

## Perception-production asymmetry for Korean double accusative ditransitives\*

Sang-Hee Park\*\* · Eunkyung Yi\*\*\*

(Duksung Women's University · Ewha Womans University)

**Park, Sang-Hee and Eunkyung Yi. 2020. Perception-production asymmetry for Korean double accusative ditransitives.** *Linguistic Research* 38(1): 27-52. Ditransitive constructions, expressing an agent, a recipient and a theme, are syntactically realized in various structures within and across languages (Malchukov et al. 2010). Korean is known to have two ditransitive constructions that vary in case marking on the recipient argument, i.e., the canonical ditransitive construction *Jisu-ka<sub>NOM</sub> Mina-eykey<sub>DAC</sub> chayk-ul<sub>ACC</sub> cwu-ess<sub>PAST</sub>-ta<sub>DECL</sub>* and the double accusative construction *Jisu-ka<sub>NOM</sub> Mina-lul<sub>ACC</sub> chayk-ul<sub>ACC</sub> cwu-ess<sub>PAST</sub>-ta<sub>DECL</sub>* 'Jisu gave Mina a book.' They are often used in the study of crosslinguistic comparison as counterparts of the English dative alternation. Previous research, however, reported huge imbalance between the two Korean variants in their frequencies of occurrence and speakers' acceptability of the constructions. In this context, we conducted two experimental studies that investigate the perception and production of the constructions, respectively. Study 1 examined the factors that may influence the acceptability of the constructions, i.e., verb type and *-cwu* benefactive morpheme. Study 2 investigated whether the double accusative ditransitive construction is a valid construction ever produced by Korean speakers, using sentence completion experiment. The results showed that Korean speakers judge the double accusative ditransitives as highly unacceptable but they do not completely avoid them in sentence completions. We discussed the results in the context of theoretical and psycholinguistic perspectives. (Duksung Women's University · Ewha Womans University)

**Keywords** ditransitive, case-marking, double accusative construction, dative alternation, Korean, acceptability judgment, sentence completion

### 1. Introduction

Ditransitive constructions refer to a construction occurring with three semantic arguments, an *agent* A, a *recipient* R and a *theme* T as in *Tom<sub>A</sub> gave John<sub>R</sub> a book<sub>T</sub>*. They often occur with a class of verbs such as *give*, *tell*, and *show* whose semantics

---

\* We thank two anonymous reviewers of *Linguistic Research* for their constructive feedback.

\*\* First author

\*\*\* Corresponding author

inherently requires those three arguments (Malchukov et al. 2010; Haspelmath 2015 for a review). From a crosslinguistic perspective, ditransitive constructions can only be defined by the semantic criteria because they syntactically manifest themselves in various ways within and across languages. Previous research showed their syntactic manifestations can be categorized into three alignment types depending on whether T or R are grammatically aligned with the *patient* P argument in a given language. The *indirective* alignment refers to the one where P and T are aligned together while R is treated differently. In the *secundative* alignment, on the other hand, P and R are aligned together while T is coded differently. In the *neutral* alignment, all three T, R, and P are grammatically encoded in the same way. English, for example, allows two types of alignment for ditransitive constructions, namely, the indirective alignment as in *Tom gave a book to John<sub>R</sub>* where R is coded with a preposition *to* and the neutral alignment as in *Tom gave John<sub>R</sub> a book* where R occurs in the normal object position with no explicit marking. The former is often called the prepositional object construction and the latter the double object construction in the literature. The phenomenon that a ditransitive verb may occur in or alternate between the two constructions to convey more or less the same meaning is referred as the *dative alternation*, one of the most studied phenomena in linguistics.

Korean, an SOV language rich in case markers, also has ditransitive constructions. The most natural or canonical syntactic manifestation is based on the indirect alignment as shown in (1a).<sup>1</sup> Namely, R is coded with a dative marker *-eykey* while T is with an accusative marker *-(l)ul* just like other P's. Since Korean allows word order scrambling, case-marked R and T may occur in alternate orders, i.e., R and then T or T and then R, while the former is known to be far more frequent than the canonical order (Yun and Hong 2014). What makes the Korean ditransitive phenomena interesting is that Korean is reported to allow the neutral alignment as well (at least marginally), both T and R being coded with an accusative marker, respectively, as illustrated in (1b). In this context, the two Korean ditransitive constructions in (1a) and (1b) seem analogous to the prepositional and double object constructions in English, respectively. Furthermore, the exchange between the dative and the accusative marker on R thus may seem to

---

1 The following abbreviations are used in glosses: ACC = accusative marker; ADN = adnominal; BEN = benefactive marker; COMP = complementizer; CONN = connective; DAT = dative marker; DECL = declarative marker; HON = honorific marker; NOM = nominative marker; PAST = past tense marker; PRES = present tense marker; SRC = source

correspond to the dative alternation in English despite the fact that they are typologically remote languages.

- (1) a. Jisu-ka      Mina-eykey   chayk-ul      cwu-ess-ta (indirective alignment)  
          Jisu-NOM   Mina-DAT   book-ACC   give-PAST-DECL  
          ‘Jisu gave Mina a book.’ or ‘Jisu gave a book to Mina.’  
      b. Jisu-ka      Mina-lul      chayk-ul      cwu-ess-ta (neutral alignment)  
          Jisu-NOM   Mina-ACC   book-ACC   give-PAST-DECL  
          ‘Jisu gave Mina a book.’ or ‘Jisu gave a book to Mina.’

Note, however, that as alluded to above, previous studies showed Korean speakers tend to judge the neutral alignment or the double accusative (acc-acc) construction in (1b) to sound far less good or even odd and also that it occurs highly infrequently in natural language use, compared to the canonical (dat-acc) construction in (1a) (Lim 1998; Cho and Jeon 2015; Shin and Park 2019). It thus seems to receive little attention from theorists and has not been considered a construction worthy of an independent standing in Korean linguistics. Rather, it was often presented and studied as one of the sub-constructions that involve repeated postpositions such as *Jisu-NOM Mina-ACC arm-ACC grabbed* ‘Jisu grabbed Mina by the arm’ and *Jisu-NOM lunch-ACC noodles-ACC ate* ‘Jisu had noodles for lunch’ (Yoon 2015). They include more of non-ditransitive constructions which are qualitatively different from the double accusative ditransitive construction we focus on here. In those constructions, the two accusative-marked arguments are often semantically related, e.g., *Mina-Mina’s arm* and *lunch-noodles*, and either of them suffices to complete the sentence with little loss in the core meaning such as *Jisu-NOM Mina-ACC grabbed* ‘Jisu grabbed Mina’ and *Jisu-NOM noodles-ACC ate* ‘Jisu had noodles.’ However, this is not the case for ditransitives: both accusative-marked arguments play distinct semantic roles for the verbs, i.e., R and T. This semantic difference makes the ditransitive double accusative construction stand out and provides support for treating it independently from the other repeated-postposition constructions. In the present study, we confine ourselves to ditransitives and call the ditransitive double accusative construction simply the double accusative construction.

