binding (Yi's) approach, Podlesskaya and Testelets do not assume that all connectives have a feature “+” or “- coordinate” which determines the syntactic status of the construction with the connective. Instead, a construction with a certain connective need not be unitary with respect to coordination/ subordination.

3. THE SYNTACTIC STATUS OF THE **-KO** CONSTRUCTION IN KOREAN

When syntactic tests such as the CSC are applied to the **-ko** construction, we see that it may show coordinate or subordinate properties in different cases, in the same way as the Japanese **-i** construction.

I investigate the syntactic properties of the **-ko** construction and ask which conditions are relevant for its being coordinate or subordinate. My assumptions are the following: **a**). I concentrate on syntactic tests the only evidence for coordinate/subordinate status. I do not consider non-finiteness of the first constituent and operator sharing at all because when syntactic tests are used, constructions with operator sharing may show both coordinate and subordinate properties: see examples in section 4; **b**). I adopt the constituent sentence structure of Chomsky (1957) and therefore consider coordination/ subordination to be a bipartite distinction; **c**). In all its occurrences, **-ko** is regarded as one lexical item (as assumed by Yi and by Lee (1993)); it's not the case that there are two different items **-ko**, one of which is a coordinate connective, and the other is a subordinate connective (as assumed by Xolodivich (1954)) - see note 10; **d**). I take into account all grammatical or semantic factors that determine the status of the construction⁹.

I use a number of instances of the CSC in order to determine the status of the **-ko** construction: scrambling, wh-question transformation (both used by Yi (1994, 1995)) and nesting (placing the first constituent inside the second one, mentioned by Haspelmath (1995: 12))¹⁰. These transformations are represented schematically in (8)-(10):

⁹ I do not look at functional properties of the **-ko** constructions, so my conclusions do not contradict the conclusion by Bergelson & Kibrik (1995) that switch-reference constructions in Tuva which are instance of Altaic Coordination are functionally coordinate.

¹⁰ I do not use the relative clause formation test because lexical resumptive pronouns are possible in Korean relative clauses; this is evidence against relative clauses being a result of movement or transformation (E.-Y. Yi, p.c.). I do not use the anaphora test proposed by Reinhart (1983) (mentioned by Haspelmath (1995: 12)) because in this test, the main (final)

(8) Scrambling(S): * [s₁] CONV [s₂]

-> OBJ₂ [s₁] CONV [s₂]

(9) Wh-question (Wq):

* [s₁] CONV [s₂] -> [s₁ WH-WORD] CONV [s₂];

* [s₁] CONV [s₂] -> [s₁] CONV [s₂ WH-WORD]

(10) Nesting (N): * [s₁] CONV [s₂] -> [s₂ [s₁] CONV]

The **-ko** construction does not have unitary syntactic properties, but may be coordinate or subordinate depending on various factors¹¹. The tests described above show that these factors are the following:

- 1) *Grammatical 1*: Presence vs. absence of a tense marker on the first constituent verb. If the marker is present, the construction is coordinate. [Henceforth, the tense marker factor].
- 2) *Grammatical 2*: If the tense marker is absent, a different-subject (DS) construction shows coordinate properties with few exceptions. [Henceforth, the same/different subject factor].
- 3) *Semantic*: If the tense marker is absent in a same-subject (SS) construction, its status depends on the semantic relation between the constituents. The “and” relation yields coordinate properties, but the “then” relation yields subordinate properties.

SS constructions easily allow “then” interpretation. In DS constructions, “then” interpretation is only possible in a few cases. It is not clear whether the semantic relation factor is relevant for DS construction. See the discussion in section 4.2.

Henceforth, I will refer to the “then” interpretation of **-ko** as **successive interpretation** and to the semantic relation factor as the **successive interpretation factor**: the data in section 4 shows that the semantic relation factor in Korean amounts to the possibility of successive interpretation.

As we saw in section 2, the same/different subject and the semantic relation factors are relevant in other languages as well - cf. (Podlesskaya, 1993; Testelets, 1997).

clause must precede the subordinate (non-final) clause - this word order is highly marked in Korean. I do not use the test of Equi-NP deletion for subject NP-s (mentioned by Podlesskaya (1993: 128)) because there is no clear-cut distinction between the **-ko** construction and prototypical adverbial constructions with respect to subject deletion.

