

On the ditransitive construction in Korean

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This paper investigates the Korean ditransitive construction consisting of the Goal (IO), a dative-case marked NP *-ey(key)*, and the Theme (DO), an accusative-case marked NP *-(l)ul*. I propose that [IO-DO] is the underlying order and [DO-IO] is derived by scrambling. I argue that the underlying order is an instantiation of the prepositional locative structure in which the Goal c-commands the Theme. This is a counterexample to Harley's (2002) typological generalization in which the Theme c-commands the Goal in the prepositional locative structure. As a further support for my proposal, I show that Korean has another locative structure in the form of a double subject construction.

1. Introduction

The ditransitive construction in English has received much attention among linguists (Larson 1988; Pesetsky 1995; Harley 1996, 2002). The following examples show that English has two different syntactic frames for argument realization associated with ditransitive verbs such as *send*.

- (1) a. Tom sent Mary a letter. [Double Object Construction]
b. Tom sent a letter to Mary. [To-Dative Construction]

Example (1-a) is called a double object construction (DOC) and consists of two NPs: the Goal *Mary* as an indirect object (IO) precedes the Theme *a letter* as a direct object (DO). Example (1-b) is called a to-dative construction (to-DC) in which the Theme (DO) *a letter* precedes the Goal (IO) *to Mary*.

An important question regarding the two syntactic frames associated with ditransitive verbs is whether the frames, DOC and to-DC, are derived from the same underlying structure or whether each frame has its own underlying representation. The proposals in the literature on the derivation of the ditransitive construction can be divided into two main approaches. First, the Derivational Approach, which views the two frames as syntactically or semantically related, states that one frame represents the underlying order and the other frame is derived via syntactic operation (as argued in Larson 1988). The Alternative Projection Approach, on the other hand, states that DOC and to-DC are not syntactically or semantically related to each

other. This approach views each frame as having its own underlying representation resulting in alternative projections (as argued in Pesetsky 1995; Harley 1996, 2002).

Korean has a ditransitive construction consisting of a dative NP and an accusative NP. For example, as shown in (2), the ditransitive construction is composed of a dative-case marked NP *-ey(key)*¹ and an accusative-case marked NP *-(l)ul*²: the dative NP, IO (Goal), can precede the accusative NP, DO (Theme), and vice-versa. I will refer to this type of ditransitive construction as dative construction.

- (2) a. Mary-nun John-eykey senmwul-ul cwu-ess-ta. [IO-DO]
 Mary-TOP John-DAT present-ACC give-PST-DEC
 ‘Mary gave a present to John.’
- b. Mary-nun senmwul-ul John-eykey cwu-ess-ta. [DO-IO]
 Mary-TOP present-ACC John-DAT give-PST-DEC
 ‘Mary gave a present to John.’

Another type of ditransitive construction attested in Korean contains two accusative-case marked NPs as in (2-c). I will refer to this type of ditransitive construction as double object construction.

- (2) c. Mary-nun John-ul senmwul-ul cwu-ess-ta.
 Mary-TOP John-ACC present-ACC give-PST-DEC
 ‘Mary gave John a present.’

While all ditransitive verbs can occur in dative construction, only a small number of ditransitive verbs, such as *cwuta* ‘give’ can occur in double object construction, as shown in Jung and Miyagawa (2004). This paper is mainly concerned with the syntax of dative construction.

Unlike in English, in Korean, not much work can be found on the syntactic relationship between the dative construction with [IO-DO] and the one with [DO-IO]. There is only one previous study by Baek & Lee (2004). They propose that [IO-DO] and [DO-IO] are derived from the same underlying structure: [DO-IO] is the underlying structure and [IO-DO] is derived via scrambling, a syntactic operation that freely orders arguments.

This paper investigates the dative construction in Korean exemplified in (2) and addresses the following research question:

‘In the two orders, [IO-DO] and [DO-IO], which one represents the underlying structure and which one represents the derived structure?’

In this paper, I propose that [IO-DO] ([Goal-Theme]) represents the underlying order as in (2-a) and [DO-IO] ([Theme-Goal]) as in (2-b) is derived from [IO-DO] by moving the DO across the IO. The derivation results from scrambling. Further, extending the ideas from Harley, I propose that the underlying order [IO-DO] is an instantiation of the prepositional locative structure in which the Goal c-commands the Theme.

¹ The allomorphs of the dative-case markers depend on the animacy of the complement NP: if the NP encodes an inanimate entity, *-ey* is used, while if the NP encodes an animate entity, *-eykey* is used.

² The allomorphs of the accusative-case markers are phonologically conditioned: if the NP ends with a consonant, *-ul* is used, while if the NP ends with a vowel, *-lul* is used.

This paper is organized as follows: In section 2, I provide a brief overview of the main approaches to English ditransitive constructions that have been proposed in the literature. In particular, I focus on Larson (1988) and Harley (1996, 2002). In section 3, I examine the Korean dative construction in which the Goal (IO) is marked with the dative-case *-ey(key)* and the Theme (DO) is marked with the accusative-case *-(l)ul*. I provide three supporting arguments for this proposal, the quantifier scope, the chain condition of *cakicasin* ‘self’, and idiomatic expressions in Korean to show that [IO-DO] is the underlying order and [DO-IO] is derived through scrambling. In section 4, I propose that the underlying order [IO-DO] is an instantiation of the prepositional locative structure headed by P_{loc} , similar to Harley’s (1996, 2002) proposed structure for the to-dative construction in English. However, I show one major difference between Harley’s structure and mine, which concerns the syntactic relationship between the Goal (IO) and the Theme (DO) argument. In contrast to Harley’s proposal that in prepositional locative structure the Theme c-commands the Goal, I argue that in Korean prepositional locative structure the Goal (IO) c-commands the Theme (DO). I show that this creates a puzzle given Harley’s cross-linguistic observation. In my analysis, Korean, thus, becomes a counterexample to Harley’s typological generalization. As a further support for my proposal, I show that Korean has another locative structure in the form of a double subject construction and I propose that the syntactic relationship between the Location and the Theme in the double subject locative construction is replicated by the syntactic relationship between the Goal (IO) and the Theme (DO) in the dative construction. In section 5, I summarize and conclude this paper.

2. Previous proposals

I provide a brief overview of the main approaches to ditransitive constructions in English: Larson’s Derivational Approach (1988) and Harley’s Alternative Projection Approach (1996, 2002). They account for the two types of ditransitive construction, the double object construction and the to-dative construction in English. I will show that Harley’s analysis is superior to Larson as the meaning difference between DOC and to-DC is accounted for in Harley.

2.1. Larson’s derivational approach (1988)

Larson provides very influential analysis of ditransitive constructions. His main proposal is that DOC is derived from to-DC via a passive-like operation. The starting point of his analysis is the syntactic asymmetries observed in DOC: the Goal asymmetrically c-commands the Theme in DOC (Barss & Lasnik 1986).

- (3) Anaphor binding
- a. John showed Mary herself. [DOC]
- b. *John showed herself Mary.
- (4) NPI licensing
- a. John sent no one anything. [DOC]
- b. *John sent anyone nothing.

For example, in (3), the anaphor *herself* must be bound by a c-commanding antecedent *Mary*. Example (3-a) is grammatical because the Goal *Mary* c-commands the Theme *herself*. However, (3-b) is ungrammatical because the Goal *Mary* does not c-command the Theme *herself*. In (4), a negative polarity item (NPI) should appear in the scope of a negative constituent. The NPI *anything* should be c-commanded by the negative constituent *no one*. In (4-a), the Goal *no one* c-commands the Theme *anything*, hence the NPI licensing condition is met. In (4-b), the Theme *nothing* does not c-command the Goal *anyone*, hence the NPI is not licensed and the example is ungrammatical.