Despite the low acceptability and the rarity of occurrences, we found it more important than one can expect to study the Korean double accusative construction more thoroughly. Studies, particularly those engaging crosslinguistic comparison, influence, or

interference, often take advantage of the superficial correspondence between English and Korean syntactic alignments of ditransitive constructions introduced above, in the context of the dative alternation (Whong-Barr and Schwartz 2002; Shin 2008; Oh 2010; Kim 2015, among others). Some of these studies aptly point out the semantically restricted nature of the double accusative construction and warn against a structurally parallel analysis of Korean and English ditransitives (Oh 2010), but some have argued for such a uniform analysis based on insufficient evidence (Kim 2015; see Lee 2020 for discussion). The dative alternation is also one of the popular phenomena for crosslinguistic investigation. It may be partly because the dative alternation is one of the rare grammatical variations in language that two different structures are associated with more or less the same meaning (cf. Goldberg 1995) and partly because a specific semantic class of verbs tend to participate in the alternation, which makes the phenomenon straightforward and clearly delineated from others. Crosslinguistically, they thus can turn relatively easily into testable and comparable items in empirical studies. To our understanding, however, previous studies vary even as to how to define the Korean double accusative construction and also as to which of the Korean and English ditransitive constructions corresponds to each other. It is common, though, across studies that they do not take as important the asymmetric acceptability and frequency between Korean ditransitives, which is not the case in English.

In this context, we aim to provide a more thorough investigation of the double accusative construction in Korean, using acceptability judgment and sentence completion experiments. More specifically, based on speakers' acceptability judgments, we first aim to test comprehensively the factors that are related to or are shown to influence the acceptability of the double accusative construction in the previous literature, namely, the effects of verb semantics and those of the benefactive construction and their interaction. In addition, given the overall low acceptability of the construction, we also aim to investigate the legitimacy of the double accusative construction in Korean grammar by examining free sentence completions after double-accusative arguments provided by native speakers, assuming that metalinguistic tasks such as acceptability judgment may tap into various cognitive resources such as strategies, biases and heuristics, other than linguistic knowledge (Tversky and Kahneman 1974).

The rest of this paper is organized as follows. In Section 2, we introduce semantic and syntactic factors that were shown to affect the Korean ditransitive constructions and that make the phenomena more complicated and confusing, and then report on an

acceptability judgment experiment designed to tease apart the effects of those factors on Korean ditransitives, i.e., verb types (caused-possession vs. caused-motion) and presence or absence of the benefactive morpheme *-cwu*. In section 3 we report the results of a sentence completion experiment designed to explore the possibility of eliciting double accusative ditransitive sentences in Korean in a relatively free context. Through these experiments we aim to address the question whether the double accusative construction is a legitimate construction in Korean, examining both how they are judged and whether they are ever produced by native speakers. General discussion on the experiment results and a summary of the paper are provided in Section 4.

## 2. Study 1

### 2.1 Introduction

As introduced in Section 1, ditransitive constructions tend to occur with a relatively small and semantically homogeneous class of verbs, namely those requiring three semantic arguments, A, R and T. Researchers further showed, based on fine-grained semantic analysis, ditransitive constructions may differ in their semantic features and entailment, interacting with the semantics of the co-occurring verbs. Rappaport Hovav and Levin (2008), for example, showed the two ditransitive variants in English, i.e., the prepositional and the double object construction, result in different semantic entailments depending on the semantic properties of the verbs they co-occur with. Namely, the double object construction always entails caused-possession (CP) irrespective of verbs' semantic properties, whereas the prepositional object construction does so only when it occurs with verbs whose meaning entails CP or *give*-type verbs. If it occurs with verbs of caused-motion (CM) or *throw*-type verbs, however, it does not entail CP.

In a similar vein, Lee (2018, 2019) showed that verb sensitivity is relevant to Korean ditransitive constructions. Lee (2019) argued CP verbs allow both the dative and the accusative marking on the R argument but CM verbs only allow the canonical dative marking. In other words, CP verbs can alternate between the canonical dative and the double accusative construction, while CM verbs are only compatible with the canonical dative construction. Lee (2018) in fact reported that the double accusative construction was judged less acceptable when occurring with a CM verb than when occurring a CP

verb on human judgment experiment, i.e., CP mean = 2.65; CM mean = 1.61 (on a 5 point Likert scale). Acceptability of the constructions resides in the lower end of the continuum in general, though.

Another grammatical property of Korean that should be noted regarding ditransitive constructions is the existence of the benefactive construction marked by the addition of the morpheme *-cwu* ‘give’, cf. *cwu-* as a main verb in (1) above.<sup>2</sup> The so-called *-cwu* or benefactive construction is a highly productive syntactic operation that applies to verbs of different valency types, i.e., intransitive, transitive and ditransitive. Importantly, ditransitive constructions can occur independently or jointly with the benefactive construction, as illustrated in (2a) and (2b), respectively, making no difference in sentential meaning. Thus, when Korean ditransitive constructions are examined and compared against the English ones, some studies assume the two types of structures can be used interchangeably, e.g., Shin (2008); others make a clear distinction between the two, e.g., Whong-Barr and Schwarz (2002).

- (2) a. Jisu-ka        Mina-eykey/lul        yenge-lul        kaluchy-ess-ta  
       Jisu-NOM    Mina-DAC/ACC    English-ACC    teach-PAST-DECL  
       ‘Jisu taught Mina English.’ or ‘Jisu taught English to Mina.’  
   b. Jisu-ka        Mina-eykey/lul        yenge-lul  
       JJisu-NOM    Mina-DAC/ACC    English-ACC  
       kaluchy-e-**cwu**-ess-ta  
       teach-CONN-BEN-PAST-DECL  
       ‘Jisu taught Mina English.’ or ‘Jisu taught English to Mina.’

When combined with intransitive or transitive verbs, the *-cwu* construction accompanies critical modifications to the syntax and semantics of a sentence. It is an applicative construction which adds another argument to the sentence not subcategorized by the verb, i.e., a beneficiary B, as illustrated in (3). Note that the benefactive role is also grammatically encoded by the marker *-eykey* and that the accusative marker *-(l)ul* is known to take the place of *-eykey* in this case as well. This makes the benefactive constructions structurally isomorphic to the ditransitive constructions with *-cwu* in (2b).

2 Oh and Zubizarreta (2010) regard *-cwu* as a morpheme that is “affixed” to another verb to function as an auxiliary or light verb. Others such as Tomioka and Kim (2017) treat it as a benefactive marker/auxiliary. The precise status of this morpheme is immaterial to our discussion.

Semantically, this case marking alternation is analogous to the benefactive alternation in English, for example, between *Jisu chose Mina a book* and *Jisu chose a book for Mina* rather than to the dative alternation that involves the preposition *to*.

- (3) Jisu-ka        Mina-eykey/lul    chayk-ul  
       Jisu-NOM    Mina-BEN/ACC    book-ACC  
       kol-la-cwu-ess-ta  
       choose-CONN-BEN-PAST-DECL  
       ‘Jisu chose a book for Mina.’