¹¹ This implies that the **-ko** construction does not have unitary constituent structure in all its instances. In my assumption b) above, I adopt the constituent structure and the bipartite distinction of coordination/ subordination which is the only possible one assuming the constituent structure. Since the constituent structure must be determined by the “+/-coordinate” feature of **-ko**, the **-ko** construction is a problem for the constituent structure analysis. One possible solution might be to assume that there are two different items **-ko₁** and **-ko₂**; one of them is a coordinate connective and the other one is a subordinate connective. However, in my assumption c) above, I say that **-ko** is a unitary lexical item. The reason for the latter assumption is the native speakers’ intuition: native speakers regard **-ko** as one item. Thus, there is a contradiction between my assumptions b) and c). I do not try to solve this problem here.

4. FACTORS WHICH DETERMINE THE STATUS OF THE -KO CONSTRUCTION: THE KOREAN DATA

In this section, I present formal tests applied to Korean data. In 4.1, the CSC tests (8)-(10) are applied to SS constructions. In 4.2, these tests are applied to DS constructions. In both cases of DS and SS constructions, I compare -ko sentences with canonical adverbial constructions. I consider SS and different-subject DS construction independently because the same/different subject parameter is relevant for the status of the -ko construction.

4.1. The CSC tests: SS construction

The examples below show the crucial role of the tense marker in the first constituent. If this marker is present, the construction shows coordinate properties; if it is absent, the construction shows subordinate properties. In (11)-(13), the conjoined actions may be interpreted as successive (see section 5.2 for discussion). In (11)-(13), the conjoined actions may be interpreted as successive (see section 5.2 for discussion). In (11), (13) the tense affix -(a/e)ss- in the first constituent is optional. However, when transformations S, Wq, N are applied, the resulting sentences (11a-b), (12), (13a-c) are only grammatical without this tense marker.

(11) **Swun Mi-nun caki aphathu-lul phal (-ass) -ko**
 Sun Mi-TOP self's apartment-ACC sell (-past) -CONV
 cohun cip-ul sa-ss-ta
 good house-ACC buy-PAST-IND
 "Sun Mi sold her apartment and bought a good house"
 a. S: cohun cip-ul Swun Mi-nun caki aphathu-lul phal (*-ass) -ko sa-ss-ta; lit. "good house, Sun Mi her apartment sell (*sold)-and bought"
 b. N: Swun Mi-nun cohun cip-ul caki aphathu-lul phal (*-ass) -ko sa-ss-ta; lit. "Sun Mi good house, her apartment sell (*sold)-and, bought"

(12) **Wq: Swun Mi-nun mwusun kotonghakkyo-lul**
 Sun Mi-TOP which high-school-ACC
 machi (*-ess) -ko Sewultayhak-ey tulesska-ss-ni
 finish (-*PAST) -CONV Seoul-university-TO enter-PAST-QUEST
 lit. "Sun Mi which high school finish (*ed)-and Seoul University entered?"; "Which is the high school that Sun Mi finished and entered the Seoul University?"¹²

(13) **Sonnem-tul-un achim-ul mek (-ess) -ko**
 guests-PLUR-TOP breakfast-ACC eat (-PAST) -CONV
 nokcha-lul masy-ess-ta
 green-tea-ACC drink-PAST-IND
 "Guests ate breakfast and drank green tea"
 a. S: nokcha-lul sonnem-tul-un achim-ul mek (*-ess) -ko masy-ess-ta; lit. "green tea, guests breakfast eat (*ate)-and drank"
 b. Wq: Sonnem-tul-un achim-ul mek (*-ess) -ko mwusun cha-lul masy-ess-ni; lit. "guests breakfast eat (*ate)-and what tea drank?"
 c. N: Sonnem-tul-un nokcha-lul achim-ul mek (*-ess) -ko masy-ess-ta; lit. "guests green tea, breakfast eat (*ate)-and, drank"

These examples show that the tense marker on the first constituent verb implies the coordinate status of the construction. Unlike the -ko construction, presence or absence of the tense

¹² In Japanese and Korean, it is possible to put a wh-question to an adverbial clause of a complex sentence; that would not result in ungrammaticality. (12) and (21b) are examples for that. See, for instance, (Lasnik & Saito, 1992) for discussion.

marker is irrelevant for constructions with adverbial clauses. In (14), the tense marker is optional, as in (11), (13), but in (14a-b) and (15), this marker is also optional, as in the original sentences.

