

Can *focus* salvage the double accusative ditransitive construction in Korean? An experimental investigation*

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Yi, Eunkyung and Sang-Hee Park. 2022. Can *focus* salvage the double accusative ditransitive construction in Korean? An experimental investigation. *Linguistic Research* 39(2): 235-274. Dative alternation in Korean refers to the variation in case on the recipient argument, which gives rise to the canonical ditransitive construction *Joan-i_{NOM} Matt-eykey_{DAT} chayk-ul_{ACC} cwu-ess_{PAST}-ta_{DECL}* and the double accusative ditransitive construction *Joan-i_{NOM} Matt-ul_{ACC} chayk-ul_{ACC} cwu-ess_{PAST}-ta_{DECL}* 'Joan gave Matt a book.' Although often regarded as alternate constructional choices, the two ditransitive variants are known to exhibit huge imbalance in their frequencies of occurrence and speakers' acceptance of the constructions (Lee 2018; Park and Yi 2021). In this context, we explored the effects of focus on the perception and production of the double accusative ditransitive construction given the fact that the accusative marker *-(l)ul* can also encode focus. In two acceptability judgment experiments, we investigated whether focus improves speakers' acceptance of the double accusative ditransitive construction, using written stimuli that vary in focus type, i.e., *new information*, *corrective*, *parallel* and *mirative* focus (Experiments 1 & 2). In addition, we conducted a verbal production experiment to investigate whether linguistic cues for focus, i.e., *wh*-questions, can elicit more answers in the double accusative ditransitive construction (Experiment 3). A post-experimental survey was also conducted to examine participants' opinions about the construction. The results showed new information focus in particular improves the perception and production of the double accusative ditransitive construction, but only to a small degree. We discussed the implications of the results in the context of previous theoretical proposals and psycholinguistic findings such as skewed frequency effects, grammaticality illusion, constructional coercion, acceptability-comprehensibility distinction, good-enough processing, etc. and suggested directions for future research. (Ewha Womans University · Duksung Women's University)

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1. Introduction

Dative alternation refers to a set of meaning-equivalent syntactic variants of ditransitives that encode three semantic arguments, *A(gent)*, *R(ecipient)* and *T(heme)*, and is one of the most extensively studied phenomena in linguistics (Haspelmath 2015), e.g., *Joan_A gave Matt_R a book_T* and *Joan_A gave a book_T to Matt_R*. Cross-linguistically, the dative alternation manifests itself in different syntactic structures (Malchukov et al. 2010). In the literature, Korean is also argued to have the dative alternation with the two syntactic variants illustrated in (1).¹

- (1) Joan-i Matt-eykey/ul chayk-ul cwu-ess-ta
 Joan-NOM Matt-DAT/ACC book-ACC give-PAST-DECL
 ‘Joan gave a book to Matt.’ Or ‘Joan gave Matt a book.’

The principal locus of distinction between the variants is the choice of case marker on the recipient argument. Namely, the recipient receives the dative case *-eykey* in one variant and the accusative case *-(l)ul* in the other. In the constructional distinction, the former is called the *dat-acc* construction and the latter the *acc-acc* or *double accusative ditransitive* construction in that the internal arguments R and T are case-marked in such a way in the respective variants.² In previous studies that compared English and Korean dative alternations, the dat-acc and acc-acc constructions were often viewed as analogous to the *to*-dative (*Joan gave a book to Matt*) and the double-object (*Joan gave Matt a book*) ditransitive construction in English, respectively (Whong-Barr and Schwartz 2002; Shin 2008; Oh 2010; Kim 2015). As will be discussed in detail in Section 1.1, however, the two variants in Korean are not interchangeably used and are difficult to be viewed as alternate constructional choices in some important respects. Given the skewed

1 The following abbreviations are used in glosses: ACC = accusative; ADD.HON = addressee honorific; ADN = adnominal; BEN = benefactive; CAUS = cause; COM = comitative; COMP = complementizer; CONN = connective; COP = copula; DAT= dative; DECL= declarative; GEN = genitive; HON = honorific marker; IMP = imperative; LOC = locative; MOD = modality; NML = nominalizer; NOM = nominative; PAST = past tense; PL = plural; PRES = present tense; Q = question; TOP = topic

2 Korean allows word order scrambling and unexpressed arguments (or *pro*-drop). An agent, a recipient, and/or a theme argument can be scrambled in order as long as they all precede the verb or can be omitted when the information can be retrieved from the context. How scrambling and argument dropping might interact with dative alternation is beyond the scope of the present study, and in this work we focus on the two ditransitive variants with all three arguments in canonical order as shown in (1).

frequency of occurrences (Shin and Park 2019) and extremely asymmetric acceptability ratings between them (Lee 2018; Park and Yi 2021), the dat-acc construction is the canonical ditransitive construction of the two in Korean while the acc-acc construction is an unusual one that calls for investigations. In what follows, we detail some puzzling differences between the putatively alternate ditransitive constructions and introduce our *focus*-based hypothesis intended to explain them.

1.1 A puzzle of the double accusative (acc-acc) variant

The case alternation introduced in (1) has been discussed in many theoretical studies (Whong-Barr and Schwartz 2002; Jung and Miyagawa 2004; Kim 2015) but is still a puzzling phenomenon when considered psycholinguistically, namely, in the context of its perception and production.³ Research showed there is a severe asymmetry between the so-called alternate constructions. As to perception, the acc-acc construction tends to be judged as a highly unacceptable frame, e.g., the mean acceptability ratings are around 1-2 on a scale of 4, 5 or 7 (Lim 1998; Cho and Jeon 2015; Lee 2018; Park and Yi 2021) while the dat-acc construction is completely acceptable. As to production, only rarely does the acc-acc construction occur in natural language use, e.g., seven instances out of 4,932 ditransitives in a corpus study (Shin and Park 2019). A predominant number of Korean ditransitives occur in the canonical dat-acc construction. This imbalance raises a question whether the two constructions truly alternate in the sense that they are reasonably equivalent structures in conveying the same ditransitive meaning.