The complexity and confusion in crosslinguistic comparison arises mainly due to the fact that the case marker *-eykey* is highly multifunctional. It can encode not only a recipient and a goal but also a beneficiary and even a source. According to Haspelmath’s (2003) semantic map of typical dative functions, i.e., direction-recipient-beneficiary, English *to* includes direction and recipient only in its boundary, whereas Korean *-eykey* encompasses all three functions (Song 2010).

In Study 1 reported below, we conduct a comprehensive investigation of the double accusative construction in Korean including the factors introduced above, using acceptability judgment experiment. We aim to investigate first speakers’ acceptability of the double accusative frame with and without *-cwu* and second, how it interacts with verb meanings known to affect the ratings. Our results will provide empirical evidence for how the double accusative and the double accusative *-cwu* construction are received by native speakers, equally or differentially, and how it is modulated by verb meanings. They will also provide theoretical implications for the analyses of the ditransitive constructions proper and the complex ditransitive *-cwu* construction in Korean.

## 2.2 Method

### *Participants*

Thirty Seoul National University undergraduate students participated in this experiment. All were native speakers of Korean. They were paid for their participation.

### Material

We chose six caused-possession (CP) and six caused-motion (CM) verbs based on Lee's (2019) classification. Then, we constructed three types of sentences for each verb: one in the canonical ditransitive construction with R-*eykey* as in (4a), another in the double accusative construction with R-*(l)ul* as in (4b) and the other in the double accusative -*cwu* construction as in (4c). The three sentence types were counterbalanced across three lists so that each participant is presented with only one type of sentence for each verb item.

- (4) a. 아버지가 아들에게 운전을 가르쳤다.  
 apeci-ka atul-eykey wuncen-ul kaluchy-ess-ta  
 father-NOM son-DAT driving-ACC teach-PAST-DECL  
 'A father taught his son driving (=how to drive).'
- b. 아버지가 아들을 운전을 가르쳤다.  
 apeci-ka atul-ul wuncen-ul kaluchy-ess-ta  
 father-NOM son-ACC driving-ACC teach-PAST-DECL  
 'A father taught his son driving (=how to drive).'
- c. 아버지가 아들을 운전을 가르쳐주었다.  
 apeci-ka atul-ul wuncen-ul kaluchy-e-cwu-ess-ta  
 father-NOM son-ACC driving-ACC teach-CONN-BEN-PAST-DECL  
 'A father taught his son driving (=how to drive).'

We also prepared thirty six filler sentences that are gradient in their acceptability from completely unacceptable to completely natural. We manipulated the acceptability of filler items so that our experimental items, particularly the noncanonical double accusative sentences, do not stand out among other items, given the relatively low acceptability of the structure reported in previous studies (Lim 1998; Cho and Jeon 2015; Shin 2020). Any two experimental items were separated by three filler sentences. CP- and CM-verb items were presented alternately in the experiment with fillers in-between.

### Procedure

This experiment was conducted via a virtual meeting platform Zoom (<https://www.zoom.us>). Participants joined a virtual meeting room owned by one of the authors at an allotted time. After completing a consent form, they were assigned to a breakout room in Zoom where each participant could do the experiment privately. Then



the experimenter joined the breakout room to give instructions. The experimenter sent the participant a link to the experiment made in a form document (JotForm, <https://www.jotform.com>) via chat in Zoom. When the participant successfully opened the link on her own computer, she was asked to share her screen with the experimenter using the screen-share function in Zoom. While the participant and the experimenter were looking at the same screen (on the participant's end), the experimenter went through the instructions and two practice items with the participant. When it was made sure the participant understood the task, the experimenter left the breakout room, leaving the participant alone, and let her complete the experiment with privacy.

In the experiment, participants were presented with a series of sentences and were asked to judge how natural the given sentences sound on a seven-point likert scale from 1 completely unnatural to 7 completely natural. In actual presentation, one sentence appeared at the top of the screen with clickable seven points underneath it with point labels for 1 completely unnatural and 7 completely natural. After choosing one of the seven points, participants clicked on the 'Next' button to move onto the next screen to see the next sentence. They were unable to go back to previous items and change their ratings as no button was available for moving backward. They completed the experiment by clicking the 'Submit' button. Then, their responses (or data) were recorded on the experimenter's JotForm account automatically. The experiment took about 10 minutes.

### 2.3 Results and discussion

Describing the data, the mean rating on the canonical ditransitive with dative marking was 6.43 (sd = 0.98) out of 7. The mean ratings on the double accusative and the double accusative *-cwu* constructions were 1.88 (sd = 1.26) and 2.03 (sd = 1.32), respectively. As illustrated in Figure 1, the dative-marked and accusative-marked sentences show almost the mirror-image distributions of ratings. The former is crowded at the higher-end while the latter at the lower-end of the continuum. We also examined the rating distribution of filler items to see whether certain rating biases in fillers might have affected the ratings of experimental items. We observed that the rating distribution of fillers produces a similar curve to that of the experimental items, showing it is unlikely they played any biasing role.

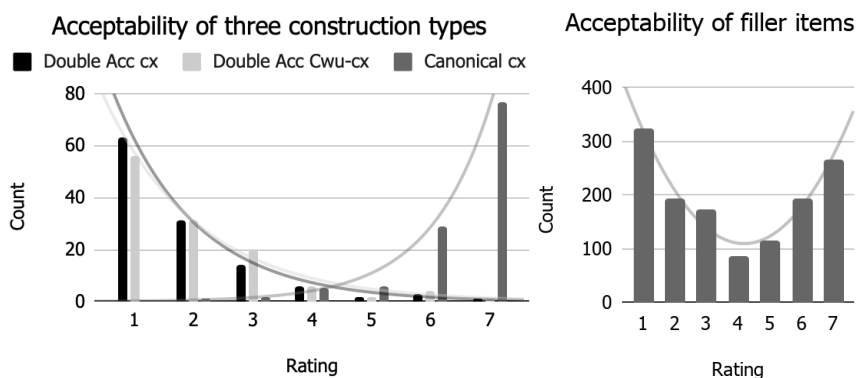


Figure 1. The acceptability ratings of experimental and filler items

We conducted mixed-effects regression analysis to analyze the data. We included in the model (1) verb-type (two levels, i.e., CP and CM), (2) construction-type (three levels, i.e., canonical, double-acc and double-acc-*cwu*-cx) and (3) their interaction as fixed factors with subject and item as random factors. The outcome variable was the participant ratings on each stimulus sentence from 1 through 7.

We found the main effect of construction-type between the canonical and both of the double accusative constructions (canonical vs. double-acc-cx,  $b = -4.90$ ,  $SE = 0.21$ ,  $df = 27.97$ ,  $t = -22.81$ ,  $p < .001$ ; canonical vs. double-acc-*cwu*-cx,  $b = -4.57$ ,  $SE = 0.21$ ,  $df = 27.97$ ,  $t = -21.26$ ,  $p < .001$ ), as expected. The difference between simple double accusative and double accusative -*cwu* sentences was not statistically significant.