(14) **Swun Mi-nun Sewultayhak-ul colephay (-ss)**

Sun Mi-TOP Seoul-university-ACC finish(-PAST)

-umulo cohun cikcang-ul et-ess-ta

-BECAUSE good job-ACC find-PAST-IND

“Because Sun Mi finished Seoul University, (she) found a good job”

a. S: cohun cikcang-ul Swun Mi-nun Sewultayhak-ul colephay (-ss) -umulo et-ess-ta; lit. “good job, Sun Mi Seoul University finished-because found”

b. N: Swun Mi-nun cohun cikcang-ul Sewultayhak-ul colephay (-ss) -umulo et-ess-ta; lit. “Sun Mi good job, Seoul University finished-because, found”

(15) **Wq: Swun Mi-nun Sewultayhak-ul colephay**

Sun Mi-TOP Seoul-University-ACC finish

(-ss)-ulttay eti-ey ka-ss-ni;

(-PAST)-WHEN where-TQ go-PAST-QUEST

lit. “Sun Mi Seoul University finished-when where went?”

“When Sun Mi finished Seoul University, where did (she) go?”

The comparison of examples with **-ko** and examples with **-(u)mulo**, **-(l)ulttay** shows that their syntactic properties are different. The properties of the **-ko** construction are not unitary and depend on presence/absence of the tense marker. The properties of adverbial constructions are unitary (they are subordinate), these properties are not contingent on the presence of the tense marker.

In the following examples, the tense marker in the first constituent is absent. These examples show the role of the semantic relation (successive interpretation) factor. In (16), the conjoined verb phrases denote properties of Sun Mi. These properties may not be interpreted as occurring successively; the only possible interpretation of **-ko** is “and”. Transformations S, Wq, N are impossible. Compare (16) with (17) where the successive interpretation is the only possible one because of the adverbial “after two years”. In (17), transformations S, Wq and N are possible¹³.

(16) **Swun Mi-nun pap-ul cohaha-ko**

Sun Mi-TOP rice-ACC like-CONV

ppang-ul silhehay-ss-ta

bread-ACC hate-PAST-IND

“Sun Mi liked rice and hated bread”

a. S: *ppang-ul Swun Mi-nun pap-ul cohaha-ko silhehay-ss-ta; lit. “bread, Sun Mi rice like-and hated”

b. Wq: *Swun Mi-nun pap-ul cohaha-ko mwues-ul silhehay-ss-ni; lit. “Sun Mi rise like and what hated?”

c. N: *Swun Mi-nun ppang-ul pap-ul cohaha-ko silhehay-ss-ta; lit. “Sun Mi bread, rice like-and, hated”

(17) **Swun Mi-nun Sewultayhak-ul colepha-ko**

Sun Mi-TOP Seoul-university-ACC finish-CONV

i-nyen-hwu Tokil-ey ka-ss-ta

two-year-AFTER Germany-DIR go-PAST-IND

“Sun Mi finished Seoul University and, two years after (that), (she) went to Germany”

¹³ Cf. also (11)-(13) above which admit successive interpretation and allow transformations S, Wq, N when they don't have any tense marker in the first constituent.

a. S: Tokil-ey, Swun Mi-nun Sewultayhak-ul colepha-ko i-nyen-hwu ka-ss-ta; lit. “to Germany, Sun Mi Seoul University finish-and two years after went”

b. Wq: Swun Mi-nun Sewultayhak-ul colepha-ko i-nyen-hwu eti-ey ka-ss-ni; lit. “Sun Mi Seoul University finish-and two years after where went?”

c. Swun Mi-nun Tokil-ey Sewultayhak-ul colepha-ko i-nyen-hwu ka-ss-ta; lit. “Sun Mi to Germany, Seoul University finish-and two years after, went”

To conclude, it has been shown in this section that the tense marker and the successive interpretation factors determine the status of the SS -ko construction. In the next section, I will present data for DS constructions.

4.2. The CSC tests: DS constructions

First, I will give examples showing that the tense marker is relevant for the status of DS constructions; second, I will show that the same/different subject parameter is also relevant, and DS constructions show coordinate properties in the majority of cases when the tense marker factor is absent. Examples (18)-(19) show that the construction is always coordinate when the first coordinated constituent has a tense marker.