Despite the extremely low acceptability and frequency, the acc-acc construction is not rejected categorically, e.g., as ungrammatical. Theorists have argued it exists in Korean grammar. Psycholinguists have conducted experiments, assuming its existence. Recently,

3 The case alternation in Korean ditransitive constructions is sometimes discussed along with the phenomena that involve repeated postpositions such as *Joan-NOM Matt-GEN/ACC hand-ACC held* ‘Joan held Matt’s hand’ and *spring-LOC/NOM beer-NOM be.tasty* ‘Summer is the best time to enjoy beer’ (Shin 2008; Hong 2014; Cho 2015; Shin 2020). However, they are qualitatively different from the dat/acc case alternation with a ditransitive meaning in several respects. First, repeated postpositions involve non-arguments, e.g. *beer* is the argument of *be.tasty* while *spring* is not. Second, they are generally judged highly acceptable as opposed to the acc-acc construction (Cho 2015). Third, acceptability of the acc-acc construction is known to be modulated by verb semantics (Lee 2018; Park and Yi 2021), but that of repeated postpositions largely depends on whether they express particular semantic relations such as integral object-component (*Matt-Matt’s hand*), time-object (*summer-beer*), etc. (Hong 2014). We suggest that the acc-acc ditransitive construction should be treated independently from other repeated prepositions.

studies also showed an interaction between the construction and verb semantics, suggesting its similarity to the dative alternation in English. Namely, the acceptability of the acc-acc construction is modulated by the semantics of verbs that it co-occurs with (Lee 2018, 2022), which is in line with Rappaport Hovav and Levin's (2008) verb sensitivity approach to the English dative alternation. The acc-acc construction was shown to sound "better" with verbs of caused possession as opposed to verbs of caused motion. It should be noted that the size of improvement in acceptability driven by verb meaning is only minimal. For example, Park and Yi (2021) replicated a significant effect of verb meaning but reported that the mean acceptability of the acc-acc construction was improved from 1.62 (sd = 0.96) with caused motion verbs to 2.15 (sd = 1.47) with caused possession verbs on a scale of 7, while the dat-acc construction was rated on average 6.43 (sd = 0.98) on the same scale. Verb meaning can condition acceptability of the acc-acc construction to some degree, but it remains on a lower end of the scale even with semantically most compatible verbs, i.e., sound still "bad."⁴

What makes the phenomenon more puzzling is that a previous study showed that speakers (or non-linguists) do produce a nontrivial number of the acc-acc construction in an experimental setting. In Park and Yi's (2021) sentence completion task, participants were given a series of sentence fragments consisting of three case-marked arguments followed by a blank such as *Joan-NOM Matt-ACC book-ACC* _____. They were asked to complete it as a sentence in any way they wished to. The results revealed participants often completed the fragments by filling in a ditransitive verb (e.g. *cwu-* 'to give'), i.e., 45.8% (44 out of 96 responses to such fragments). It is particularly interesting because there are other syntactic possibilities available in Korean by which they could make the accusative-marked person argument (*Matt-ACC*) play a role other than a recipient.⁵ What this suggests is that speakers take the accusative marker as a possible

4 The sentence examples of the acc-acc construction used to support theories are often judged unnatural by native speakers. In our informal survey, for example, nine out of ten Korean native speakers rejected the acc-acc sentence examples presented in Lee (2022) when asked to make a binary choice, i.e., acceptable vs. not acceptable.

5 Examples of non-ditransitive continuations reported in Park and Yi (2021):

- (i) *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.'
- (ii) *uysa-ka hwanca-lul [yengyangcey-lul manhi mek-umyen an-toy-nun*
doctor-NOM patient-ACC [dietary.supplements-ACC much take-if not-become-ADN
salam-ulo] pwunlyuha-yss-ta

grammar option that encodes a recipient role for a ditransitive meaning at least in this experimental setting, although it is shown to be highly infrequent in natural language use.

1.2 The accusative marker as focus encoder

Although previous research showed the semantics of verbs may improve the acc-acc construction, as noted above, the increment is only minimal and the construction is still judged to be around the unacceptable (rather than acceptable) range, i.e., below the median of the scale. Assuming it is a grammatical construction in Korean, we further need to examine what linguistic factor makes better or worse the construction above and beyond the previously known effect such as verb meanings. In this regard, we pay attention to the fact that the accusative marker *-(l)ul* in Korean may be used to encode information other than genuine *case* (Sohn 1994, 1999; Park 1995; Han 1999; Schütze 2001). A phenomenon called case stacking best illustrates the non-case use of *-(l)ul*. For example, in (2a) *-(l)ul* is stacked onto an argument that is already marked with dative case; in (2b) the marker is added to an adjunct, as well as to a dative-marked argument, resulting in multiple case marking. It has been argued that these additional instances of *-(l)ul* are a marker of focus, i.e., an information-structural category associated with the most prominent information in the sentence (Park 1995; Schütze 2001). That is, if they are true case markers, they would contradict the widely-held assumption that no NP with inherent case (e.g., dative) may be assigned additional structural case (e.g., accusative). Further evidence for non-case uses of *-(l)ul* is argued to be found in finite complement clauses, such as that in (3), where the subject may receive no other case than nominative (Lee 1991; Schütze 2001).

- (2) a. Swunhi-ka Yenghi-eykey(-lul) chayk-ul cwu-ess-ta.
 Swunhi-NOM Yenghi-DAT(-ACC) book-ACC give-PAST-DECL
 ‘Swunhi gave Yenghi the book.’
 b. John-i Swunhi-eykey-lul Yenghi-ey tayhayse-lul iyaki
 John-NOM Swunhi-DAT-ACC Yenghi-LOC about-ACC talk
 hay-ss-ta.

person-as] categorize-PAST-DECL

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

do-PAST-DECL

‘John talked to Swunhi about Yenghi.’

- (3) John-i Mary-ka/lul yeppu-ess-ta-ko
 John-NOM Mary-NOM/ACC pretty-PAST-DECL-COMP
 mit-nun-ta.
 believe-PRES-DECL
 ‘John believes that Mary was pretty.’

Some previous studies explicitly proposed that the *-(l)ul* marker on the recipient argument in the acc-acc construction encodes focus rather than the accusative case assigned by the verb. Sohn (1999: 280) argued that the recipient argument of a ditransitive verb, which is supposed to be dative-marked by default, can be “accusativized for focus.” Urushibara (1997) further reported that her consultants interpreted the accusative-marked recipient as focalized in comprehending a double accusative ditransitive sentence. Furthermore, Park (1995: 80) argued focalizing the recipient rather than the theme argument by means of a question word as in (4) improves the acceptability of the acc-acc construction, as the *-(l)ul* marker is used to encode pragmatic case, i.e., focus.