We did not find the main effect of verb-type but found a significant interaction between verb-type and construction-type, particularly between verb-type and the simple double accusative construction ( $b = 0.72$ ,  $SE = 0.30$ ,  $df = 27.97$ ,  $t = 2.36$ ,  $p < .05$ ). We closely examined the nature of the interaction. The results revealed that acceptability ratings tend to be higher on the CP verbs (mean = 2.15,  $sd = 1.47$ ) than on the CM verbs (mean = 1.62,  $sd = 0.96$ ) when they were presented in the double accusative construction, as is illustrated by the differences in the slopes of exponential trendlines in Figure 2. This improvement driven by CP verbs was not observed in the other two constructions. Importantly, the verb-type effect was not statistically significant for the double accusative -*cwu* construction (CP mean = 2.10,  $sd = 1.27$  ; CM mean = 1.95,  $sd = 1.37$ ) as opposed to the simple double accusative construction.

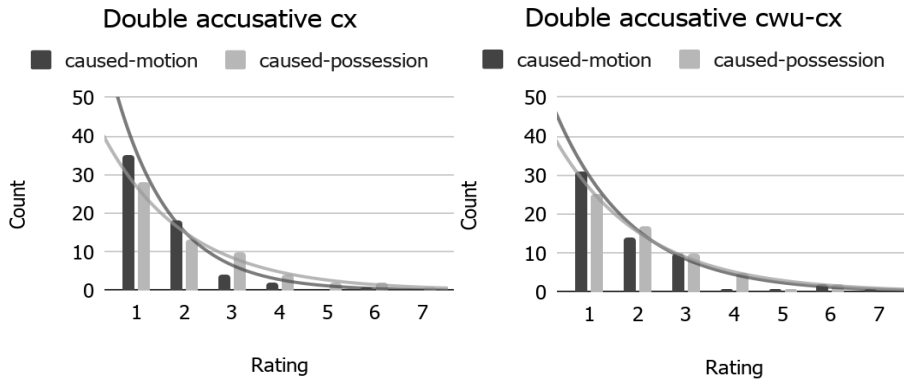


Figure 2. Acceptability ratings on the sentences with an accusative-marked recipient

The current results replicated previous findings with respect to accusative-marked recipients. First, acceptability ratings on these constructions are overall very low. As opposed to the theoretical assumption/argument that they are legitimate constructions in Korean (e.g., Yoon 2015), average speakers of Korean do not readily accept them as natural Korean sentences. Second, as noted by Oh (2010), some argue *-cwu* construction improves acceptability of the accusative marked recipient. As with Oh's results, the current study found no such evidence. Third, we found the verb effect on the acceptability of the double accusative construction, replicating Lee (2018). Note, however, that the mean ratings of the double accusative construction was relatively higher in Lee (2018), i.e., 2.13 on a scale of 5, than the current result, i.e., 1.88 on a scale of 7. This seems to be due to differences in the experimental design (see Section 4 for discussion). Fourth, the results showed the verb effects disappear in the double accusative *-cwu* construction. It is mainly due to the slightly improved acceptability of CM verbs in the *-cwu* construction (while CP verbs make no difference between the simple and the *-cwu* construction). It suggests that the *-cwu* construction is less influenced by verb types as is expected by the fact that *-cwu* can combine with many different types of verbs and that the simple ditransitive and ditransitive *-cwu* constructions are received differently by speakers although they convey the same message.

### 3. Study 2

#### 3.1 Introduction

Linguistic theory aims to discover and characterize speakers' knowledge of language. Knowing a language means not only being able to comprehend and judge how natural or grammatical a given string of words sounds but also being able to produce well-formed strings in that language. The overall very low acceptability of the double accusative construction we have replicated in Study 1 above casts a fundamental question whether the construction indeed belongs to Korean grammar. Kempen and Harbusch (2005) suggested that there is a "production threshold" on the continuum of grammaticality ratings. They predicted that a construction whose rating is not above the threshold never occurs or occurs only infrequently in corpora, i.e., a marked construction. Furthermore, they argued constructions that receive even lower grammatical ratings are "only delivered in case of malfunctioning production mechanism or deliberate output distortion." We are not aware where the threshold falls on the continuum, but the generally low ratings for the double accusative construction as low as 1 pose a question whether it is at least a marked construction or an ungrammatical one, putting aside theorists' endorsing the construction. To address this question, we conducted a sentence completion experiment where participants are given double accusatives and are asked to complete the fragment by providing the rest of the sentence including predicates. They are free to continue the fragment with any predicates other than dative verbs. The results will show whether the double accusative ditransitive construction is what speakers never construct on their free will, what they marginally produce or what they produce at around medium-sized frequency.

#### 3.2 Method

##### *Participants*

Sixteen Seoul National University undergraduate students participated in this experiment. All were native speakers of Korean. None of them participated in Experiment 1. They were paid for their participation.

### Material

We prepared twenty-four sentence fragments from the sentence stimuli used in Experiment 1. We removed the verbs at the sentence final position, leaving up to the third arguments as in (5). The half of the sentences were with a human/animate argument marked with the dative marker, *-eykey*, as in (5a); the other half were with the accusative marker, *-(l)ul*, leaving two consecutive accusative-marked elements in the fragment, as in (5b).

- (5) a. 아버지가 아들에게 운전을 \_\_\_\_\_  
 apeci-ka atul-eykey wuncen-ul  
 father-NOM son-DAT driving-ACC
- b. 아버지가 아들을 운전을 \_\_\_\_\_  
 apeci-ka atul-ul wuncen-ul  
 father-NOM son-ACC driving-ACC

Two types of sentence fragments were counterbalanced across two lists so that each participant saw only one version of each item, i.e., (5a) or (5b). A participant thus completed six dative-marked and six accusative-marked items presented alternately in the experiment. Any two closest experimental items were separated by three filler items in presentation.

Thirty-six filler items were constructed based on those used in Experiment 1. We removed the later part of the filler sentences including the verbs. Filler fragments varied in length, ranging from two to ten words long (mean = 4.64, sd = 1.72).

### Procedure

Participants were recruited and informed of the experiment in the same way as in Experiment 1. In this experiment, participants were presented with a sentence fragment, i.e., the beginning of a sentence as in (5), and were asked to complete it to make a natural Korean sentence. They were asked to provide a continuation that first occurred to their mind and not to change it with a second thought or later. On the completion of a sentence, they clicked on the 'Next' button to move onto the next screen to see the next fragment. As before, they were unable to go back to previous items as no such button was available. They completed the experiment by clicking on the 'Submit' button after completing the last fragment. Then, their responses were recorded on the

experimenter's JotForm account and made available for access. The experiment took around 8-15 minutes.

### 3.3 Results and discussion

The fragmental stimuli were completed with a variety of constructions while participants' preference for the choice of construction differed depending on stimulus types. When presented with dac-acc fragments, they provided dative constructions predominantly frequently, 90.6% (87/96); when presented with acc-acc fragments, however, they provided dative continuations down to 45.8% (44/96) and produced many other constructions. This is illustrated in Figure 3 (left). This difference was statistically significant when we analyzed the data using the mixed-effects logistic regression, including subject and item as random factors ( $b = -4.03$ ,  $SE = 0.95$ ,  $z = -4.22$ ,  $p < .001$ ). It confirms speakers produce less or relatively disprefer dative continuations after acc-acc fragments than after dac-acc fragments.