(18) Chel Swu-ka cangkaka (-ss)-ko ku-uy
 Chol Su-NOM marry (-PAST)-CONV he-POSS
 emeni-ka atul-uy aphathu-lo isahay-ss-ta
 mother-NOM son-POSS apartment-DIR move-PAST-IND

“Chol Su married, and his mother moved to her son’s apartment [to live with Chol Su and his wife]”¹⁴

a. S: atul-uy aphathu-lo Chel Swu-ka cangkaka (*-ss)-ko ku-uy emeni-ka isahay-ss-ta; lit. “to son’s apartment, Chol Su marry (*ied)-and his mother moved”

b. Wq: Chel Swu-ka cangkaka (*-ss)-ko ku-uy emeni-nun mwukwu-uy aphathu-lo isahay-ss-ni; lit. “Chol Su marry (*ied)-and his mother to whose apartment moved?”

c. N: Chel Swu-uy emeni-nun atul-uy aphathu-lo Chel Swu-ka cangkaka (*-ss)-ko isahay-ss-ta; lit. “Chol Su’s mother to son’s apartment, Chol Swu marry (*ied)-and, moved”

(19) Hak Swu-ka saphyo-lul nay (-ss)-ko
 Hak Su-NOM application-to-retire-ACC submit (-PAST)-CONV
 Chel Swu-ka cohun il-ul math-ass-ta
 Chol Su-NOM good job-ACC get-PAST-IND

“Hak Su submitted the application to retire, and Chol Su got a good [Hak Su’s] job”

a. S: cohun il-ul Hak Swu-ka saphyo-lul nay (-ss)-ko Chel Swu-nun math-ass-ta; lit. “good job, Hak Su application to retire submit (*tcd)-and Chol Su got”

b. Wq: Hak Swu-ka saphyo-lul nay (*-ss)-ko Chel Swu-nun mwusun il-ul math-ass-ni; lit. “Hak Su application to retire submit (*ted)-and Chol Su which job got?”

c. N: Chel Swu-nun cohun il-ul Hak Swu-ka saphyo-lul nay (*-ss)-ko math-ass-ta; lit. “Chol Su good job, Hak Su application to retire submit (*ted)-and, got”

Comparison of (18)-(19) and (20)-(21) shows that the presence of the tense marker is irrelevant for different-subject adverbial sentences, in the same way as in case of same-subject adverbial constructions.

¹⁴ As I point out later, DS constructions generally resist successive interpretation unless they contain an adverbial **nantwi** “after that” which makes the successive interpretation the only possible (see examples (22)-(24)). However, examples (18)-(19) can be interpreted successively even without the adverbial **nantwi**. I propose a solution to this question in section 5.2.

(20) on kacok-i Pwullanse-ey ka-ss-ulttay
 whole family-NOM France-TO go-PAST-WHEN
 Yeng Ca-nun thukhi emma-lul kiliwehay-ss-ta
 Yong Ja-TOP especially mother-ACC miss-PAST-IND

“When the whole family [except for Yong Ja] went to France, Yong Ja especially missed her mother”

a. S: thukhi emma-lul on kacok-i Pwullanse-ey ka-ss-ulttay Yeng Ca-nun kiliwehay-ss-ta; lit. “especially mother, whole family to France went-when, Yong Ja missed”
 b. N: Yeng Ca-nun thukhi emma-lul on kacok-i Pwullanse-ey ka-ss-ulttay kiliwehay-ss-ta; lit. “Yong Ja especially mother, whole family to France went-when, missed”

(21) a. Wq: on kacok-i Pwullanse-ey ka-ss-ulttay
 whole family-NOM France-TO go-PAST-WHEN

Yeng Ca-nun eti-eyse iss-ess-ni
 Yong Ja-TOP where-LOC be-PAST-QUEST

lit. “whole family to France went-when, Yong Ja where was?”; “When the whole family went to France, where was Yong Ja?”

b. Wq: on kacok-i eti-ey ka-ss-ulttay Yeng Ca-ka Sengchin-cyse iss-ess-ni; whole family-NOM where-TO go-PAST-WHEN Yong Ja-NOM Songchin-LOC be-PAST-QUEST; lit. “whole family where went-when, Yong Ja in Songchin was?”; “What is the place where the whole family went when Yong Ja was in Songchin?” [cf. note 11]

To conclude, DS -ko constructions may only be subordinate if the first conjoined constituent verb lacks the tense marker.