- (4) a. ne-nun nwukwu-eykey/lul chayk-ul cwu-ess-ni?
 you-TOP who-DAT/ACC book-ACC give-PAST-Q
 ‘To whom did you give the book?’
 b. ne-nun John-eykey/?ul mwues-ul cwu-ess-ni?
 you-TOP John-DAT/ACC what-ACC give-PAST-Q
 ‘What did you give to John?’

In this context, the present study attempts to explore the focus effects that may potentially modulate the perception and production of the double accusative ditransitive construction in Korean. Section 1.3 provides the details of this study.

1.3 The present study

As introduced above, Korean speakers tend to view the double accusative ditransitive

construction as unacceptable in comprehension while they were shown to construct such sentences by providing a ditransitive verb to a blank as in *Joan-NOM Matt-ACC book-ACC gave*. It should be noted, however, that in an average experimental setting with double accusative ditransitive prompts, it cannot be controlled for whether participants consider the sentences either strictly semantically or discourse-pragmatically when they do the task. Namely, we have no way of knowing whether participants intended focus on recipients when interpreting or conceptualizing the given prompts. In the present study, we attempt to clarify the role of the accusative marker in stimuli on the perception and production of the acc-acc construction. We make recipient arguments explicitly focalized using varied morphosyntactic means that instantiate four known focus types, i.e., *new information*, *corrective*, *parallel* and *mirative* focus illustrated in Section 2.1 below, and examine whether the unambiguously focused recipient improves the acceptability of the sentences in the acc-acc construction (Experiments 1 and 2) and whether it promotes the production of the construction (Experiment 3). The production experiment was particularly designed to overcome the limitations of Park and Yi's (2021) experiment. It provides a more naturally communicative setting, compared to simply providing a verb to a blank when arguments and case markers are already fixed. We also conducted a post-experimental survey to clarify their responses to the prompts.

The organization of this paper is as follows. Section 2 reports on two written judgment experiments. Section 3 reports on a spoken production experiment and a post-experimental survey. Section 4 discusses the results and their implications and also suggests further study.

2. Acceptability judgment: Experiments 1 & 2

We investigated whether focused recipients improve speakers' acceptability of the acc-acc or double accusative ditransitive construction in Korean. We examined four focus types in two separate rating experiments, namely, corrective and new-information focus in Experiment 1 and parallel and mirative focus in Experiment 2. All other experimental settings were kept constant across the experiments. Section 2.1 introduces the four focus types in detail. Sections 2.2 and 2.3 report on Experiments 1 and 2, respectively.

2.1 Four types of focus

Focus is one of the linguistic constructs whose definition is known to be highly elusive. Typically it is defined as a part of a sentence that carries the most prominent information. Prominence is often defined by the novelty of information (Halliday 1967; Jackendoff 1972) or by the presence of explicit or implicit alternatives that are contrasted with the focused element in context (Rooth 1992; Krifka 2008). These two notions of prominence naturally give rise to a major division between new information focus and contrastive focus. The latter further branches into subcategories to adequately explain the phenomena (Gussenhoven 2007; Hartmann 2008). In our experiments, we examined new information focus and three types of contrastive focus known to be realized morphosyntactically.

New information focus highlights newly introduced content without necessarily contrasting it with any other elements in a discourse context. This focus type is often characterized by question and answer interactions illustrated in (5). The *wh*-question (*who*) requests new information; an answer to it (*Joan*) fills in the information gap (Halliday 1967; Rochemont 1978; Van Valin and LaPolla 1997).⁶

(5) A: Who met Matt?

B: Joan met Matt.

One may use a variety of linguistic means to contrast one element with another in a discourse context. First, what is called corrective focus is formed by an explicit rejection of alternatives, e.g., A, not B (Gussenhoven 1983; cf. Chafe's (1974) 'contrastive' focus). In (6a), for example, *Matt* is the focused element that is contrasted with the alternative *Jack*. The contrastively focused element and its alternative(s) can also be presented as conjuncts in coordinate constructions or in parallel structures as exemplified in (6b). This type is referred to as parallel focus (Féry 2008; Hartmann 2008).

(6) a. Joan met Matt, not Jack.

6 See, however, Erteschik-Shir (1986) for a view that *wh*-words as focus are rather restricted to certain kinds of questions.

- b. Joan met Matt and Sumi met Jack.

Contrast can also be established without an explicit mention of alternatives as illustrated in (7). So-called mirative focus highlights the gap between the presupposed and the conveyed message (Cruschina 2012; inspired by the notion of mirativity in DeLancy 1997, 2001).

- (7) A: Mina lost 20 kilograms in a week.
B: That can't be true!

For example, the amount of weight loss (20 kilograms) is focused as it is contrasted with general background knowledge. It is unusual for one to lose 20 kg in a week. We tested corrective, parallel and mirative focus that can be realized based on morphosyntactic means with no help of prior contexts.

2.2 Experiment 1

2.2.1 Methods

Participants

Thirty undergraduate students at a university in Seoul participated in this experiment. They were all native speakers of Korean. They declared their first language and current primary language are Korean. They were paid monetary compensation for their participation.

Material

We used as a control set the twelve basic acc-acc ditransitive sentences used in Park and Yi (2021) as illustrated in (8a). Six sentences occur with caused-possession verbs and the other six with caused-motion verbs. While verb type is not the focus of our investigation, we included it as an independent variable in this experiment as well in order to investigate the focus effect above and beyond any known effects such as the verb type effect. Including verb type was also useful in examining the possibility of its interaction with the focus effect. We minimally modified the basic acc-acc sentences such that their

recipient arguments have new information focus as in (8b) and corrective focus as in (8c).

- (8) a. *apeci-ka atul-ul wuncen-ul kaluchi-ess-ta* (NO FOCUS)
 father-NOM son-ACC driving-ACC teach-PAST-DECL
 ‘Father taught the son driving (=how to drive).’
- b. *apeci-ka nwukwu-lul wuncen-ul kaluchi-ess-nunci* (NEW INFO)
 father-NOM who-ACC driving-ACC teach-PAST-COMP
al-ko siph-ta
 know-COMP want-DECL
 ‘(I) want to know who the father taught driving.’
- c. *apeci-ka ttal-i anila atul-ul wuncen-ul* (CORRECTIVE)
 father-NOM daughter-NOM not son-ACC driving-ACC
kaluchi-ess-ta
 teach-PAST-DECL
 ‘Father taught the son, not the daughter, driving.’