The asymmetries also occur with to-DC: the Theme asymmetrically c-commands the Goal, as illustrated in (5) and (6).

- (5) Anaphor binding [to-DC]
 a. I showed Mary to herself.
 b. *I showed herself to Mary.
- (6) NPI licensing [to-DC]
 a. John sent no books to any of the students.
 b. *John sent any of the books to none of the students.

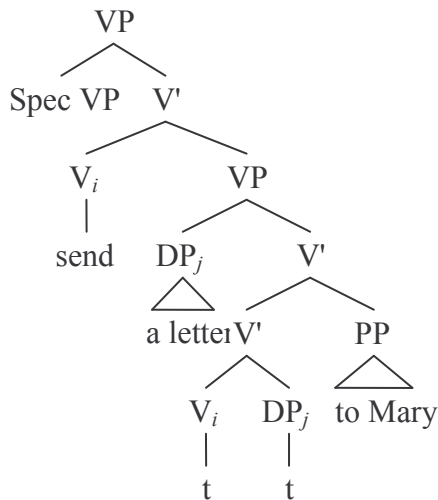
In order to capture the syntactic asymmetries attested in the two constructions, Larson proposes a VP shell of hierarchical structure in which one VP is embedded directly under the other. He argues that the creation of two VP shells is able to account for the asymmetrical c-commanding relationship between the Goal (IO) and the Theme (DO). Larson proposes (8-a) for the to-DC and (8-b) for DOC, as shown below. In (8-a), the DO asymmetrically c-commands the IO, accounting for (5) and (6). In (8-b), the IO asymmetrically c-commands the DO, accounting for (3) and (4).

An important argument to support Larson's VP shell analysis comes from 'Verb + Goal' idioms in English, so-called 'discontinuous idioms' found in to-DC. In 'Verb + Goal' idioms found in to-DC in English, according to Larson, the ditransitive verb and the Goal (IO) form a single constituent as an idiom excluding the Theme (DO). This is an idiom-as-constituents theory that stipulates that idioms form one constituent at some point in the syntactic derivation. The idiom is called discontinuous because the ditransitive verb initially forms a constituent with the Goal (IO) at some syntactic level and it later moves to the upper VP. For instance, in (7), *sent* forms a constituent with *to the showers*, excluding *Mary*, to build an idiom in D-structure and then moves to the upper VP. Larson argues that most idioms formed with a ditransitive verb in English are 'Verb + Goal' idioms that appear in to-DC.

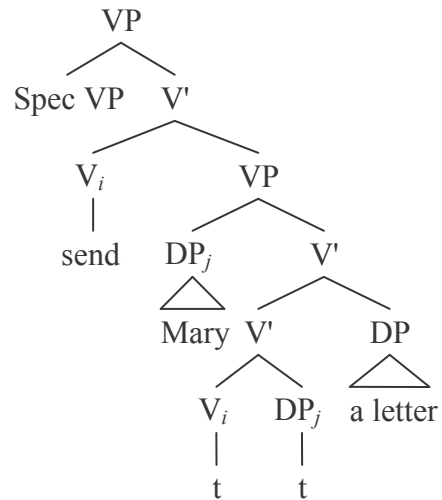
- (7) The coach *sent* Mary *to the showers*. [to-DC]
 [_{VP} The coach [_{V'} V empty [_{VP} Mary [_{V'} *sent* [_{PP} *to the showers*]]]]]
 'The coach took Mary out of the game.'

Further, on the basis of the VP shell-approach, he argues that to-DC in (8-a) is the underlying structure from which DOC in (8-b) is derived. The transformation from to-DC to DOC is achieved by 'dative shift', a passive-like operation applied to the lower VP of the to-DC structure: this causes the Goal to move to the specifier position of the lower VP and the Theme to be generated in an adjunct position in DOC. The trees in (8) represent the two structures introduced by Larson.

(8) a. John sent a letter to Mary. [to-DC]



b. John sent Mary a letter. [DOC]



In (8-a), the Theme (DO) *a letter* is generated in the position of the specifier of the lower VP and the Goal (IO) *to Mary* in the complement of the lower VP. Once an operation similar to passivization is applied to the lower VP, the dative-case assigned to the IO *to Mary* is absorbed and the theta-role assigned to the DO *a letter* undergoes demotion. This syntactic operation generates DOC, as in (8-b): the Goal (IO) *Mary* moves to the specifier position of the lower VP and the Theme (DO) *a letter* is in the adjunct position of the lower VP. Larson calls this passive-like operation ‘dative shift’.

An important argument to support Larson’s transformational approach comes from his assumption that the IO and the DO in to-DC and DOC have the same theta role, and the Uniformity of Theta-Role Assignment Hypothesis (UTAH), initially proposed by Baker (1988). According to Baker, UTAH states that identical thematic relationships are represented by identical structural relationships between items at the level of D-structure. Larson extends Baker’s UTAH and proposes Relativized UTAH. The Relativized UTAH states that identical thematic relations are represented by identical relative hierarchical relations between items at D-structure. In Larson’s account of ditransitive structures, the Theme is hierarchically higher than the Goal in to-DC and equivalent thematic roles are assigned to the Goal (IO) and the Theme (DO) in DOC and to-DC. For example, in (9), according to Larson, the IO *John* in to-DC has the same thematic role as the IO *John* in DOC. Thus, because the two constructions have the same argument structure, DOC is transformed from to-DC via ‘dative shift’.

(9) a. Tom gave a book to John.

[to-DC]

b. Tom gave John a book.

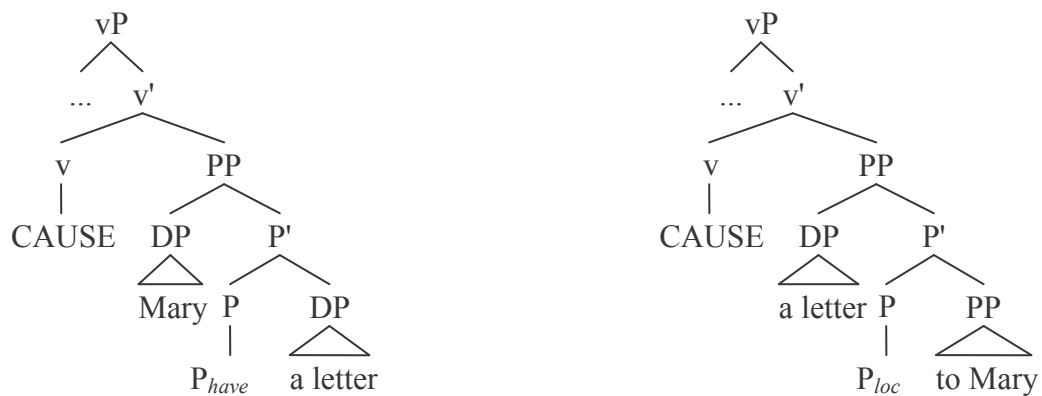
[DOC]

In summary, Larson captures the hierarchical structure of the Goal and the Theme with the VP-shell analysis and proposes that DOC is derived from to-DC via ‘dative shift’ in English. He presents ‘discontinuous idioms’ as a supporting argument for the VP-shell analysis and motivates transformation of DOC from to-DC by appealing to Relativized UTAH.

2.2. Harley's alternative projection approach (1996, 2002)

Harley proposes that DOC and to-DC have alternative projections. DOC has a possessive prepositional structure headed by an abstract possessive preposition, P_{have} , and to-DC has a locative prepositional structure headed by an abstract locative preposition, P_{loc} . Harley argues that ditransitive verbs are decomposed into little $v_{cause} + P_{have}$ in DOC and little $v_{cause} + P_{loc}$ in to-DC. In (10-a), the DOC is projected from P_{have} : the IO *Mary* encodes the meaning of possessor and the DO *a letter* encodes the meaning of possessee. This P_{have} moves to the little v that contributes the causative meaning and little $v_{cause} + P_{have}$ together is spelled out as a ditransitive verb such as *give*.