Testelets (1997) proposes that the same/different subject factor is relevant for the status of the Tsakhur conjunctionless coordination construction. Namely, a SS construction is much more often subordinate than a DS one. In Korean, the same/different subject factor is also relevant when the tense marker affix is absent. A DS construction shows coordinate properties in a regular case, even if the first conjoined clause has no tense affix (examples such as (18)-(19) are difficult to construct, see note 14). (22) is a DS construction; transformations S, Wq, N in (22a-c) are ungrammatical.

(22) Chel Swu-ka Sewultayhak-ul colepha-ko
 Chol Su-NOM Seoul-university-ACC finish-CONV
 Yeng Ca-ka cohun ttal-ul nah-ass-ta
 Yong Ja-NOM good daughter-ACC bear-PST-IND
 “Chol Su finished Seoul University, and Yong Ja had a nice daughter”
 a. S: *cohun ttal-ul Chel Swu-ka Sewultayhak-ul colepha-ko Yeng Ca-ka nah-ass-ta;
 lit. “nice daughter, Chol Su Seoul University finish-and Yong Ja had”
 b. Wq: *Chel Swu-ka Sewultayhak-ul colepha-ko Yeng Ca-nun mwukwu-lul nah-ass-ni; lit. “Chol Su Seoul University finish-and Yong Ja who had?”
 c. N: *Yeng Ca-nun cohun ttal-ul Chel Swu-ka Sewultayhak-ul colepha-ko nah-ass-ta;
 lit. “Yong Ja nice daughter, Chol Su Seoul University finish-and, had”

In Korean, two conjoined events in a SS construction are easily interpreted as successive when they share the tense affix, but successive interpretation is difficult to get in a DS construction even if the tense affix is shared. Conjoined events in SS sentences such as (11), (13) (repeated here with only one tense marker in the second constituent) are easily interpreted as successive, but that is not true for a DS sentence such as (22). Successive interpretation is impossible in DS sentences (23)-(24) unless they have the adverbial **nantwi** “after that” which makes the successive interpretation possible (the same is true for (22); (22) would allow transformations S, Wq, N if it contained **nantwi**).

(11) Swun Mi-nun caki aphathu-lul phal-ko
 Sun Mi-TOP self's apartment-ACC sell-CONV

cohun cip-ul sa-ss-ta
 good house-ACC buy-PAST-IND
 “Sun Mi sold her apartment and bought a good house”

(13) Sonnem-tul-un achim-ul mek-ko
 guests-PLUR-TOP breakfast-ACC eat-CONV
 nokcha-lul mas-y-ess-ta
 green-tea-ACC drink-PAST-IND
 “Guests ate breakfast and drank green tea”

(23) Hak Swu-ka hakkyo-eyse ttal-ul teyleo-ko (nantwi)
 Hak Su-NOM school-FROM daughter-ACC bring-CONV (after-that)
 Swun Mi-ka sicang-ey ka-ss-ta
 Sun Mi-NOM market-TO go-PAST-IND

(a) With nantwi: “Hak Su brought the daughter from school, and then Sun Mi went to the market”;
 (b) Without nantwi: “Hak Su brought the daughter from school; and Sun Mi went to the market” [these events are not successive; the speaker does not intend to convey any temporal relation between them at all]

(24) Swun Mi-ka achim-ul yoliha-ko (nantwi)
 Sun Mi-NOM breakfast-ACC cook-CONV (after-that)
 Hak Swu-ka ayki-eykey kukes-ul meky-ess-ta
 Hak Su-NOM child-DAT it-ACC feed-PAST-IND

(a) With nantwi: “Sun Mi cooked breakfast, and then Hak Su fed it to the child”;
 (b) Without nantwi: “Sun Mi cooked breakfast; and Hak Su fed it to the child” [not successive]

The conjoined events in (22)-(24) may in principle be interpreted as successive even without **nantwi**. In the English translations (b) of (23)-(24) which contain no adverbial “after that” (and also in corresponding Russian sentences) successive interpretation is possible. Hence, the fact that (22)-(24) as opposed to (11), (13) have no successive interpretation without **nantwi**, may only be explained by the same/different subject parameter.