To encode new information focus in (8b), we replaced the recipient arguments by a *wh*-word, *nwukwu* ‘who’ (Lee 1995; Han 1999). To keep the stimuli in the declarative form, we embedded the sentences with *who* as a clausal complement of the verbs that mean, for example, ‘want-to-know,’ ‘investigate,’ and ‘must-make-sure,’ i.e., indirect questions. To add corrective focus, we added a pre-modifying phrase meaning ‘not *X* (but)’ (*X*-NOM *anila*) to the acc-marked recipient argument as illustrated in (8c). This process resulted in two more sets of twelve sentences of different focus type. The full list of experimental items is provided in the Appendix.

We constructed thirty-six filler sentences, syntactically and semantically irrelevant to ditransitive meaning and structures. We included as fillers both grammatical and ungrammatical sentences to different degrees in order to make the experimental sentences less stand out, given that the acc-acc sentences tend to be at a lower end of the acceptability scale in previous studies. We counterbalanced three types of experimental sentences across three lists in Latin Square, i.e., within-subjects. A participant saw only one of the three focus conditions occurring with the same verb. The sentences are pseudo-randomly ordered such that two semantic verb types alternate in presentation. Any two trial sentences are separated by three filler sentences. The filler sentences and their order are constant across three lists.

Procedure

The experiment was conducted on a virtual meeting platform. A participant joined the experimenter's Zoom room (<https://www.zoom.us>) at an assigned time and received, through the chat window, a link to a new session of the experiment made in *JotForm* (<https://www.jotform.com>). The participant was then asked to share his or her own screen by using the screen-share function in Zoom. While sharing the screen on the participant's end, the experimenter gave instructions until (s)he finished four practice items. Once the participant was made sure (s)he understood the experiment, the experimenter left the Zoom room and the participant did the experiment in private.

In the experiment, participants were presented with one sentence per screen along with a clickable panel of seven dots labeled from 1 to 7 (from 1 'completely unnatural' to 7 'completely natural'). Once they clicked on a score and the 'Next' button, they moved on to the next trial. They could not go back to previous sentences. They were instructed to proceed at their comfortable pace but were encouraged to click on a rating score that first came to their mind. We also made it clear that there is no right or wrong answer in this experiment so that they do not make normative decisions on sentence acceptability. When participants clicked on the 'Submit' button on the last page, the result was immediately sent to the experimenter via email and stored in the JotForm server for download. The experiment took about 10-12 minutes.

Analysis

We used the raw rating values to make an overview of the data. For statistical analysis, we z-transformed the Likert ratings to make sure each participant's responses are on a standardized scale (Schütze and Sprouse 2013). We analyzed the data using mixed-effects regression models. We first put into the model standardized acceptability values as outcome variable and focus and verb type as predictor variables. The verb-type factor was, by default, included in the model to examine the effect of focus in the context of previously known predictor(s). Of the three focus conditions, the no-focus condition was originally set as the reference level to which the effects of the other two focus conditions were compared, in order to examine any focus effects on acceptability in general. Then it was changed to the corrective focus condition to make a pairwise comparison between corrective and new-information focus. In all models, we started out with the maximal model including both random slopes and intercepts for both predictors (Barr et al. 2013). We then removed random factors one by one from the one with smaller variance first

when a convergence error occurs, following standard practice. We report below the most complex models that produced no model errors. For all models we report the main effect of focus along with that of verb type. In post hoc analyses, we fitted the data to more models to examine whether there are any unforeseen interactions between our predictors, e.g., between verb type and focus. We also analyzed several subsets of the data to clarify the results. We report these results below.

2.2.2 Results

Overall, the results showed that the acceptability ratings on the acc-acc sentences were generally very low, confirming the previous results. The mean Likert ratings of the construction and their standard deviations were 1.90 (1.24), 2.29 (1.45) and 1.85 (1.24) in no focus, new information focus and corrective focus conditions, respectively. Figure 1 illustrates the distribution of standardized rating values in two types of plots. The boxplot (Figure 1a) shows that the mean ratings are patterned with verb types such that caused-possession verbs lead to slightly higher mean ratings in all three conditions. The swarmplot (Figure 1b) in which a dot corresponds to each data point shows that the most crowded areas are more or less the same across the six distributions but the plot of new information focus with caused-possession verbs has a relatively longer and wider tail toward the upper end.

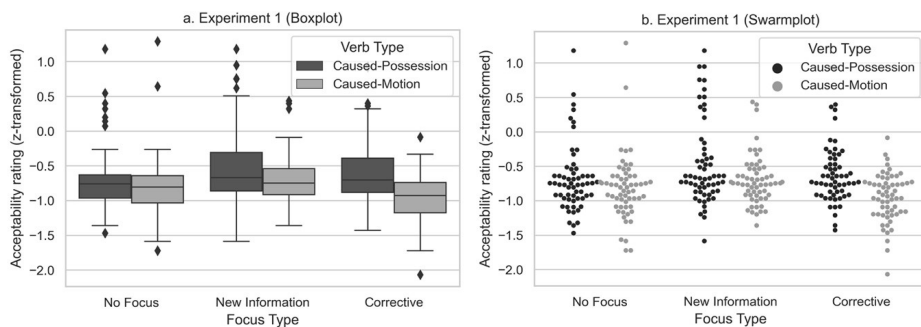


Figure 1. Plots of acceptability ratings in Experiment 1

In the first mixed-effects regression model we found the significant main effects of new information focus and verb type. Speakers' acceptability of the acc-acc construction

improves with new information focus ($b = 0.136$, $t = 1.990$, $p < 0.05$) but not with corrective focus ($b = -0.087$, $t = -1.276$, $p = 0.20$), compared to the no-focus control. The verb type effect shown in previous studies persisted in the present experiment, i.e., caused-possession verbs better than with caused-motion verbs ($b = 0.24$, $t = 3.111$, $p < 0.01$). In the second model where the corrective focus condition was set as baseline, we found the main effects of new information focus and verb type again, confirming the significant difference between the two focus conditions.

In post hoc analyses where we explored the possibility of interaction between focus type and verb type, we found no significant interactions overall, but within each subset of the conditions the verb type effects slightly varied. Verb type exhibited no effect within the no-focus condition ($b = 0.127$, $t = 1.291$, $p = 0.226$), a trending effect within new-information focus condition ($b = 0.239$, $t = 1.953$, $p = 0.088$) and a significant effect in the corrective focus condition ($b = 0.366$, $t = 2.675$, $p < 0.05$). The result shows the verb type effect can be shaky depending on the settings due to its relatively small effect sizes.