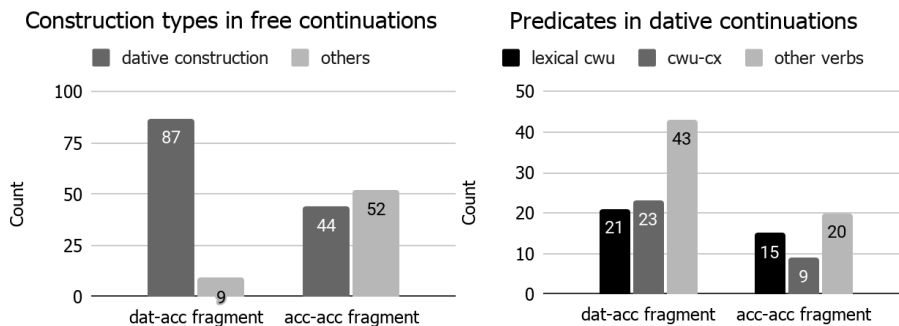


Figure 3. A summary of speakers' continuations after fragments

We also closely examined the continuations provided by the participants, e.g., actual responses shown in (6) below. First, we found, as illustrated in Figure 3 (right), when they provided dative constructions, they used the lexical verb *cwu-* most frequently both for the dac-acc and for the acc-acc fragment type as in (6a). The original verbs deleted from the sentence stimuli of Experiment 1 were *kaluchi-* 'to teach', *cikupha-* 'to pay', *kwonha-* 'to offer', *pwuyeha-* 'to grant', *sunginha-* 'to grant', *mathki-* 'to entrust', *centalha-* 'to forward', *pannapaha-* 'to return', *paysongha-* 'to ship', *ponay-* 'to send',

*pwuchi-* ‘mail’, and *tenci-* ‘throw’. Except for one item *kaluchi-* ‘to teach’ introduced in (4) above, the other (eleven) fragments in fact provide contexts that fit with *cwu-* ‘give’ as predicate. The *cwu-* verb bias was stronger with acc-acc fragments (34.0%, 15/44) than with dat-acc fragments (24.1%, 21/87). It was mainly because participants produced much fewer continuations with non-*cwu* verbs after the acc-acc fragments as in (6b).

- (6) a. 여자가 동창을/동창에게 초대장을 주었다.

yeca-ka                      tongchang-eykey/tongchang-ul      chotaycang-ul  
 woman-NOM      alumnus-DAT/alumnus-ACC      invitation-ACC  
 cwu-ess-ta  
 give-PAST-DECL

‘The woman gave an invitation to her alumnus.’

- b. 의사가 환자에게/환자를 영양제를 처방했다.

uysa-ka                      hwanca-eykey/hwanca-lul      yengyangcey-lul  
 doctor-NOM      patient-DAT/patient-ACC      nutrients-ACC  
 chepangha-yss-ta  
 prescribe-PAST-DECL

‘The doctor prescribed dietary supplements to a patient.’

Participants also provided many continuations in the *-cwu* construction as in (7), i.e., 26.4% (23/87) after dac-acc fragments and 20.5% (9/44) after acc-acc fragments. When the agent argument refers to an entity higher in social rank than the dative argument, they often added the honorific marker *-si* after *-cwu* as in (7b). More importantly, although some argued the *-cwu* construction makes the acc-acc pattern sound better, it was judged unnatural in Experiment 1 above and in the current experiment, the acc-acc fragments failed to facilitate the production of the *-cwu* construction, confirming that the *-cwu* construction is not particularly associated with double accusative frames (Oh 2010).

- (7) a. 직원이 고객을 물품을 찾아주었다.

cikwen-i                      kokayk-ul                      mwulphwum-ul      chaca-cwu-ess-ta  
 employee-NOM      customer-ACC      goods-ACC      find-BEN-PAST-DECL  
 ‘The employee found the goods for the customer.’

- b. 아버지가 아들에게/아들을 운전을 가르쳐주셨다.

apeci-ka atul-eykey/atul-ul wuncen-ul  
 father-NOM son-DAT/son-ACC driving-ACC  
 kaluchy-e-cwu-si-ess-ta  
 teach-CONN-BEN-HON-PAST-DECL  
 ‘The father taught a son how to drive.’

Second, we also examined non-dative continuations after both fragment types. The majority of non-dative completions after the dat-acc fragments (7/9) were *receive*-type continuations as in (8a) where the marker *-eykey* encodes a source rather than a recipient, exploiting the fact that the marker *-eykey* is polysemous in Korean, e.g., encoding either a recipient or a source in datives, or an agent of passives. After acc-acc fragments, in particular, we found many causative continuations, either a lexical causative as in (8b) or a syntactic or periphrastic causative as in (8c). In these constructions, the subject (nominative-marked argument) is the *causer* and the accusative-marked human argument is a *causee*.

- (8) a. 이사회가 대주주에게 경영권을 뺏었다. (*deprive*-construction)

isahoy-ka t aycwucwu-eykey kyengyengkwen-ul  
 executive.board-NOM major.shareholder-SRC management.rights-ACC  
 ppays-ess-ta  
 deprive-PAST-DECL.  
 ‘The executive board deprived the major shareholder of management rights.’

- b. 아버지가 아들을 운전을 시켰다. (*lexical causative*)

apeci-ka atul-ul wuncen-ul sikhy-ess-ta  
 father-NOM son-ACC driving-ACC make.do-PAST-DECL.  
 ‘The father made a son drive.’

- c. 신부가 하객을 부케를 받게 했다. (*syntactic causative*)

sinpwu-ka hakayk-ul pwukhey-lul pat-key ha-yss-ta  
 bride-NOM guest-ACC bouquet-ACC receive-cause.do-PAST-DECL  
 ‘The bride let a guest receive the bouquet.’



Other frequent types of continuations after double accusatives include constructions that make the second accusative-marked element a part of an embedded clause, as exemplified in (9). In transitive continuations as in (9a), the first accusative-marked element serves as a sole object of the matrix clause and the embedded clause serves as an adjunct conveying the meaning of purpose, reason, etc. Depending on the semantics of the main verbs, the embedded clause can serve as a complement of the verbs as in (9b).

- (9) a. 여자가 동창을 초대장을 주지 않았다는 이유로 때렸다. (transitive)

yeca-ka tongchang-ul chotaycang-ul cwu-ci  
 woman-NOM alumnus-ACC invitation-ACC give-COMP  
 anh-ass-ta-nun iyu-lo ttayly-ess-ta  
 not-PAST-DECL-ADN reason-for beat-PAST-DECL

‘The woman beat the alumnus for not giving her an invitation.’