To conclude, if the tense marker factor is not present (the first constituent verb does not have this marker), a DS construction shows coordinate properties in most cases, even in cases when the conjoined events may be interpreted as successive. For a SS construction, the factor of having successive or not successive interpretation is crucial.

Testelets (1997: 124) shows that when a Tsakhur DS construction involves a reason-consequence relation, it shows subordinate properties. Consequently, the semantic relation factor is valid for Tsakhur DS constructions. In Korean, it is impossible to construct examples similar to Tsakhur because **-ko** admits no reason interpretation. This restriction of the **-ko** construction is shown in (25)-(26). Either (25) (a SS construction) or (26) (a DS construction) admit no reason-consequence interpretation: translations (a)-(b) are not possible, but only translation (c) which contains no reason component is possible¹⁵.

(25) Swun Mi-nun sensayng i -ko maywu emkyekha-∅-ta
 Sun Mi-TOP teacher be-CONV very severe-PRES-IND
 *(a) “Because Sun Mi is a teacher, she is very strict”
 *(b) “Sun Mi is a teacher, and so she is very strict”
 (c) “Sun Mi is a teacher; and she is very strict”

¹⁵ I regard this restriction as evidence that **-ko** is not a contextual, but a specialized converb in Nedjalkov’s (1989, 1995) system. See arguments for that in Rudnitskaya (1997), section 3.1.

(26) **Swun Mi-ka/-nun pyengina-ko**
 Sun Mi-NOM/-TOP be-sick-CONV
Hak Swu-ka/-nun achim-ul yolihay-ss-ta
 Hak Su-NOM/TOP breakfast-ACC cook-PAST-IND
 *(a) "Because Sun Mi was sick, Hak Su cooked breakfast"
 *(b) "Sun Mi was sick, and so Hak Su cooked breakfast"
 (c) "Sun Mi was sick; Hak Su cooked breakfast"

Since the reason-consequence interpretation is barred in the **-ko** construction, this interpretation cannot be used in order to see whether the semantic relation factor is valid for the DS construction. The only adverbial relation possible in **-ko** sentences is successive as in (18)-(19). Therefore, the semantic relation factor in Korean amounts to the possibility of successive interpretation. As we saw above, the successive interpretation is very restricted in Korean DS constructions unlike English (or Russian) constructions with the conjunction **and**. I argue that the same/different subject parameter affects the possibility of successive interpretation. Then, the semantic factor is relevant for both SS and DS constructions, but it is blocked to a large extent in DS constructions. This issue is discussed in section 5.2.

5. DISCUSSION: THE INTERACTION AMONG THE TENSE AFFIX, SAME/DIFFERENT SUBJECT AND SEMANTIC RELATION (SUCCESSIVE INTERPRETATION) FACTORS

In sections 3-4, I have listed the factors which determine the syntactic status of the **-ko** construction and presented the data which are evidence for the validity of these factors. In this section, I will show the interaction of the factors considered: i.e. which values for these parameters can cooccur with each other.

I will argue that both of the grammatical factors influence the syntactic status of the **ko** construction only indirectly, via the successive interpretation factor. This is because both of the grammatical factors are relevant as long as each of them imposes restrictions on the interpretation licensing only non-successive interpretation (tense marker factor) or resisting successive interpretation (same/different subject factor)¹⁶. Then, the successive relation factor is crucial for the coordinate / subordinate status.

5.1. The tense affix factor and the successive interpretation factor

The presence of a tense marker in the first constituent imposes the following restriction on the interpretation of the sentence: the successive interpretation is excluded, cf. (Sohn, 1995: 120)). In (27), it is shown that the successive adverbial **nantwi** cannot cooccur with the tense marker in the first constituent).

(27) **Chel Swu -ka / -nun cangkaka-ss-ko (*nantwi)**
 Chol Su -NOM/TOP marry-PAST-CONV (*after-that)
ku-uy emeni -ka / -nun atul-uy aphathu-lo he-
 POSS mother -NOM/TOP son-POSS apartment-DIR

¹⁶ The analysis in this section supports Yoon & Yoon's (1990) and Yoon's (1994) conclusion that the **-ko** construction is coordinate unless the sentence receives a successive interpretation.

isahay-ss-ta
 move-PAST-IND
 "Chol Su married; and [also] his mother moved to her son's apartment" [successive interpretation is impossible]

The same restriction holds for SS constructions such as (28) ((28)=(11) with a tense affix in both constituents; **nantwi** is not allowed).