2.3 Experiment 2

2.3.1 Methods

Participants

Thirty undergraduate students participated in this experiment. They were all native speakers of Korean. They reported their first and current primary languages are Korean. They were paid monetary compensation for their participation. None of them had participated in Experiment 1.

Material

As with Experiment 1, we adapted the simple no-focus acc-acc sentences as in (9a) to incorporate focus elements. To construct sentence stimuli with parallel focus, we inserted another tuple of an acc-marked recipient and a gift argument ('daughter-ACC fishing-ACC') that makes a parallel with the original one ('son-ACC driving-ACC'), as illustrated in (9b). To add mirative focus, we put a pre-modifier, i.e., an adjective or relative clause, to the recipient arguments that is relatively unexpected from general

presupposition, e.g., ‘little’ to ‘son (who is taught to drive)’ and ‘lazy’ to ‘secretary (who is given a bonus)’ as illustrated in (9c).

- (9) a. apeci-ka atul-ul wuncen-ul kaluchi-ess-ta (NO FOCUS)
 father-NOM son-ACC driving-ACC teach-PAST-DECL
 ‘Father taught the son driving (=how to drive).’
 b. apeci-ka ttal-ul nakksi-lul, atul-ul (PARALLEL)
 father-NOM daughter-ACC fishing-ACC son-ACC
 wuncen-ul kaluchi-ess-ta
 driving-ACC teach-PAST-DECL
 ‘Father taught the daughter fishing and the son driving.’
 c. apeci-ka elin atul-ul wuncen-ul kaluchi-ess-ta (MIRATIVE)
 father-NOM little son-ACC driving-ACC teach-PAST-DECL
 ‘Father taught a little son driving.’

The filler sentences from Experiment 1 were reused in this experiment. All other settings were the same as in Experiment 1.

Procedure

Same as Experiment 1.

Analysis

Same as Experiment 1.

2.3.2 Results

We found the acceptability ratings on the acc-acc sentences were very low as were in Experiment 1. The mean Likert ratings of the construction and their standard deviations were 1.81 (1.04), 1.60 (0.92) and 1.86 (1.11) in no focus, parallel focus and mirative focus conditions, respectively. The distributions of standardized rating values are illustrated in Figure 2. As before, the most crowded areas are more or less the same across the six distributions. The two plots of parallel focus have relatively longer and wider tails toward the lower end.

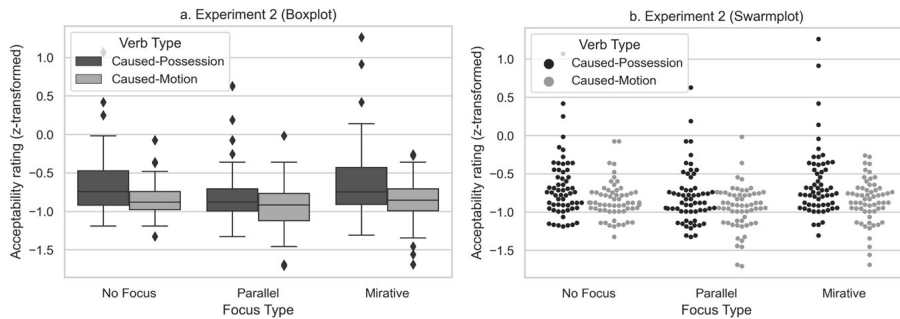


Figure 2. Plots of acceptability ratings in Experiment 2

In the mixed-effects model, the verb type effects were reconfirmed, as predicted ($b = 0.184$, $t = 3.733$, $p < 0.001$). We also found a marginally significant negative effect in the parallel focus condition ($b = -0.112$, $t = -1.852$, $p = 0.073$) but no effects in the mirative focus condition ($b = 0.018$, $t = 0.307$, $p = 0.760$). Note that the negative effect indicates parallel focus even worsens the acceptability of the construction as opposed to our prediction.

In post hoc analyses, we found no significant interactions between focus type and verb type. Within each subset of the conditions, the verb type effects are significant in the mirative focus condition ($b = 0.147$, $t = 2.296$, $p < 0.05$) and marginally significant within the no-focus condition ($b = 0.170$, $t = 2.169$, $p = 0.056$), cf. Experiment 1, and within the parallel focus condition ($b = 0.235$, $t = 2.071$, $p = 0.065$).

2.4 Discussion of Experiments 1 and 2

The two judgment experiments explored the possibility that focushood improves the acceptability of the accusative marker *-(l)ul* on recipient arguments in the acc-acc construction, i.e., beyond marking the recipient semantic role (Sohn 1994, 1999; Park 1995; Han 1999; Schütze 2001). Of the four types of focus tested in the experiments, only the new information focus was shown to significantly improve the acceptability of the construction. The increment is small, though, as with the effect of verb type. Even with new information focus added, the mean acceptability was a little above 2 on the scale of 7. In all other conditions, mean acceptabilities were below 2. The contrastive focus, i.e., corrective, parallel and mirative foci, had no effect or even worsened the

acceptability of the construction.