- (10) a. 'John gave Mary a letter.' [DOC] b. 'John gave a letter to Mary.' [to-DC]



On the other hand, in (10-b), the to-DC is projected from P_{loc} : the IO *Mary* encodes the meaning of location and the DO *a letter* encodes the meaning of locatee. This P_{loc} is the head of the PP complement to the little v and combines with it to be spelled out as a ditransitive verb such as *give*. By postulating alternative projections for DOC and to-DC, Harley presents a base-generated analysis where DOC and to-DC have different underlying forms, in contrast to Larson's derivational analysis.

Harley accepts syntactic asymmetries between the IO and the DO noted by Larson (1988). However, she argues that Larson's derivational approach presents a problem. First, in Harley's view, in DOC, the IO is a possessor and the DO a possessee, whereas in to-DC the IO is a location and the DO a locatee. This is different from Larson who postulates identical thematic roles are for the IO and the DO in the two constructions.

An argument supporting Harley's idea comes from the animacy constraint observed in DOC but not in to-DC, known as Oehrle's generalization, as the following examples in (11) show.

- (11) a. The editor sent the article to Sue. [to-DC]
 b. The editor sent Sue the article. [DOC]
 c. The editor sent the article to Philadelphia. [to-DC]
 d. ^{??}The editor sent Philadelphia the article. [DOC]
- (Green 1974; Oehrle 1976)

(11-a) and (11-b) are grammatical in which the IO *Sue* is animate. However, when the IO is inanimate, as in (11-c) and (11-d), there is a contrast in grammaticality. While the to-DC in (11-c) is grammatical, the DOC in (11-d) is grammatical only when the Goal *Philadelphia* indicates a group of people or an organization. This animacy constraint in DOC can be

accounted for by Harley: the IO in DOC must be animate because it receives a possessor interpretation and has a possessor thematic role. (11-d), thus, can be construed as follows.

- (12) The editor sent Philadelphia the article. [DOC]
 ‘The editor CAUSED the group or organization in Philadelphia to HAVE the article.’

In contrast, in to-DC there is no animacy requirement on the Goal because it receives location meaning: either an animate or an inanimate IO can receive a location meaning and a locative thematic role. Thus, (11-c) can be construed as follows.

- (13) The editor sent the article to Philadelphia. [to-DC]
 ‘The editor CAUSED the article to be LOCATED in Philadelphia’.

A similar contrast in interpretation is attested in examples in (14). On a closer look, comparing (14-a) and (14-b), there is a much stronger implication that the students actually learned or acquired some French in (14-a) rather than in (14-b).

- (14) a. John taught the students French. [DOC]
 b. John taught French to the students. [to-DC]

This interpretational difference can be accounted for by Harley’s proposal that the IO in DOC receives a possessor role and the IO in to-DC receives a locative role: the students HAVE the knowledge of French in DOC but not in to-DC. These examples show different thematic roles for the same NPs: a possessor relationship exists between the IO and the DO in DOC but not in to-DC. Thus, DOC cannot be derived from to-DC, contrary to Larson’s derivational approach.

Further supporting argument for Harley’s alternative projection approach comes from idioms. Harley observes that Larson incorrectly predicts that discontinuous idioms ‘Verb + Goal’ in to-DC can switch to DOC preserving the idiomatic interpretation because DOC is transformed via ‘dative shift’ from to-DC.

However, Harley shows that none of these idioms can be put into DOC. The ‘discontinuous idiom’ in to-DC cannot freely alternate with DOC while retaining the idiomatic meaning. Harley reanalyzes these idioms as ‘ P_{loc} + Goal’ idioms. In other words, P_{loc} combines with the Goal to have an idiomatic meaning at some syntactic level as a single constituent and is spelled out as a lexical ditransitive verb such as *give* when it combines with the little *v* that contributes the causative meaning.

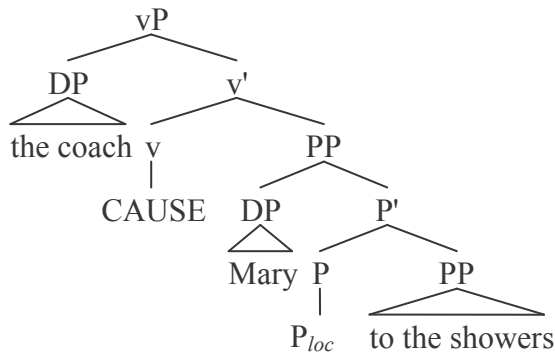
Further, Harley presents another form of idioms, ‘Verb + Theme’ idioms that appear in DOC, as shown in (15).

- (15) a. Alice *gave* him *hell*. [DOC]
 b. *Alice gave hell to him. [to-DC]

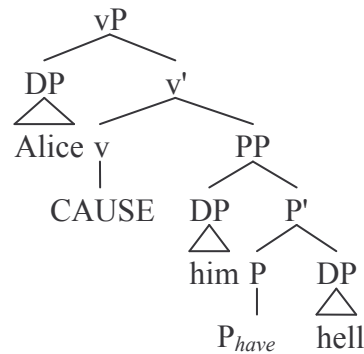
In (15-a), *give* forms a constituent with *hell* to produce an idiomatic interpretation in DOC: the idiomatic meaning cannot be preserved in to-DC, as in (15-b). She calls this idiom ‘ P_{have} + Theme’ idiom. In other words, P_{have} combines with the Theme to create an idiomatic meaning at some syntactic level as a single constituent and is spelled out as a lexical ditransitive verb such as *give* when P_{have} combines with the little *v* that contributes the causative meaning.

In sum, Harley suggests that there are two types of idioms: ‘Verb + Goal’ which appears in to-DC and ‘Verb + Theme’ which appears in DOC. She accounts for the two different idiomatic forms, using the alternative projections, P_{have} and P_{loc} projections in replacement of Larson’s lower VP shells. The two types of idioms are ‘ P_{loc} + Goal’ in to-DC as in (16-a) and ‘ P_{have} + Theme’ in DOC as in (16-b).

(16) a. ‘The coach *sent* Mary *to the showers*.’



b. ‘Alice *gave* him *hell*.’



In Harley’s analysis, the different semantic content of P_{have} and P_{loc} is the reason why an idiom cannot freely shift between DOC and to-DC. Further, ‘Verb + Goal’ idioms in to-DC cannot shift to DOC as ‘P + Goal’ do not form a constituent in DOC and ‘Verb + Theme’ idioms in DOC cannot shift to to-DC because [P + Theme] do not form a constituent to-DC.

On the basis of P_{have} and P_{loc} in her alternative projection approach in English, Harley formulates an interesting cross-linguistic generalization: across languages, in P_{loc} structure, the locate (Theme) c-commands the location (Goal), and if a language has P_{have} structure the possessor (Goal) c-commands the possessee (Theme).

Thus far, two main approaches in the literature on ditransitive construction were reviewed: Larson’s Derivational Approach and Harley’s Alternative-projection Approach. I attempted to show that Harley’s work is superior to Larson in that while Harley correctly predicts animacy constraint on DOC and meaning difference between DOC and to-DC, Larson does not.

3. [IO-DO] as underlying order

Korean has a dative construction consisting of the Goal (IO) marked with the dative *-ey(key)* and the Theme (DO) marked with the accusative *-(l)ul*. The IO and the DO can be ordered freely with respect to each other. For example, in (17-a), the Goal (IO) marked with the dative *-ey(key)* precedes the Theme (DO) marked with the accusative *-(l)ul* and in (17-b), the Theme (DO) marked with the accusative *-(l)ul* precedes the Goal (IO) marked with the dative *-ey(key)*.