(28) **Swun Mi-nun caki aphathu-lul phal-ass-ko**
 Sun Mi-TOP self's apartment-ACC sell-PAST-CONV
 (***nantwi**) cohun cip-ul sa-ss-ta
 (*after-that) good house-ACC buy-PAST-IND
 "Sun Mi sold her apartment; and [also she] bought a good house" [non-successive]

Recall from note 4 that the marker -(a/e)ss- cannot be anaphoric, i.e. if this marker is present in the subordinate clause, the tense of the subordinate clause cannot be understood as dependent on the tense of the main clause. Therefore, the events denoted by these clauses are understood as occurring at time points which are not related to each other, and hence not successive - see the discussion of this phenomenon in Korean by Sohn (1995: 91). That explains the restriction on the successive interpretation imposed by the tense marker factor.

This restriction allows us to claim that the tense marker factor determines the syntactic properties of the -ko construction via the successive interpretation factor: constructions with the tense marker in the first constituent only allow non-successive ("and") interpretation, therefore they show coordinate syntactic properties.

5.2. *The same/different subject factor and the successive interpretation factor*

It was shown in section 4.2 that, though successive interpretation is possible in DS sentences, this interpretation is much more restricted for DS sentences than for SS sentences. I will argue that the successive interpretation factor is relevant for DS constructions, and the same/different subject factor is only relevant because the DS parameter restricts the successive interpretation.

My proposal is that the Korean -ko construction imposes stronger restrictions on the possibility of successive interpretation than English and Russian constructions with **and**. The latter constructions (see (Grice, 1989; Sannikov, 1990)) always have the successive interpretation if the conjoined events may occur successively¹⁷. However, in the -ko construction, the coincidence of subjects is required for successive interpretation. In this case, even though -ko is not a switch-reference marker, it has properties of a SS switch-reference marker when the possibility of successive interpretation is involved. In SS sentences, successive interpretation is possible. In regular DS sentences, it is impossible. Compare Korean sentences (29)-(30) ((=23)-(24) without **nantwi**) and their literal translations assuming that -ko corresponds to **and**. The literal English translations in which -ko=**and** allow successive interpretation (even though this interpretation is not obligatory), while Korean sentences themselves do not admit successive interpretation.

(29) **Hak Swu-ka hakkyo-eyse ttal-ul teyleo-ko**
 Hak Su-NOM school-FROM daughter-ACC bring-CONV

¹⁷ Schmerling (1975) shows that the CSC holds for English sentences with **and** both in cases of "and" and in cases of successive interpretation. Then, **and**, unlike -ko, is a connective with the feature "+coordinate".

Swun Mi-ka sicang-ey ka-ss-ta

Sun Mi-NOM market-TO go-PAST-IND

lit. "Hak Su brought the daughter from school, and Sun Mi went to the market"; not lit.
 "Hak Su brought the daughter from school; and [also] Sun Mi went to the market" [non-successive]

(30) Swun Mi-ka achim-ul yoliha-ko

Sun Mi-NOM breakfast-ACC cook-CONV

Hak Swu-ka ayki-eykey kukes-ul meky-ess-ta

Hak Su-NOM child-DAT it-ACC feed-PAST-IND

lit. "Sun Mi cooked breakfast, and Hak Su fed it to the child"; "Sun Mi cooked breakfast; and [also] Hak Su fed it to the child" [non-successive]

Under the assumption that the successive interpretation is possible only in SS constructions, DS sentences (18)-(19) (repeated here) which also allow such interpretation must be accounted for.

(18) Chel Swu-ka cangkaka(-ss)-ko ku-uy

Chol Su-NOM marry(-PAST)-CONV he-POSS

emeni-ka atul-uy aphathu-lo isahay-ss-ta

mother-NOM son-POSS apartment-DIR move-PAST-IND

"Chol Su married, and [then] his mother moved to her son's apartment"

(19) Hak Swu-ka saphyo-lul nay (-ss) -ko

Hak Su-NOM application-to-retire-ACC submit(-PAST)-CONV

Chel Swu-ka cohun il-ul math-ass-ta

Chol Su-NOM good job-ACC get-PAST-IND

"Hak Su submitted the application to retire, and [then] Chol Su got a good [Hak Su's] job"

Bergelson & Kibrik (1995: 385) note that switch-reference systems in many languages have "gray zones" where the orientation of the switch-reference mechanism is blurred, and where both the SS marker and the DS marker are possible. Bergelson & Kibrik point out the main sources of such blurring: incomplete coincidence or the referential extension of the subjects; non-prototypical reference of the subjects (specific, non-count or non-referential subject); non-prototypical (non-animate or non-agentive) subjects. For the **-ko** construction, successive interpretation should be possible in DS constructions in these cases.