It is interesting to speculate on why new information focus was relatively effective while contrastive ones are not. One possible reason behind this finding might be linked to the fact that there is a specialized morpheme in Korean that can encode contrastive or familiar information, i.e., the topic marker *-(n)un*. The marker can be added to subjects and objects to indicate their information status as the topic (i.e., what the sentence is about) or as contrastive topics (i.e., topics which are interpreted contrastively). The recipient argument in a ditransitive construction can also be marked by *-(n)un* to express contrastiveness, e.g., *Joan-i_{NOM} Matt-un_{TOP} chayk-ul_{ACC} cwu-ess_{PAST}-ta_{DECL}* ‘Joan gave a book to Matt (and to no other boys).’ One can therefore imagine that accusative marking, rather than topic marking, on the recipient argument is naturally associated with the function of non-contrastive/new information, e.g., statistical preemption (Goldberg 2011). Thus, it might counteract the effects of our syntactic manipulations intended for contrastiveness. Another possibility is that it might be due to the functional peculiarities of the marker *-(l)ul*. As introduced above, focus is broadly defined as what brings *prominence*. Some researchers in Korean linguistics argued that the *-(l)ul* marker connotes ‘total affectedness’ and thus puts ‘emphasis’ on the argument when used instead of the dative *-eykey* marker, i.e., when the recipient is intended to be totally affected by the action (Yang 1998; Beavers 2011). In other words, the *-(l)ul* marker on the recipient evokes prominence of some sort, but it may not be concerned with contrastiveness. Also, it might be due to the modality of the experiments. According to Han (1999: 85-98), there are various ways to encode focus structure in Korean, i.e., phonological (focal accents and intonation), lexical (*wh*-words and factive verbs), morphological (focus particles such as *-man* ‘only’), syntactic (clefts) and word order (immediate preverbal position as unmarked focus position) coding systems. Two or more of these can be used on the same element to make it more explicitly focused or on different elements within the same sentence to create a more complex focus structure. As one of our reviewers pointed out, focus can be driven only by context as well. Purely context-driven and phonologically-manifested foci are above and beyond the scope of the present experiments which are based on written sentence judgments. We examined focus types that are clearly marked by morphosyntactic means and do not exclude the possibility that focus by other means may lead to different effects. In our experiments, new information focus was encoded clearly by the *wh*-word *nwukwu* ‘who,’ which with its clause-mates constructs an (embedded) *wh*-interrogative sentence.⁷ The contrastive focus types were

indicated only by means of syntactic constructions that highlighted paired alternatives. Given that our experiments involved written stimuli with no phonological or contextual cues that may facilitate the recognition of the intended focus structure, one can imagine that the raters find *wh*-focus, with both lexical and syntactic cues signaling its presence, to be relatively easier to recognize than the other (contrastive) focus structures.

Lastly, the results should be taken with some caution since, despite our effort to encode focus with relatively unambiguous morphosyntactic means, it is possible two or more encoding systems point to different focus structures in our material. That may have mitigated or removed the focus effect. Taking the example sentence *father-NOM who-ACC₁ driving-ACC₂ teach-Q*, the lexical and syntactic systems, together with the morphological focus marker ACC₁, indicate *who* as the focus, whereas the word order coding system indicates *driving* might also be a focus element, as it occurs in the immediate preverbal position for default focus. Similarly, in the stimuli of new information focus, the *wh*-word was embedded under a factive verb meaning ‘know,’ ‘not-know’ or ‘clarify’ (e.g., (I) [*father-NOM who-ACC driving-ACC teach-COMP*] *not-know*, ‘(I) don’t know whom father taught how to drive.’). The content of the sentential complement is known to be inherently presupposed and hence not focal (Han 1999:87). These conflicting cues might have distracted to some degree the raters from the comprehension of the intended focus structures in our experimental stimuli.

3. Verbal production: Experiment 3

This section reports on a spoken sentence production experiment conducted in a communicative context, i.e., answers to questions, and a post-experimental survey on the participants. Experiment 3 investigates whether focus elements facilitate the production of the acc-acc construction. This experiment is based on the results of Experiments 1 and 2 but is designed to overcome their limitations. It also provides a more naturalistic linguistic setting, compared to that used in Park and Yi’s (2021) production experiment. The post-experimental survey is conducted to collect participants’ qualitative responses to our stimuli and the acc-acc construction.

The results of Experiments 1 and 2 showed that the acc-acc construction gets more

7 As is well-known, Korean *wh*-words are indistinguishable between a true question word and an indefinite meaning ‘someone.’ This lexical ambiguity of *wh*-words is immaterial to the current discussion.

acceptable when new information focus is lexically encoded on recipients by *nwukwu* ‘who.’ In our material for judgment, the interrogative sentences are embedded as a sentential complement under factive verbs to make declaratives, e.g., (8b). As discussed in Section 2.4, such complements may be presupposed and possibly become not focal. It may weaken the focushood of the *wh*-word in our material, which may have resulted in only a small boost in acceptability. Thus, in the present experiment, we used direct interrogative sentences as stimuli. In addition, *wh*-words are widely accepted as one of the focus encoders, whereas some argue that the answers to the *wh*-words receive the “true” new information focus (Erteschik-Shir 1986). By using the question-and-answer sequence, we can examine the potentially stronger focus effects of the answers while participants are given more freedom in their sentence formulation. We also conducted this experiment in the auditory (questions) and spoken (response) modality. The present experiment provides a more naturalistic communicative context in comparison to Park and Yi’s (2021) production experiment. Considering the finding that speakers tend to reuse the same construction in question-answer pairs (Levelt and Kelter 1982), the current setting naturally provides participants with a context in which they choose between the acc-acc and dat-acc construction after questions in the same or alternative construction.

3.1 Experiment 3

3.1.1 Methods

Participants

Twenty undergraduate students in Seoul participated in this experiment. They were all native speakers of Korean. They were paid for their participation. None of them participated in Experiments 1 and 2.

Material

We constructed twenty-four interrogative sentences by adapting the no-focus sentences used in Experiments 1 and 2. We replaced the nouns denoting recipients by the *wh*-word *nwukwu*, meaning ‘who.’ Korean is a *wh*-word in-situ language. A declarative and its interrogative form have the same word order while only differing in verbal endings, e.g., *-ta* ‘DECL’ and *-kka* ‘Q,’ as illustrated in (10). In the interrogative stimuli, the addressee

honorific marker *-supni* is added to the verb so as to convey respect for the addressee, i.e., polite questions. The *wh*-word is case-marked either with the dative *-eykey* or the accusative *-(l)ul* resulting in twelve dat-acc and twelve acc-acc questions. The constructions were counterbalanced across two lists.

- (10) *apeci-ka nwukwu-eykey/lul wuncen-ul kaluchi-ess-supni-kka?*
 father-NOM who-DAT/ACC driving-ACC teach-PAST-ADD.HON-Q
 ‘To whom/Whom did father teach driving?’

Thirty-six other *wh*-questions irrelevant to the dative meaning were constructed as fillers. We varied question types in order to make the pattern in the experimental questions less noticeable. Fillers include four types of questions as illustrated in (11a-d), i.e., causer *nwukwu-ttaymwuney* ‘because of whom’ (11a), nominative *nwuka* ‘who’ (11b), comitative *nwukwu-wa* ‘with whom’ (11c), and genitive *nwukwu-uy* ‘whose’ (11d). These four filler types were pseudo-randomly ordered. Any two experimental questions are separated by three of these filler questions in presentation. All question stimuli were spoken by the researcher (a female native speaker of Korean) and were recorded using Praat (Boersma and Weenink 2021).