- (17) a. Mary-nun John-eykey senmwul-ul cwu-ess-ta. [IO-DO]
 Mary-TOP John-DAT present-ACC give-PST-DEC
 ‘Mary gave a present to John.’
- b. Mary-nun senmwul-ul John-eykey cwu-ess-ta. [DO-IO]
 Mary-TOP present-ACC John-DAT give-PST-DEC
 ‘Mary gave a present to John.’

I propose that [IO-DO] ([Goal-Theme]), as in (17-a), is the underlying order and [DO-IO] ([Theme-Goal]), as in (17-b), is derived by moving the Theme over the Goal, through scrambling. This is in contrast to Baek & Lee's (2004) proposal that [DO-IO] represents the underlying order. I provide three supporting arguments for my proposal: quantifier scope, chain condition, and ditransitive idioms in Korean.

3.1 Quantifier scope

The first piece of evidence comes from quantifier scope in Korean. Before going into the discussion on how quantifier scope supports that [Goal-Theme] is the underlying order in Korean, it is important first to understand scope freezing, an interpretive property of quantifiers in Korean, distinct from English.

In English, as shown in (18), scope ambiguity is attested: *some* can take scope over *every* and vice-versa.

(18) Some student read every book. (some>every, every>some)

In contrast, in Korean, scope ambiguity does not occur in the corresponding double quantifier sentence, as in (19). This sentence has the canonical SOV order (Joo 1989; Ahn 1990; Sohn 1995; Hagstrom 1998).

(19) **etten** haksayng-I **motun** chayk-ul ilk-ess-ta.
 some student-NOM every book-ACC read-PST-DEC
 'Some student read every book.' (some>every, *every>some)

However, if the object precedes the subject through scrambling, scope ambiguity becomes available, as in (20).

(20) **etten** chayk -ul_i **motun** haksayng-i t_i ilk-ess-ta.
 some book-ACC every student-NOM read-PST-DEC
 'Every student read some book.' (some>every, every>some)

Thus, scope rigidity obtains in [Subj-Obj], a canonical word order in Korean, as in (19), but not in [Obj-Subj] a scrambled word order, as in (20). We call this the 'scope freezing effect': scope is frozen in a canonical word order, while it is flexible in a scrambled order: the trace of the scrambled object allows the inverse scope to be possible.

Now, let us see what scope ambiguity can tell us about the underlying order of the Korean dative construction. If [Goal-Theme] is the underlying order, then [IO-DO] sentence containing a quantified IO and a quantified DO should not have a flexible scope due to the 'scope freezing effect', whereas a corresponding [Theme-Goal] sentence should show a flexible scope. Indeed, this is borne out in (21): in (21-a) [Goal-Theme] ([IO-DO]) reveals rigid scope: only the reading in which *etten* 'some' takes scope over *motun* 'every' is available such that 'Tom gave all the books to a particular kid'. However, as shown in (21-b), the reverse order, [DO-IO] has a flexible scope: both the reading in which *etten* 'some' takes scope over *motun* 'every' and *motun* 'every' takes scope over *etten* 'some' are available.

- (21) a. Tom-un **etten** ai-eykey **motun** chayk-ul cwu-ess-ta. [Goal-Theme]
 Tom-TOP some kid-DAT every book-ACC give-PST-DEC
 ‘Tom gave every book to some kid.’ (some > every, *every > some)
- b. Tom-un **etten** chayk-ul_i **motun** ai-eykey t_i cwu-ess-ta. [Theme-Goal]
 Tom-TOP some book-ACC every kid-DAT give-PST-DEC
 ‘Tom gave some book to every kid.’ (some > every, every > some)

Thus, the properties of quantifier scope support that the underlying order of the dative construction between the Goal and the Theme in [DO-IO] is [Goal-Theme] and [Theme-Goal] is the derived order.

On the other hand, according to Miyagawa & Tsujioka (2004), in Japanese, quantifier scope between Goal and Theme [IO-DO] depends on the animacy of the Goal argument. This casts doubt on the derivational approach for the Japanese ditransitive construction. Thus, I consider the corresponding example in Korean and determine whether the animacy of the Goal makes a difference in the quantifier scope judgment in Korean.

In Japanese, there is no scope ambiguity when the Goal is animate as in (22-a) but if the Goal is inanimate as in (22-b), scope ambiguity appears. However, as the data in (23) show, the corresponding example with the inanimate Goal in Korean does not display scope ambiguity: *etten* ‘some’ can only take scope over *motun* ‘every’ and not vice-versa. Thus, regardless of the animacy of the Goal, scope ambiguity is not attested in [Goal-Theme] in Korean.

- (22) a. Taoo-ga dareka-ni dono-nimotu-mo okutta. [IO-DO]
 Taro-NOM someone-NI every-package sent
 ‘Taro sent someone every package.’ (some>every, *every>some)
- b. Taroo-ga dokoka-ni dono-nimotu-mo okutta. [IO-DO]
 Taro-NOM some place-NI every-package sent
 ‘Taro sent every package to some place.’ (some>every, every>some)
 [Miyagawa & Tsujioka 2004]

- (23) John-un etten cangso-ey motun senmwul-ul ponay-ess-ta. [IO-DO]
 John-TOP some place-DAT every present-ACC send-PST-DEC
 ‘John sent every package to some place.’ (some>every, *every>some)

However, in contrast to my proposal, a recent discussion by Baek and Lee (2004) argues that [DO-IO] is the underlying order and [IO-DO] is the derived order. This is because for Baek & Lee (2004), [DO-IO] does not reveal flexible scope but the reverse order [IO-DO] does.

The data in (24) are examples given by Baek & Lee (2004). They claim that [Goal-Theme] in (24-a) is ambiguous, while [Theme-Goal] in (24-b) is not.

- (24) a. Sue-nun **motun** ai-eykey **etten** mwuncey-lul cwu-ess-ta. [Goal-Theme]
 Sue-TOP every kid-DAT some problem-ACC give-PST-DEC
 ‘Sue gave some problem to every kid.’
- b. Sue-nun **motun** mwuncey-lul **etten** ai-eykey cwu-ess-ta. [Theme-Goal]
 Sue-TOP every problem-ACC some kid-DAT give-PST-DEC
 ‘Sue gave every problem to some kid.’

However, on a closer look, the data that they are using are not appropriate for testing scope ambiguity. In (24-a), the Goal is marked with a universal quantifier and the Theme with an

existential quantifier. This sentence has *motun* > *etten* ‘every > some’ reading: this covers both the situations in which ‘each kid received the same problem’ and the situation in which ‘each kid received a different problem’. Hence, (24-a) illustrates an issue of vagueness, not ambiguity. Moreover, in (24-b), on a closer look, scope ambiguity does occur: in addition to the reading in which every problem is given to a different kid, the reading in which a particular kid got all the problems is available. The two readings occur because *motun* ‘every’ takes scope over *etten* ‘some’ and vice-versa.

Thus, on the basis of the ‘scope freezing effect’ in [Goal-Theme] regardless of the animacy of the Goal and scope ambiguity in [Theme-Goal], I conclude that [Goal-Theme] derives [Theme-Goal] in Korean.

3.2 Chain condition of *cakicasin* ‘self’

The next argument that supports that [IO-DO] represents the underlying order is provided by the chain condition of *cakicasin* ‘self’ in Korean. I show that the Korean anaphor *cakicasin* ‘self’ is sensitive to the chain condition and this sensitivity can be used to support the proposal that [IO-DO] ([Goal-Theme]) is the underlying structure in the dative construction in Korean.