- b. 의사가 환자를 영양제를 많이 먹으면 안되는 사람으로 분류했다. (NP + PP complements)

uysa-ka hwanca-lul yengyangcey-lul manhi  
 doctor-NOM patient-ACC dietary.supplements-ACC much  
 mek-umyen an-toy-nun salam-ulo pwunlyuha-yss-ta  
 take-if not-become-ADN person-as categorize-PAST-DECL

‘The doctor categorized the patient as a person who should not take too much dietary supplements.’

The last type of continuations to note is the subject-to-object raising construction as in (10). In these cases, participants used raising verbs such as *sayngkakha-* ‘think’ and *wenha-* ‘want’ as matrix verbs which take a clausal complement. The accusative-marked human argument in the stimuli plays the role of a semantic subject to the verb in the embedded clause, e.g., *sa-* ‘buy’ in (10), while being syntactically ascended to the object position in the matrix clause.

(10) 직원이 고객을 물품을 사지 않았다고 생각한다. (subject-to-object raising)

cikwen-i                kokayk-ul        mwulphwum-ul    sa-ci  
 employee-NOM    customer-ACC    goods-ACC        buy-COMP  
 anh-ass-ta-ko                sayngkakha-n-ta  
 not-PAST-DECL-COMP    think-PRES-DECL  
 'The employee thinks the customer did not but the item.'

Most of these non-dative continuations are grammatical and sound completely acceptable (at least to the authors, both being native speakers of Korean), although they tend to be conceptually and/or structurally more complex than dative continuations. What these other continuations show here is that if the double accusative dative construction is completely ungrammatical in Korean, there are ways for Korean speakers to avoid ungrammatical production even when presented with the fragments consisting of two accusative marked arguments in a row. The results of this production experiment suggest that somehow the double accusative construction is represented in the mental grammar of Korean speakers whereas it is highly dispreferred in general relative to the dat-acc counterpart as shown in Experiment 1 above.

#### 4. General discussion

This paper investigated two types of ditransitive constructions in Korean using two experimental paradigms, each of which examining the perception and production of the constructions, respectively. We focused in particular on the validity of the double accusative ditransitive construction as a grammatical one since there seems to exist a huge discrepancy in the judgment of the construction between linguists and lay people. It is not difficult to observe an immediate negative reaction to the construction when presenting it to Korean speakers while syntacticians endorse it. This study thus attempted to address the question whether the double accusative ditransitives are an actually grammatical construction, examining both how they are judged and whether they are ever produced.

We observed in the judgment study (Study 1) that acceptability ratings of the double accusative construction were significantly higher with a CP verb than with a CM verb. Importantly, the same verb type effect was not found in the double accusative *-cwu*

construction. This shows that CM verbs are as good as CP verbs in the double accusative *-cwu* construction, although the acceptability tends to be low with either type of verbs.

We suspect the lack of verb type effect in the double accusative *-cwu* construction is due to the semantic contribution of the benefactive morpheme *-cwu* and the implications associated with the recipient and beneficiary roles. Previous research has shown that the double accusative construction is cross-linguistically associated with a caused possession frame, which conveys that an actor A causes a recipient R to come to possess a theme T (Levin 2008; Lee 2018, 2019). Because CP verbs license a recipient and entail a result possessive state, they are semantically compatible with the double accusative construction. CM verbs, by contrast, do not entail a result possessive state and therefore are not expected to be found in the double accusative construction. We assume, as with many others (Song 2010; Tomioka and Kim 2017), that the morpheme *-cwu* contributes a ‘caused benefit’ meaning, namely A causes a beneficiary B to benefit from A’s action. Although beneficiaries are conceptually different from recipients, the two roles imply each other, especially when something comes into a recipient’s possession (Newman 1996; Kittilä 2005; Song 2010). Thus, when *-cwu* is added to a CM verb, the goal argument is augmented as a ‘goal-beneficiary-recipient’ hybrid, which naturally fits in the caused possession frame.

We conjecture that the overall low acceptability of double accusative (*-cwu*) constructions as opposed to the canonical dative construction may be the effect of an information-structural constraint on double case marking constructions. Previous research has suggested that Korean double case marking is sensitive to information-structural categories such as focus and topic (Yoon 1986; Kim 2001; Schütze 2001; Hong 2014). While much theoretical research has assumed the double accusative construction is a legitimate construction in Korean, there has also been experimental work showing that native speakers judge the construction as marginal at best (see Cho 2015 and references therein). This discrepancy can be investigated through a carefully controlled experiment testing the role of the first accusative-marked NP as the focus or topic of the construction. We believe such an experimental approach can provide a promising direction for a deeper understanding of double accusative constructions in general and the dative-type double accusative construction examined in this work in particular.

We also observed a severe discrepancy between acceptability judgment and actual production in Studies 1 and 2. The ratings of the double accusative sentences were only around 2 or often below on the seven-point scale, which shows that the frame is almost

completely unacceptable to most speakers, while they produced a nontrivial number of double accusative sentences even when they have other grammatical options not to. We suspect various factors may influence the phenomena independently and/or concurrently.

One of the major factors we suspect is the asymmetric frequency of constructions in actual use. Previous studies have shown that various types of frequency information are closely related to or can explain speakers' acceptability judgment or their choices of construction (Gries and Stefanowitsch 2004; Featherston 2005; Kempen and Harbusch 2005; Arppe and Järvikivi 2007; Divjiak 2017, among many others). In particular, Bermel et al. (2018) investigated the role of absolute and proportional frequency of morphological forms in Czech and reported that proportional frequency plays a salient role in judgment tasks while absolute frequency does so in production tasks. Regarding the frequencies of the constructions we examined here, i.e., the canonical ditransitive and the double accusative constructions in Korean, Shin and Park (2019) reported to have found only seven cases of the double accusative construction used in the written component of the Sejong Corpus, compared to 4,925 cases of the canonical ditransitive construction after examining about 890K sentences, i.e., the double accusative construction constituting only 0.14%. This huge gap in frequency between the two constructions and only a tiny proportion of the double accusative construction may have biased the raters even more strongly against the infrequent double accusative construction than one can expect from the actual uses of such a construction, although very rare.

The extremely low acceptability of the double accusative construction can also be accounted for by what Goldberg and her colleagues suggested, namely competition and statistical preemption, in relation to the skewed frequency distribution discussed above. Based on previous neuroscience studies, Goldberg (2019: 84) contends that when we judge an expression, "we implicitly compare it with a "correct" way to express the intended message-in-context." It suggests that in the context of the current study, when speakers judge a structure, i.e., the double accusative construction, they implicitly compare it with an alternative construction, i.e., the canonical ditransitive frame. Taking the frequency bias into account, in other words, even when only the low-frequency one is present to be judged, both the low- and high-frequency expressions for a given context compete with each other implicitly in the mind.