- (11) a. *thaykpaykisa-ka nwukwu-ttaymwuney kil-ul*
 deliveryman-NOM who-because.of route-ACC
ilh-ess-supni-kka?
 lose-PAST-ADD.HON-Q
 ‘Because of whom did the deliveryman get lost?’
 b. *nwuka khemphyuthe-lul swuliha-yss-supni-kka?*
 who-NOM computer-ACC fix-PAST-ADD.HON-Q
 ‘Who fixed the computer?’
 c. *akeycwuin-i nwukwu-wa insa-lul nanwu-ess-supni-kka?*
 shop.owner-NOM who-COM greeting-ACC share-PAST-ADD.HON-Q
 ‘Who did the shop owner greet with?’
 d. *kokayk-i nwukwu-uy ceyanse-lul senthaykha-yss-supni-kka?*
 customer-NOM who-GEN proposal-ACC select-PAST-ADD.HON-Q
 ‘Whose proposal did the customer select?’

Each auditory question stimulus is matched with a visual stimulus to help participants answer the question. A visual stimulus consists of two characters depicted by line drawing. The characters are balanced in gender, one male and one female. Their positions (left and right) were also counterbalanced, i.e., man – woman and woman – man. Each character was labeled with a common male or female name in Korean so that participants can easily refer to them in their answers. In every visual stimulus, either of the two characters was circled to indicate the person who makes a correct answer to the question.⁸

[Audio] apeci-ka nukwu-eykey/lul wuncen-ul kaluchi-ess-supni-kka? (= (10))
 'To whom/whom did father teach driving?'
 'Minki' 'Huycwu'



Figure 3. An example stimulus of an auditory question and a visual cue

Procedure

The experiment was conducted virtually via Zoom as with Experiments 1 and 2. While in a Zoom meeting room, the experimenter sent the participant a link to the experiment made in *FindingFive* (<https://www.findingfive.com>). The participant was asked to open the link and share their screen with the experimenter. During instruction, participants were encouraged to check their audio quality and fix any speaker-related problems. For each practice, we also encouraged them to replay the recorded verbal response in order

8 Although we mainly intended for new information focus in questions, the material inevitably includes contrastiveness in question answering. Participants saw visual stimuli consisting of two characters, which might be viewed as alternatives. It is possible that this presentation of answer choices may have allowed the participants to comprehend the *(l)ul*-marked recipient as contrastive focus and the question as a concealed question with alternatives, a context that favors bare case marking over *(l)ul*-marking on the recipient (Lee and Choi 2010), i.e., a ‘contrastive selecting focus’ after Dik et al. (1981):

(i) Cinmi-ka computer(-lul) sa-ss-e, hywutaephon(-ul) sa-ss-e?
Jinmi-NOM computer(-ACC) buy-PAST-Q, cell.phone(-ACC) buy-PAST-Q
'Did Jinmi buy a computer or a cell phone?' (Lee and Choi 2010: (6A))

to make sure their microphone was working properly. We made a replay button visible only during practice. They could not replay the auditory stimuli in the actual experiment. We informed participants of this change in the instruction. Once the participant was confident that (s)he understood the experiment, we left the Zoom room and they did the experiment in private. The experiment took about 15 minutes.

Data coding and analysis

Participants' verbal responses were transcribed and annotated as to their morphosyntactic structures, i.e., overall sentence structure and case-marking. Responses occurred in two broad syntactic types: The majority occurred in the same argument order as that of questions, i.e., subject - indirect object (recipient) - direct object (theme) - verb. This type further varied as to case-marking on the recipients, i.e., dative (-*eykey*), accusative (-(*l*)*ul*) and genitive (-*ui*). We coded each type as *dat-acc*, *acc-acc*, and *gen-acc*, respectively, as illustrated in (12a-c). Note that the *gen-acc* construction is a transitive rather than a ditransitive sentence, e.g., *The captain approved who-ACC a leave?* and *The captain approved Sungho-GEN leave*. The remaining responses occurred in the topic-comment structure which is similar to the cleft construction in English, as illustrated in (12d). We coded them as *topic-comment*.

(12) a. Response type 1: *dat-acc*

cwungtaycang-i sungho-eykey hyuka-lul
 captain-NOM Sungho-DAT vacation-ACC
 sunginha-yss-supni-ta.
 approve-PAST-ADD.HON-DECL
 'The captain granted Sungho a vacation.'

b. Response type 2: *acc-acc*

cwungtaycang-i sungho-lul hyuka-lul
 captain-NOM Sungho-ACC vacation-ACC
 sunginha-yss-supni-ta.
 approve-PAST-ADD.HON-DECL
 'The captain granted Sungho a vacation.'

c. Response type 3: *gen-acc*

cwungtaycang-i sungho-uy hyukalul
 captain-NOM Sungho-GEN vacation-ACC

sunginha-yss-supni-ta.

approve-PAST-ADD.HON-DECL

‘The captain approved of Sungho’s vacation.’

d. Response type 4: topic-comment

cwungtaycang-i hyuka-lul sunginha-n salam-un

captain-NOM vacation-ACC approve-ADN Person-TOP

sungho-i-pni-ta.

Sungho-COP-ADD.HON-DECL

‘The person who the caption granted a vacation to is Sungho.’

Then, we coded the responses as to whether the construction used in the answer corresponded to that of its question or shifted to another construction using dummy coding, same = 0 and shift = 1. We analyzed the data using mixed-effects logistic regression models to find whether repeating and shifting the construction in answers is modulated by the constructions of the question stimuli. We entered into the model question type (dat-acc vs. acc-acc) and, as before, verb type (caused-motion vs. caused-possession) as predictors and constructional repetition (repeat vs. shift) as an outcome variable. We further analyzed the data with a focus on whether and how frequently speakers produce the acc-acc construction in their answers and also whether questions in the acc-acc construction significantly increase the production of the construction.

3.1.2 Results

We found overall the vast majority of the responses occurred in the canonical dat-acc construction, irrespective of the constructions used in questions, as illustrated in Figure 4. The dat-acc construction constituted 97% and 78% of the responses to the dat-acc and acc-acc constructions, respectively. After questions in the acc-acc construction, 9% of the responses repeated the same acc-acc construction. None had responded with the acc-acc construction when asked in the dat-acc construction. When asked in the acc-acc construction, participants shifted to the gen-acc construction in 9% of the responses. The remaining few responses occurred in the topic-comment structure, constituting 2% and 4% after each question type, respectively.