Rizzi (1986) notes that when a DP, that is an R-expression moves over an anaphor, the trace of the moved R-expression and the anaphor form a chain. The chain condition states that the trace of the R-expression cannot be locally c-commanded by the anaphor in a chain. The violation of the chain condition usually results in ungrammaticality in Italian, as in (25).

- (25) * Gianni_i si_i è stato affidato t_i
 Gianni to-himself was entrusted
 ‘Gianni was entrusted to himself.’

In (25), the R-expression ‘Gianni’ moves over the anaphor ‘himself’, leaving a trace (t). The anaphor *himself* and the trace (t) form a chain. In this chain, the trace (t) is c-commanded by the anaphor *himself*: this is a violation of chain condition, resulting in ungrammaticality.

A similar chain condition effect is observed in Korean with Korean reflexive anaphor *cakicasin* ‘self’.

- (26) a. *John-ul_i cakicasin-i_i t_i po-ass-ta.
 John-ACC self -NOM see-PST-DEC
 ‘Self saw John.’
 b. John-ul_i cakicasin-uy_i hyeng-I t_i po-ass-ta.
 John-ACC self -GEN brother-NOM see-PST-DEC
 ‘Self’s brother saw John.’

The example in (26-a) shows that the chain condition is in effect in Korean: in a chain formed by the anaphor *cakicasin* ‘self’ and the trace of the R-expression ‘John’, the anaphor locally c-commands the trace of the R-expression. In contrast, in (26-b), the chain condition is not violated: the anaphor is embedded within a DP and so it does not locally c-command the trace of the R-expression. In other words, (26-a) violates the chain condition in which the trace of *John* is c-commanded by the anaphor *cakicasin* ‘self’, resulting in ungrammaticality, whereas (26-b) does not violate the chain condition and so the example is grammatical.

I now turn to the data in dative construction. I predict that the chain condition effect should be observed with the anaphor *cakicasin* ‘self’ in [DO-IO], but not in [IO-DO]. If [DO-IO] is derived through scrambling of the DO over the IO, then there is a trace of the DO c-commanded by the IO. This then means that if the DO is an R-expression and the IO is an anaphor, the chain condition effect should be observed, resulting in ungrammaticality. This prediction is borne out. In (27-a), no chain condition effect is observed: the DO, the reflexive anaphor *cakicasin* ‘self’, is in a base-generated position and is c-commanded by the coreferential R-expression *John*. In contrast, a chain condition effect is observed in (27-b). The DO has moved over the IO, leaving a trace. This trace forms a chain with the anaphor *cakicasin* ‘self’ and is c-commanded by the anaphor, resulting in ungrammaticality.

- (27) a. Sue-ka John-*eykey*_i cakicasin-*ul*_i poyecwu-ess-ta. [IO-DO]
 Sue-NOM John-DAT self-ACC show-PST-DEC
 ‘Sue showed self to John.’
- b. *Sue-ka John-*ul*_i cakicasin-*eykey*_i t_i poyecwu-ess-ta. [DO-IO]
 Sue-NOM John-ACC self-DAT show-PST-DEC
 ‘Sue showed John to self.’

In sum, the fact that the chain condition effect is observed in [Theme-Goal] supports my proposal that the Theme has scrambled over the Goal leaving a trace and that [Goal-Theme] is the underlying order.

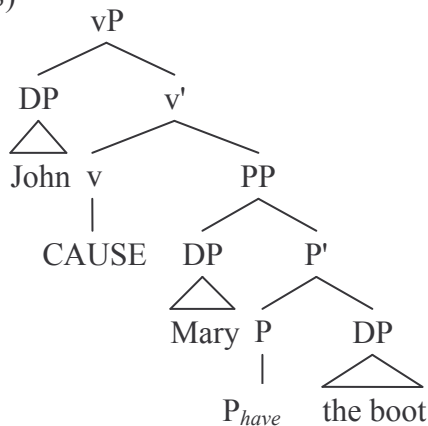
3.3 Theme (DO) + ditransitive verb idioms in Korean

Another supporting argument for the proposal that [IO-DO] ([Goal-Theme]) in Korean represents the underlying order is provided by the existence of idioms formed by ditransitive verbs and the Theme (DO) in Korean, to the exclusion of the Goal (IO).

It has been shown that the majority of idioms in the ditransitive construction forms a single constituent at some structural level (Richards 2001; Harley 2002). According to Harley (2002) in English, as was discussed in section 2.2, there are two types of idioms in the ditransitive construction: [Verb + Theme] idioms that appear in DOC and [Verb + Goal] idioms that appear in to-DC. The each of two types of idioms forms a single constituent at some structural level.

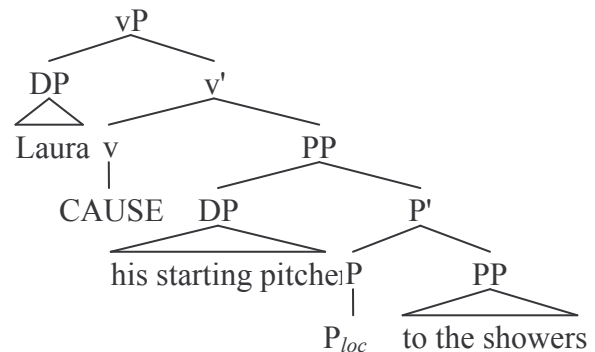
The two trees in (28) and (29) illustrate Harley’s idioms. In (28), DOC headed by P_{have} , P_{have} combines with the Theme to build an idiomatic meaning as a single constituent and is spelled out as a lexically ditransitive verb when it move to the little *v*. Thus, an idiom of [Ditransitive Verb + Theme] is formed in DOC, to the exclusion of the IO, as in (28-a). In to-DC headed by P_{loc} in (29), this P_{loc} combines with the Goal to build an idiomatic expression and is spelled out as a lexically ditransitive verb when it moves to the little *v*. Thus, an idiom of [Ditransitive Verb + Goal] is formed in to-DC, to the exclusion of the DO, as in (29-a).

(28)



- a. John gave Mary the boot.
- b. *John gave the boot to Mary.

(29)



- a. Laura sent his starting pitcher to the showers.
- b. *Laura sent to the showers his starting pitcher.

Idioms in Korean also tend to form constituents to the exclusion of non-idiomatic elements. For example, in (30-a), the Theme, *olipalul* ‘duck’s foot’ combined with a ditransitive verb *naymilessta* ‘show’ forms an idiom in [Goal-Theme]. In [Theme-Goal] in (30-b), while the literal reading ‘Sue showed duck’s foot to her mother.’ is available, the sentence is degraded under the idiomatic interpretation. This may be due to discourse effects caused by scrambling. In general, scrambled phrase is associated with special discourse effects, such as focus, or topichood. If [Theme-Goal] is derived by scrambling of the Theme over the Goal, the Theme would be associated with a special discourse function that may clash with idiomatic interpretation.

- (30) a. Sue-nun emma-eykey **olipal-ul** **naymil-ess-ta.** [Goal-Theme]
 Sue-TOP mother-DAT duck’s foot-ACC show-PST-DAT
 ‘Sue lied to (her) mother.’
- b. ??Sue-nun *olipal-ul* emma-eykey *naymil-ess-ta.* [Theme-Goal]
 Sue-TOP duck’s foot-ACC mother-DAT show-PST-DEC

More Korean idioms are given in (31) and (32).