The competition between potentially possible constructions is known to be affected by a phenomenon called statistical preemption (Boyd and Goldberg 2011). That is, if there exists a more common and usual expression for a certain message in speakers'

associative memory, it inhibits its alternative (but less good) expression, if any, from occurring. As a result, the existence of a good or usual one facilitates its own occurrences. When speakers view acceptability judgment as a normative enterprise as suggested by Goldberg (2019: 85), they are likely to judge the highly infrequent and less good one to be odd. The strength of the preemption effects depends on the probability of the constructions. Thus, given the existence of the canonical ditransitive construction, the extreme rarity of the double accusative construction in natural language use may lead speakers to conclude the construction is too unusual for the intended message, even to the point it is not “right.” We suspect these phenomena can also explain the fact that the ratings on the double accusative construction tend to be even lower in our experiment than those reported in Lee (2018). It seems to be due to differences in the experimental design: In our experiment, each participant saw both the double accusative and the canonical dative construction in an experiment, i.e., within-subject design, while, to our understanding, participants were assigned to either condition, namely either to the double-accusative list or to the canonical ditransitive list in Lee’s (2018) experiment, i.e., between-subject design. The within-subject design may have made our participants more prone to the effects of competition and preemption, compared to those participating in the between-subject experiment where they were not exposed to alternative constructions.

While they judged the double accusative dative construction to be highly unacceptable in general, participants produced it more often than one would expect in Study 2. It should be noted that they did so even when other syntactic alternatives were available for use to complete the fragments. It seems we can hardly view them as ungrammatical production or as an outcome of error operations in sentence production that actually occur sporadically in language use. It is because such completions were observed from most of the participants and also because we have no reason to believe the pool of these participants is qualitatively different from that of the judgment study, i.e., both recruited from among undergraduates at the same university. It seems obvious from the results of the two studies that the double accusative construction is a highly dispreferred structure but is still one of the potentially possible syntactic options for a given context.

The relatively high proportion of the double accusative continuation in production we observed raises an interesting question. Previous research showed that it is often the case that even the structures with medium-range acceptability ratings are often very low in the frequency of occurrences (Kempen and Harbusch 2005). The relatively high proportion of the double accusative frame can be due to the nature of our task. Participants were

not completely free in providing a sentence; they were given a fragment with two accusative arguments being present in the first place and asked to find a way to make it sound right. Assuming that Korean speakers tend to avoid putting the same type of postpositions in a row within a sentence (Shin 2020), the fragments we provided them with were syntactic contexts that they rarely encounter in actual language use. We believe they are still easy enough that any average Korean speaker can complete them, though. As discussed in Section 3.3, they could come up with only several structures for a given syntactic environment, which might have raised the probability of the dative continuation. The asymmetry between judgment and production of the double accusatives may also have been affected by speakers' tendency such that they are strict as a judge for a structure but are relatively generous when producing it for themselves. Namely, they may choose to produce a little odd expression as long as they believe it is "interpretable." The mixed result, i.e., a highly unacceptable construction that can be produced with nontrivial frequency in a certain context, obviously calls for further systematic investigation.

## References

- Lim, Gyu-hong. 1998. Kwukehak nonmwuney ssuin yeymwuney tayhan mokwuke hwacaury swuyong kanungsengye kwanhan yenkwu [A study of native speakers' acceptance on a sample from Korean linguistics journals]. *Hangeul* 239: 161-193.
- Arppe, Antti and Juhani Järviö. 2007. Every method counts: Combining corpus-based and experimental evidence in the study of synonymy. *Corpus Linguistics and Linguistic Theory* 3: 131-159.
- Bermel, Neil, Ludek Knittl, and Jean Russell. 2018. Frequency data from corpora partially explain native-speaker ratings and choices in overabundant paradigm cells. *Corpus Linguistics and Linguistic Theory* 14(2): 197-231.
- Boyd, Jeremy K. and Adele E. Goldberg. 2011. Learning what not to say: The role of statistical preemption and categorization in *a*-adjective production. *Language* 87(1): 55-83.
- Cho, Yongjoon. 2015. *Korean experimental syntax: A case of acceptability judgments of Korean multiple accusative constructions*. PhD Dissertation. Konkuk University.
- Cho, Yongjoon and Moon Gee Jeon. 2015. Hankwuke swuyongseng phantanuy silhempangpeplon pikyo yenkwu [A comparative study of acceptability judgment collection methods in Korean]. *The Journal of Linguistics Science* 72: 397-416.
- Divjak, Dagmar. 2017. The role of lexical frequency in the acceptability of syntactic variants: Evidence from *that*-clauses in Polish. *Cognitive Science* 41: 354-382.

- Featherston, Sam. 2005. The Decathlon Model of empirical syntax. In Stephan Kepser and Marga Reis (eds.), *Linguistic evidence: Empirical, theoretical and computational perspectives*, 187-208. Berlin: Mouton de Gruyter.
- Goldberg, Adele. 1995. *Constructions: A Construction Grammar approach to argument structure*. Chicago: University of Chicago Press.
- Goldberg, Adele. 2019. *Explain me this: Creativity, competition, and the partial productivity of constructions*. Princeton: Princeton University Press.
- Gries, Stefan Th. and Anatol Stefanowitsch. 2004. Extending collocation analysis: A corpus-based perspective on 'alternation.' *International Journal of Corpus Linguistics* 9(1): 97-129.
- Haspelmath, Martin. 2003. The geometry of grammatical meaning: Semantic maps and cross-linguistic comparison. In Michael Tomasello (ed.), *The new psychology of language* vol. 1, 211-242. Mahwah, NJ: Erlbaum.
- Haspelmath, Martin. 2015. Ditransitive constructions. *Annual Review of Linguistics* 1: 19-41.
- Hong, Ki-Sun. 2014. Multiple case constructions in Korean and the discourse structure. *Korean Journal of Linguistics* 39(3): 677-699.
- Kempen, Gerard and Karin Harbusch. 2005. The relationship between grammaticality ratings and corpus frequencies: A case study into word order variability in the midfield of German clauses. In Stephan Kepser and Marga Reis (eds.), *Linguistic evidence: Empirical, theoretical and computational perspectives*, 329-349. Berlin: Mouton de Gruyter.
- Kim, Jong-Bok. 2001. A constraint-based and head-driven analysis of multiple nominative constructions. In Dan Flickinger and Andreas Kathol (eds.), *Proceedings of the 7th International Conference on Head-Driven Phrase Structure Grammar*, 166-181. Stanford: CSLI.
- Kim, Lan. 2015. Asymmetric ditransitive constructions: Evidence from Korean. *Lingua* 165: 28-69.
- Kittilä, Seppo. 2005. Recipient-prominence vs. beneficiary-prominence. *Linguistic Typology* 9: 269-297.
- Lee, Hanjung. 2018. Two types of variation in the morphosyntactic expression of recipients of dative verbs in Korean. *Linguistic Research* 35(3): 449-482.
- Lee, Hanjung. 2019. On the distribution of semantic classes of dative verbs in syntactic constructions in Korean. *Korean Journal of Linguistics* 44(2): 255-291.
- Lee, Hanjung. 2020. Ditransitive hierarchy, semantic compatibility and the realization of recipients in Korean dative constructions. *Journal of Linguistics* 1-36. Online first, doi:10.1017/S0022226720000523.
- Levin, Beth. 2008. Dative verbs: A crosslinguistic perspective. *Linguistic Investigations* 31(2): 285-312.
- Malchukov, Andrej, Martin Haspelmath, and Bernard Comrie. 2010. Ditransitive constructions: A typological overview. In Andrej Malchukov, Martin Haspelmath, and Bernard Comrie (eds.), *Studies in ditransitive constructions: A comparative handbook*, 1-64. Berlin: Mouton de Gruyter.
- Newman 1996. *Give: A cognitive linguistic study*. Berlin: Mouton de Gruyter.
- Oh, Eunjeong. 2010. Recovery from first-language transfer: The second language acquisition of