I propose that (18)-(19) are also cases of blurring. This is because in both of these examples, two instances of the same situations are implied by the conjoined clauses. In (18), the instances are "Chol Su's living in his apartment" and "Chol Su's mother's living in his apartment"; in (19) - "Hak Su's working at some job" and "Chol Su's working at the same job". Even though the subjects are different in (18), they play the same role in the situation implied in (18); the same holds for (19). If we assume that DS constructions have the same properties as SS constructions when the subjects of the DS construction play the same role in two instances of one situation, the fact that successive interpretation is allowed in (18)-(19) is accounted for.

To conclude, I claim that DS constructions normally disallow successive interpretation, therefore DS constructions usually show coordinate syntactic properties. DS constructions can have properties of SS constructions such as (18)-(19) under the condition formulated above. Such DS constructions allow successive interpretation and show properties of subordinate structures.

In the present section, I showed the interaction between the tense marker factor and the successive interpretation factor, and between the same/ different subject factor and the

interpretation factor. The tense marker in the first conjoined constituent and the DS construction disallow successive interpretation of the **-ko** sentence, whereas subordinate properties are only consistent with successive interpretation. Hence, the interpretation factor determines the coordinate/ subordinate status directly, while the tense affix and same/different subject factors can influence the status only indirectly, via the interpretation factor. These results are shown in Table 1 below.

Table 1. The interaction of the three factors which influence the status of the **-ko** construction

successive		non-successive	
+tense	-tense	+tense	-tense
DS	-	/subord	coord
SS	-	subord	coord

Table 1 shows that the subordinate status is only consistent with successive interpretation, but the coordinate status is only consistent with the non-successive interpretation. Thus, there is a one-to-one correspondence between the interpretation and the coordinate/ subordinate status. For the two grammatical factors, there is no such correspondence. First, in the absence of the tense marker, the construction may be both coordinate and subordinate. Second, the DS construction may be both coordinate and subordinate.

This shows ones more that the interpretation factor is crucial for the syntactic status of the **-ko** construction. Since only the non-successive interpretation of **-ko** is possible in the presence of the grammatical factors, these factors determine the coordinate/ subordinate stats of the construction indirectly, i.e. via the interpretation factor.

6. CONCLUSION

In this paper, conditions for syntactic coordinate vs. subordinate properties of the Korean Altaic Coordination construction with the marker **-ko** were investigated. The tests used were instances of the CSC. The following factors determine the syntactic properties of the construction: if the first constituent contains a tense marker, the construction shows coordinate properties; a DS construction shows coordinate properties (with few exceptions); in the absence of the first two factors the construction shows coordinate properties unless the successive interpretation is possible. The two grammatical factors are relevant because they impose constraints on the interpretation of the **-ko** sentence; i.e. they disallow successive interpretation. Then, the successive interpretation factor is the only one that determines the status of the **-ko** construction directly; the other two factors can only determine it indirectly, i.e. via the interpretation factor.

We see that the interpretation factor leads in restrictions in the **-ko** construction similar to the CSC effects. The CSC is valid for European languages where the distinction between coordination and subordination is grammaticalized (or syntactic). However, if the coordination/subordination distinction is based only on interpretation factors in the **-ko**

construction in Korean, no grammaticalized or syntactic distinction “coordination/subordination” can be introduced in Korean.

Abbreviations

ACC - accusative

AOR - aorist

CONV - converb

coord - coordinate

DAT - dative

DIR - directional

DIR.OBJ - direct object

ERG - ergative

IND - indicative marker

NOM - nominative

OBJ - object

PAST - past tense

PLUR - plural

PRED - predicate

PRES - present tense

QUEST - question marker

S1, S2 - first, second conjoined clause

SUBJ - subject

subord - subordinate

+/tense - the tense marker is present/ absent

TOP - topic

VP1, VP2 - first, second conjoined verb phrase

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