- (31) a. na-nun John-eykey **han tek-ul** **sso-ass-ta.** [Goal-Theme]
 I-TOP John-DAT one tray.of.food-ACC shoot-PST-DEC
 ‘I treated John.’
- b. ??na-nun *han tek-ul* John-eykey *sso-ass-ta.* [Theme-Goal]
 I-TOP one tray.of.food-ACC John-DAT shoot-PST-DEC
- (32) a. Sue-nun Joe-eykey **uysim-ul** **sa-ss-ta.** [Goal-Theme]
 Sue-TOP Joe-DAT doubt-ACC buy-PST-DEC
 ‘Joe suspected Sue.’
- b. ??Sue-nun *uysim-ul* Joe-eykey *sa-ss-ta.* [Theme-Goal]
 Sue-TOP doubt-ACC Joe-DAT buy-PST-DEC

If the underlying order in the dative construction is [Goal-Theme], then most idioms in the ditransitive construction should be [Theme + Ditransitive Verb] type, as the Theme and the

ditransitive verb form a constituent at some structural level. Hong's (1998) analysis of the Korean idioms supports this prediction. According to Hong, Korean idiomatic expressions are usually formed as [Theme + Verb].

Using a dictionary of Korean idiomatic expressions that includes approximately 3,300 idioms, Hong classifies [Verb + argument] idioms according to the theta-role of the argument. The results are summarized in Table 1.

Theta-roles	Verb
Agent	0.5 %
Beneficiary	0%
Theme	78 %
Location	10%

Table 1 Types of theta-roles combining with a verb in Korean idioms

Table 1 shows that the majority of [Argument + Verb] idioms has a Theme argument.

Restricting to idioms formed with a ditransitive verb, Hong also found that most idioms contain a Theme argument. Her findings are summarized in Table 2.

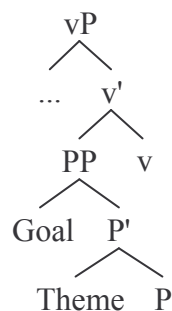
Theta-roles	Number of idioms in ditransitive construction
Agent	0
Theme	214
Location	45
Theme + Location	30
Agent + Theme + Location	0
	289

Table 2 Types of theta-roles in ditransitive verbs in Korean idioms

According to her classification, there are 289 idioms that are formed with a ditransitive verb, and the majority of them contain a Theme argument.

[Table 1] and [Table 2] show that most idioms containing a ditransitive verb are formed with a Theme argument. This supports the structure in (33) for the Korean ditransitive construction. The fact that most idioms containing a ditransitive verb are formed with a Theme argument supports the structure in (33) for the Korean dative construction.

(33) [Theme + Ditransitive Verb] in Korean



In (33), the Theme and ‘P’ form a constituent. At the P’ level, the idiomatic meaning is established for [Theme + Ditransitive Verb] idioms. When P moves to the little *v*, the ditransitive verb is spelled out.

At this point, a question arises concerning the idioms formed with the Location argument. As shown in [Table 2], the number of idioms in the ditransitive construction containing Location is 45. The presence of these idioms goes against the idiom as constituency theory, as ditransitive verb and Goal do not form a constituent. However, across languages, the majority of idioms generally respect constituency in which idiomatic elements function together as a single unit, to the exclusion of non-idiomatic elements. This general tendency of idioms is observed in Korean too, as most idioms in ditransitive construction is [Verb + Theme] type.

In the next section, I establish that the P head of the Korean ditransitive structure is P_{loc} , not P_{have} .

4. P_{loc} in [IO-DO]

I propose that the underlying order [IO-DO] is an instantiation of the prepositional locative structure, as similar to Harley’s proposed structure for the to-DC in English. However, in contrast to English (Harley 2002), I argue that in Korean prepositional locative structure, the IO (Goal) c-commands the DO (Theme). This is contrary to Harley’s typological generalization where the DO (Theme) c-commands the IO (Goal) in P_{loc} structure. Korean, thus, becomes a counterexample to Harley’s typological generalization according to my analysis. I show that Korean has another locative structure in the form of a double subject construction. I argue that the syntactic relationship between the Location and the Theme in double subject locative structure is replicated by the syntactic relationship between the Goal (IO) and the Theme (DO) in ditransitive structure. I present three supporting arguments for this claim: quantifier scope, PRO controlling, and honorific agreement.

4.1 [IO-DO] as an instantiation of P_{loc} structure

I provide Harley’s analysis concerning P_{have} and P_{loc} structure in English before going into the discussion on Korean. As discussed in section 2.2, Harley proposes that DOC and to-DC are separately headed by different elements, P_{have} and P_{loc} respectively. In DOC, there is an animacy constraint on the Goal argument as in (34). Harley connects this to the semantics of possession and establishes that DOC is headed by P_{have} .

- (34) a. The editor sent **Sue** the article.
 b. ??The editor sent **Philadelphia** the article.

In (34), the Goal argument *Sue* or *Philadelphia* is interpreted as a possessor that is required to be an animate entity. (34-b) is grammatical only under the reading that *Philadelphia* refers to an organization or a company.

In contrast, in to-DC as in (35), there is no animacy constraint on the Goal argument. Harley connects this to the semantics of Location and establishes that to-DC is headed by P_{loc} .

- (35) a. The doctor sent the article to **Sue**.
 b. The doctor sent the article to **Philadelphia**.

In other words, in English, DOC is grammatical only when the Goal argument is animate, while to-DC is not subject to this restriction. Harley (2002) thus proposes that DOC establishes a prepositional possessive structure headed by P_{have} in which the Goal (possessor) c-commands the Theme (possessee), and to-DC establishes a prepositional locative structure headed by P_{loc} in which the Theme (Locatee) c-commands the Goal (Location).

On the basis of the distribution of P_{have} and P_{loc} in English and other languages, Harley formulates an interesting cross-linguistic generalization: across languages, in the P_{loc} structure, the Locatee (Theme) c-commands the Location (Goal) and, if a language has the P_{have} structure, the possessor (Goal) c-commands the possessee (Theme).

Now, I turn to the data in Korean. I propose that the dative construction [IO-DO] establishes a prepositional locative structure headed by P_{loc} , as similar to Harley's to-DC in English. However, the c-commanding relationship between arguments in the Korean prepositional locative structure is at odds with Harley's typological generalization. In Korean, the IO (Goal) c-commands the DO (Theme), unlike the corresponding structure in English in which the DO (Theme) c-commands the IO (Goal).

One piece of evidence in support of my proposal that Korean [IO-DO] is a projection of P_{loc} is that there is no animacy constraint on the Goal argument in Korean. For example, as the data in (36) show, both the animate Goal argument *chinkwu* 'friend' in (36-c) and the inanimate Goal argument *hakkyo/sewulsi* 'school/Seoul city' in (36-a) is allowed. That the animacy constraint does not apply to [IO-DO] ([Goal-Theme]) supports that dative construction in Korean is a prepositional locative structure rather than a prepositional possessive structure. Moreover, there is no animacy constraint on the Goal in [Theme-Goal] ([DO-IO]) either, as shown in (36-b) and (36-d). This supports that [Theme-Goal], the scrambled order, is also an instantiation of prepositional locative structure headed by P_{loc} .

- (36) a. Sue-nun hakkyo/sewulsi -ey ton-ul ponay-ess-ta. [Goal-Theme]
 Sue-TOP school/Seoul city-DAT money-ACC send-PST-DEC
 'Sue sent money to school/Seoul city.'
- b. Sue-nun ton-ul hakkyo/sewulsi -ey ponay-ess-ta. [Theme -Goal]
 Sue-TOP money-ACC school/Seoul city-DAT send-PST-DEC
 'Sue sent money to school/Seoul city.'
- c. Sue-nun chinkwu-eykey ton-ul ponay-ess-ta. [Goal-Theme]
 Sue-TOP friend-DAT money-ACC send-PST-DEC
 'Sue sent money to a friend.'
- d. Sue-nun ton-ul chinkwu-eykey ponay-ess-ta. [Theme- Goal]
 Sue-TOP money-ACC friend-DAT send-PST-DEC
 'Sue sent money to a friend.'