- English double objects by Korean speakers. *Second Language Research* 26(3): 407–439.
- Oh, Eunjeong and Maria Luisa Zubizarreta. 2010. A comparison of English and Korean double objects. In Linda Uyechi and Lian-Hee Wee (eds.), *Reality exploration and discovery: Pattern interaction in language and life*, 185–212. Stanford: CSLI.
- Rappaport Hovav, Malka and Beth Levin. 2008. The English dative alternation: The case for verb sensitivity. *Journal of Linguistics* 44: 129–167.
- Schütze, Carson T. 2001. On Korean ‘case stacking’: The varied functions of the particles *ka* and *lul*. *The Linguistic Review* 18: 193–232.
- Shin, Jeong-Ah. 2008. *Structural priming in bilingual language processing and second language learning*. PhD Dissertation. University of Illinois at Urbana-Champaign.
- Shin, Gyu-ho and Sun Hee Park. 2019. Language use matters: Verb-construction fusion in the comprehension of dative constructions in Korean. *Paper presented at the 21st Meeting of the International Circle of Korean Linguistics*. Melbourne, Australia.
- Shin, Gyu-ho. 2020. People also avoid repetition in sentence comprehension: Evidence from multiple postposition constructions in Korean. *Linguistics Vanguard* 6(1): 1–12.
- Song, Jae Jung. 2010. Korean benefactive particles and their meanings. In Fernando Zuniga and Seppo Kittila (eds.), *Benefactives and malefactives: Typological perspectives and case studies*, 393–418. Amsterdam: John Benjamins Publishing Company.
- Tomioka, Satoshi and Lan Kim. 2017. The *give*-type benefactive constructions in Korean and Japanese. *Journal of East Asian Linguistics* 26: 233–257.
- Tversky, Amos and Daniel Kahneman. 1974. Judgment under uncertainty: Heuristics and biases. *Science* 185(4157): 1124–1131.
- Whong-Barr, Melinda and Bonnie D. Schwartz. 2002. Morphological and syntactic transfer in child L2 acquisition of the English dative alternation. *Studies in Second Language Acquisition* 24(4): 579–616.
- Yoon, James Hye-Suk. 1986. Some queries concerning the syntax of multiple subject constructions in Korean. *Studies in the Linguistic Science: Illinois Working Papers* 16: 215–236. Department of Linguistics, University of Illinois, Urbana-Champaign.
- Yoon, James Hye-Suk. 2015. Double nominative and double accusative constructions. In Lucien Brown and Jaehoon Yeon (eds.), *The handbook of Korean linguistics*, 79–97. Oxford: John Wiley and Sons.
- Yun, Hongoak and Upyong Hong. 2014. The effect of role predictability and word predictability on sentence comprehension. *Journal of Cognitive Science* 15: 349–390.



## Appendix

### Stimuli for experiment 1

#### A. Stimuli with caused possession verbs in three types of construction

1. (a) 아버지가 아들에게 운전을 가르쳤다.  
(b) 아버지가 아들을 운전을 가르쳤다.  
(c) 아버지가 아들을 운전을 가르쳐 주었다.  
'The father taught driving to the son.'
2. (a) 사장이 비서에게 성과급을 지급했다.  
(b) 사장이 비서를 성과급을 지급했다.  
(c) 사장이 비서를 성과급을 지급해 주었다.  
'The CEO paid a bonus to the secretary.'
3. (a) 의사가 환자에게 영양제를 권했다.  
(b) 의사가 환자를 영양제를 권했다.  
(c) 의사가 환자를 영양제를 권해 주었다.  
'The doctor offered a dietary supplement to a patient.'
4. (a) 이사회가 대주주에게 경영권을 부여했다.  
(b) 이사회가 대주주를 경영권을 부여했다.  
(c) 이사회가 대주주를 경영권을 부여해 주었다.  
'The executive board granted management rights to the major shareholder.'
5. (a) 중대장이 이등병에게 휴가를 승인했다.  
(b) 중대장이 이등병을 휴가를 승인했다.  
(c) 중대장이 이등병을 휴가를 승인해 주었다.  
'The captain granted a leave to the soldier.'
6. (a) 아이가 누나에게 세뱃돈을 맡겼다.  
(b) 아이가 누나를 세뱃돈을 맡겼다.  
(c) 아이가 누나를 세뱃돈을 맡겨 주었다.  
'The kid entrusted sebaetdon to his sister (sebaetdon = 'New Year's gift money' in Korean)'

#### B. Stimuli with caused motion verbs in three types of construction

1. (a) 경찰서장이 시민에게 감사장을 전달했다.  
(b) 경찰서장이 시민을 감사장을 전달했다.  
(c) 경찰서장이 시민을 감사장을 전달해 주었다.  
'The police chief forwarded a testimonial (or certificate of appreciation) to a citizen.'
2. (a) 세입자가 집주인에게 열쇠를 반납했다.  
(b) 세입자가 집주인을 열쇠를 반납했다.  
(c) 세입자가 집주인을 열쇠를 반납해 주었다.  
'The tenant returned the keys to the landlord.'

3. (a) 직원이 고객에게 물품을 배송했다.  
(b) 직원이 고객을 물품을 배송했다.  
(c) 직원이 고객을 물품을 배송해 주었다.  
'The employee delivered the item to the customer.'
4. (a) 여자가 동창에게 초대장을 보냈다.  
(b) 여자가 동창을 초대장을 보냈다.  
(c) 여자가 동창을 초대장을 보내 주었다.  
'The woman sent an invitation to an alumnus.'
5. (a) 시어머니가 며느리에게 반찬을 부쳤다.  
(b) 시어머니가 며느리를 반찬을 부쳤다.  
(c) 시어머니가 며느리를 반찬을 부쳐 주었다.  
'The mother-in-law mailed a daughter-in-law some food (or side dishes).'
6. (a) 신부가 하객에게 부케를 던졌다.  
(b) 신부가 하객을 부케를 던졌다.  
(c) 신부가 하객을 부케를 던져 주었다.  
'The bride threw the bouquet to a guest.'

**Sang-Hee Park**

Research Assistant Professor  
Chamirisa College of Liberal Arts  
Duksung Women's University  
Samyang-ro 144-gil, Dobong-gu,  
Seoul, 01369 Korea  
E-mail: sangheepark@duksung.ac.kr

**Eunkyung Yi**

Assistant Professor  
Department of English Education  
Ewha Womans University  
52, Ewhayeodae-gil, Seodaemun-gu,  
Seoul, 03760 Korea  
E-mail: eyi@ewha.ac.kr

Received: 2020. 11. 30.

Revised: 2021. 03. 01.

Accepted: 2021. 03. 10.