(36-a) and (36-b) can be construed as 'Sue CAUSED the money to be LOCATED at school/in Seoul City' and (36-c) and (36-d) can be construed as 'Sue CAUSED the money to be LOCATED at friend'.

In addition, the data in (37) below further support that the Goal argument in the Korean dative construction has semantics of location corresponding to the Goal in to-DC in English. In English, for example, as already discussed in section 2.2, comparing the data in (37-a) with (37-b), there is a much stronger implication that the students actually learned or acquired French in (37-a) compared to (37-b). (37-b) does not imply that the students necessarily learned French.

- (37) a. John taught the students French. [DOC]
 b. John taught French to the students. [to-DC]

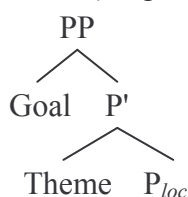
The corresponding Korean examples in (38) have a similar interpretation to that in (37-b).

- (38) a. Sue-nun haksayngtul-eykey hankwuke-lul kaluchi-ess-ta. [Goal-Theme]
 Sue-TOP students-DAT Korean-ACC teach-PST-DEC
 ‘Sue taught Korean to the students.’
 b. Sue-nun hankwuke -lul haksayngtul-eykey kaluchi-ess-ta. [Theme-Goal]
 Sue-TOP Korean-ACC students-DAT teach-PST-DEC
 ‘Sue taught Korean to the students.’

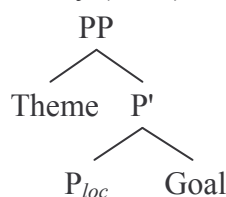
The data in (38) do not imply that the students necessarily possess knowledge of Korean. In (38-a) and (38-b), students were taught Korean by Sue, but it does not guarantee that they actually learned to speak or write Korean. Thus, if students receive a Location role, the semantics of Location on the Goal argument makes sense. The data in (38) can be construed as ‘Sue CAUSED the knowledge of Korean to be LOCATED at the students’.

Therefore, on the basis of there being no animacy constraint on the Goal argument and the Goal argument patterning with the Location role, I propose that Korean dative construction is a prepositional locative structure headed by P_{loc} where the Goal c-commands the Theme as in (39). The reverse order [Theme-Goal] is derived by scrambling of the Goal over the Theme.

(39) Korean (Proposed):



(40) Harley (2002):



The proposed P_{loc} structure for Korean, however, is very different from Harley’s (2002) proposed structure. According to Harley (2002), in the prepositional locative structure, the Theme c-commands the Goal, as in (40). She claims that this c-commanding relationship is observed across all languages. Her cross-linguistic generalization states that in the prepositional locative structure, the Theme (Locatee) c-commands the Goal (Location).

But in the Korean prepositional locative structure proposed in (39), the Goal c-commands the Theme. According to my analysis, Korean thus becomes a counterexample to Harley’s generalization.

In the next section, I discuss the Korean case further and show that Korean has another locative structure in the form of a double subject construction. I argue that the arguments in the double subject locative construction have the same c-commanding relation as the [Goal-Theme] in ditransitive structure. This reinforces the conclusion that Korean P_{loc} structure varies from English P_{loc} structure.

4.2 Locative structure in the form of double subject construction (DSC)

Korean has another locative structure in the form of a double subject construction. I propose that the syntactic relationship in the double subject construction is duplicated by the syntactic

relationship in the dative construction. Specifically, the syntactic relationship between the Location and the Theme in the double subject construction is replicated by the syntactic relationship between the Goal and the Theme in the dative construction. The two constructions are comparable, as the Location and the Goal belong to the same type of thematic relation, as in Jackendoff (1972).

Let us first examine the double subject construction in Korean. As the data in (41) show, the Korean double subject locative construction consists of the Location argument marked with the dative *-ey(key)* and the Locatee (Theme) argument marked with the nominative *-i/ka*. The Location argument can also appear in the nominative or with the topic marker *-nun*. As in (41-a), the Location can precede the Locatee (Theme) and as in (41-b), the Locatee (Theme) can precede the Location.

- (41) a. *chayksang-ey(-nun) chayk-i iss-ta.* [DSC]
 desk-DAT (-TOP) book-NOM exist-DEC
Location Locatee (Theme)
- b. *chayk-I chayksang-ey (-nun) iss-ta.* [DSC]
 book-NOM desk-DAT(-TOP) exist-DEC
Locatee (Theme) Location
 ‘On the desk, the book exists.’ (There is a book on the desk.)

I argue that [Location-Theme] in (41-a) is the underlying structure and [Theme-Location] in (41-b) is derived through scrambling of the Theme over the Location. This makes the syntactic relationship between *chayksang* ‘desk’ and *chayk* ‘book’ in (41-a) equivalent to the syntactic relationship between *hakkyo* ‘school’ and *ton* ‘money’ in (42): the Location c-commands the Locatee (Theme) in the double subject construction, similar to the way that the Goal c-commands the Theme in [IO-DO].

- (42) *Mary-nun hakkyo-ey ton-ul cwu-ess-ta.* [IO-DO]
 Mary-TOP school-DAT money-ACC give-PST-DEC
Goal Theme
 ‘Mary gave money to school.’

The c-commanding relationship between [Location-Theme] and [Goal-Theme] is consistent with Kuno’s (1973) general hierarchy. According to Kuno (1973), in Japanese, the Goal is hierarchically higher than the Theme. This is consistent with my claim that the Location c-commands the Theme in double subject construction and the Goal (IO) c-commands the Theme (DO) in the dative construction. In addition, previous studies on the syntax of the double subject locative construction have shown that the first NP, the Location, is the sentential subject of the double subject construction, which again supports that the Location c-commands the Theme (Gerdts & Youn 1988; Kim 1990; O’Grady 1991; Gerdts & Youn 1999; Yoon 2001).

In the rest of section 4, I discuss quantifier scope, PRO controlling, and honorific agreement as supporting arguments for the claim that the syntactic relationship between the Location and the Theme in the double subject locative construction is replicated by the syntactic relationship between the Goal (IO) and the Theme (DO) in [IO-DO] in the Korean dative construction. I show that the underlying structure is [Location-Theme] with the Location c-commanding the Theme, just as [Goal-Theme] is the underlying structure in the dative construction, with the Goal c-commanding the Theme. I show that the Location as the sentential subject of the double subject locative construction c-commands the Theme. This is

significantly different from Harley's cross-linguistic generalization that the Theme c-commands the Goal (Location) in the prepositional locative structure: in the Korean prepositional locative structure the Goal (Location) c-commands the Theme.

4.2.1 Quantifier scope

The first piece of evidence comes from quantifier scope, which has already been used to establish the underlying order in the dative construction in section 3.1. Quantifier scope supports that in the double subject locative construction, [Location-Theme] is the underlying structure, deriving the reverse structure [Theme-Location] through scrambling. I show that [Location-Theme] does not display scope ambiguity similar to [Goal-Theme] ([IO-DO]), while [Theme-Location] does, similar to [Theme-Goal]. This shows that the Location is the sentential subject in [Location-Theme] and as such, it c-commands the Theme.

As already noted in section 3.1, scope freezing is attested in [Subject-Object], a canonical word order in Korean, but not in [Object-Subject], the scrambled word order. This is called the 'scope freezing effect' in Korean. This quantifier scope can be used to establish the underlying structure in the double subject locative construction. If [Location-Theme] is the underlying structure, it should show frozen scope. In contrast, [Theme-Location] should show flexible scope. Indeed, this prediction is borne out as illustrated in (43).

- (43) a. **etten** pang-ey **motun** khemphyuthe-ka iss-ta. [Location-Theme]
 some room-DAT every computer-NOM exist-DEC
 'In some room, every computer exists.'
- b. **etten** khemphyuthe-ka_i **motun** pang-ey t_i iss-ta. [Theme-Location]
 some computer-NOM every room-DAT exist-DEC
 'In every room, some computer exists.'

For example, in (43-a), [Location-Theme] reveals frozen scope: *etten* 'some' only takes scope over *motun* 'every' and not vice-versa. The only available reading is that 'there are all the computers in a particular room'. In contrast, in the reverse order [Theme-Location] as in (43-b), has flexible scope: *etten* 'some' only takes scope over *motun* 'every' and vice-versa. This indicates that in (43-b), the Theme *etten khemphyuthe* 'some computer' (Location) has scrambled over the Location *motun pang* 'every room', leaving a trace. The trace of the Location allows the inverse scope reading *motun* > *etten* 'every > some'. Two readings are thus available in (43-b). When *some* takes scope over *every*, the interpretation is that 'there is a particular computer in all the rooms'. When *every* takes scope over *some*, the interpretation is that 'every room is equipped with a possibly different computer'.

Similar scope ambiguity is attested with an animate Location, as the data (44) show. In (44-a), [Location-Theme] reveals frozen scope: *etten* 'some' only takes scope over *motun* 'every'. The only available reading in (44-a) is that 'a particular student has all the books'. In contrast, the reverse order [Theme-Location] in (44-b) has flexible scope.

- (44) a. **etten** haksayng-eykey **motun** chayk-i iss-ta. [Location-Theme]
 some student-DAT every book-NOM exist-DEC
 'To some student, every book exists.'
- b. **etten** chayk-i_i **motun** haksayng-eykey t_i iss-ta. [Theme-Location]
 some book-NOM every student-DAT exist-DEC
 'To every student, some book exists.'

In summary, on the basis of the scope freezing in [Location-Theme] and the scope ambiguity in [Theme-Location], I conclude that [Location-Theme] is the underlying structure in which the Location as the sentential subject c-commands the Theme. This supports that the syntactic relationship between the Location and the Theme in the double subject locative construction is similar to the syntactic relationship between the Goal and the Theme in the dative construction.

4.2.2 PRO controlling

The next piece of evidence to support that [Location-Theme] is the underlying structure in which the Location as the sentential subject c-commands the Theme comes from PRO controlling. If the Location c-commands the Theme, the Location as the sentential subject should be able to control PRO in a subject-oriented adjunct clause. This prediction is borne out as shown in (45) (Youn 1985, 1989; Gerds & Youn 1989b; O'Grady 1991; Yoon 2001).

As the data in (45) show, the PRO in the Korean subject-oriented adjunct clause, that is, the *-seto* construction in this example, can only be controlled by the Location argument in the double subject locative construction.

- (45) a. [*PRO*_{*i*/**k*} koa-myen-seto] Sue -*eykey*_{*i*} enni-ka_{*k*} iss-ta. [LOC-THM]
 orphan-COMP Sue-DAT sister-NOM exist-DEC
 ‘Though PRO being an orphan, to Sue, a sister exists.’
 b. [*PRO*_{*i*/**k*} koa-myen-seto] enni-ka_{*k*} Sue -*eykey*_{*i*} t_{*k*} iss-ta. [THM-LOC]
 orphan-COMP sister-NOM Sue-DAT exist-DEC
 ‘Though PRO being an orphan, to Sue, a sister exists.’

For example, in (45-a), *Sue* as the sentential subject is able to control the subject PRO in the adjunct clause, while *enni* ‘sister’ cannot control the PRO. In a scrambled order shown in (45-b), the location as the subject is also able to control the subject PRO in the subject-oriented adjunct clause.

To summarize, given that the Location controls the missing subject PRO in a subject oriented adjunct clause *-seto* ‘though’ construction, I conclude that the Location is the sentential subject and as such, it c-commands the Theme.

4.2.3 Honorific agreement

Another piece of supporting evidence for the proposal that the Location as the sentential subject c-commands the Theme and that [Location-Theme] is the underlying structure is provided by the honorific agreement holding between the sentential subject and the predicate (Gerds & Youn 1989a; Youn 1985, 1989; Gerds & Youn 1989b; O'Grady 1991; Yoon 2001).

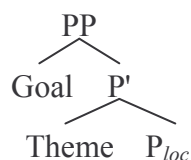
Indeed, in (46), the honorific subject marker *-kkey* on the Location co-occurs with the honorific marking *-(u)si-* on the predicate. The same holds in a scrambled order shown in (46-b). In contrast, example (46-c) is not grammatical because the honorific marking *-(u)si-* on the predicate does not agree with *aki-eykey* ‘baby-DAT’. The same holds in the scrambled order shown in (46-d).

- (46) a. sensayngnim-**kkey** aki-ka iss-**usi**-ta. [Location-Theme]
 teacher-DAT.HON baby-NOM exist-HON-DEC
 ‘To a teacher, a baby exists.’

- b. aki-ka_i sensayngnim-**kkey** t_i iss-**usi**-ta. [Theme-Location]
 baby-NOM teacher-DAT.HON exist-HON-DEC
 ‘To a teacher, a baby exists.’
- c. *[?]aki-eykey sensayngnim-I iss-**usi**-ta. [Location-Theme]
 baby-DAT teacher-NOM exist-HON-DEC
 ‘To a baby, a teacher exists.’
- d. *[?]sensayngnim-i_i aki-eykey t_i iss-**usi**-ta. [Theme-Location]
 teacher-NOM baby-DAT exist-HON-DEC
 ‘To a baby, a teacher exists.’

In sum, the arguments presented in this section support that the Location is the sentential subject of the double subject locative construction and that as the sentential subject, it c-commands the Theme. Thus, [Location-Theme] is the underlying structure and [Theme-Location] is derived through scrambling. I propose that [Location-Theme] establishes locative structure in which the Location c-commands the Theme as in (47).

(47)



This in turn supports the syntactic relationship between the Location and the Theme in double subject locative structures is similar to the syntactic relationship between the Goal (IO) and the Theme (DO) in ditransitive structures. This reinforces my proposal that [IO-DO] is an instantiation of prepositional locative structure in Korean in which the Goal c-commands the Theme. This means that Korean is a counterexample to Harley’s typological generalization that the Theme c-commands the Goal in prepositional locative structure.

5. Conclusion

In this paper, I have provided an analysis of the Korean dative construction consisting of the Goal (IO), a dative-case marked NP, and the Theme (DO), an accusative-case marked NP. I observed that a dative NP (IO) can precede an accusative NP (DO) and vice-versa as in [IO-DO] and [DO-IO], and proposed that [IO-DO] ([Goal-Theme]) is the underlying order and [DO-IO] ([Theme-Goal]) is generated by scrambling of the DO over the IO. I also proposed that the dative construction is an instantiation of the prepositional locative structure headed by P_{loc} structure, as similar to Harley’s proposed structure for the to-dative construction in English. I argued that in the Goal (IO) c-commands the Theme (DO) in P_{loc} structure. However, this is inconsistent with Harley’s typological generalization in which cross-linguistically, the Theme (DO) c-commands the Goal (IO) in P_{loc} structure. I provided a discussion on the syntax of double subject locative construction in Korean that reinforces my proposal that Korean P_{loc} structure indeed varies from English P_{loc} structure. The data in Korean, thus, shed new light on the typology of ditransitive construction: there is another type of dative construction projected from P_{loc} , in which the Location (Goal) c-commands the Locatee (Theme).

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