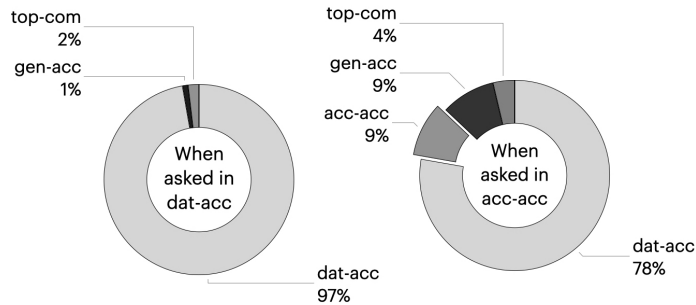


Figure 4. The distribution of response structures in two question conditions (n=108 each)

In the results of the mixed-effects logistic regression model, we found the main effect of question type ($b = 9.314$, $z = 2.539$, $p < 0.001$). The acc-acc questions significantly increased the production of the same acc-acc construction in answers, compared to the dat-acc questions. But verb type was not a significant predictor of constructional shifts ($b = 0.405$, $z = 1.093$, $p = 0.71$). In a post hoc analysis, we explored the possibility of an interaction between question type and verb type but found no effects.

To summarize, speakers overall tend not to produce the acc-acc construction, but the likelihood of speakers' producing the acc-acc construction increases when asked in the acc-acc construction, i.e., 9%. As opposed to the results in the judgment experiments, verb type does not modulate speakers' choice of construction. Namely, caused-possession and caused-motion verbs do not differ in repeating or shifting the constructions.

3.2 A post-experiment survey

This survey was intended to examine what participants noticed in the experiment and how they felt about our constructional manipulations in questions. Particularly, we intended to seek their opinion about the acc-acc construction as it is not a common construction in natural speech in Korean.

3.2.1 Methods

Of the twenty participants in Experiment 3, nineteen filled out this survey. They were not informed about this survey prior to their participation. On finishing the experiment,

they were sent a survey link made in Google Form and asked to fill out the form in the same Zoom environment.

The survey consists of two questions. We first asked whether they remembered anything from the experiment. We tried to ask a broad and neutral question first not to bias them in any way. Then, we asked whether they found anything strange in the experiment. After they finished the form, the researcher briefly interviewed the participants to clarify their answers. It took about 5 minutes or less.

3.2.2 Results

The review of our post-experiment survey revealed that 17 participants (out of 19) reported they noticed and remembered something in the experiment. The description of what they noticed and degrees of its detail vary as they are not trained linguists. However, all such answers pointed to the acc-acc questions. They said it sounded unnatural and awkward to use *-(l)ul* in the context where *-eykey* sounds appropriate. Some mentioned it sounded like L2 Korean learners' speech and some said they never heard of "this kind of sentence." Nine explicitly mentioned they answered in the acc-acc form in some trials when they were asked with it but tried to use the more natural dat-acc instead in others. Some additionally mentioned they felt they tended to repeat the question construction in the experiment even when they know there are other ways available.

Later, we closely looked at the data of the two participants who did not report any problem with the acc-acc questions in the survey and examined how they produced the construction. Interestingly, we found they never answered in the acc-acc construction. To the six acc-acc questions, one participant answered with 5 dat-acc and 1 gen-acc sentences and the other participant with 2 dat-acc and 4 topic-comment sentences. This suggests that they have no difficulty in processing the acc-acc questions in comprehension even without noticing it, while they do not produce it in the setting that encourages constructional repetition, i.e., between question and answer (Levelt and Kelter 1982).

3.3 Discussion

The results of this study revealed first, the constructional differences in questions

have a significant influence in speakers' choosing a construction for answers and second, there is still huge imbalance again between the dat-acc and acc-acc construction, with the former constituting the majority of the responses. Only a small number of responses to the acc-acc questions were in the latter construction. It is smaller than expected, since studies showed speakers tend to coordinate syntactic structure in dialogue (Branigan et al. 2000) and, particularly, tend to repeat the surface form in the question-answering situation (Levelt and Kelter 1982), i.e., syntactic priming. Levelt and Kelter reported 73% of the answers were in the corresponding structure with 50% as chance level in their Experiment 1. Although studies may vary in the effect sizes of syntactic priming (Mahowald et al. 2016), our result does not seem to fall within the generally expected range. In our experiment, despite a trigger or aid favoring the acc-acc construction such as focus manipulation and question-answering context for syntactic priming, only a small portion of the answers to the acc-acc questions (9%) showed structural repetition. The result suggests that the acc-acc construction may not be a truly grammatical alternative to the dat-acc construction for the same meaning.

It is worth noting that syntactic repetition may occur with an ungrammatical sentence in a syntactic priming context (Ivanova et al. 2012; Experiment 4, in the non-alternating DO prime and the same verb condition). Ivanova et al. investigated whether brief exposure to an ungrammatical prime sentence such as **The waitress donates the monk the book* (the double object construction instead of *The waitress donates the book to the monk*) can facilitate speakers' reusing the same ungrammatical structure when given the same verb *to donate* in describing a target picture. They reported the priming effect was 9% in this particular condition. Given that a conversational setting usually facilitates syntactic coordination, the increase we found in our experiment is relatively even smaller than Ivanova et al.'s repetition of ungrammatical sentences in the non-conversational setting.

It should also be noted that the production of the acc-acc construction in our experiment is much less likely than in Park and Yi's (2021) sentence completion experiment, i.e., 45.8%. Given that the current experimental setting provides a more naturalistic communicative context, we suspect that the relatively large proportion of the acc-acc construction reported in Park and Yi (2021) might be an artifact of the task, e.g., fill in the blank given in *father-NOM son-ACC driving-ACC* _____. Participants can easily imagine an event with the given arguments (father, son, and driving) with little help of case markers. It is possible that the participants may not have completed the

fragments in the most linguistically natural way but completed them with only comprehensible continuations. In addition, as shown in Park and Yi (2021), other syntactically natural ways to complete the fragments were more complicated than simply providing a ditransitive verb to produce a double accusative sentence, e.g., making embedded clauses (see Footnote 5). Presumably, avoiding the acc-acc construction was an inconvenient way for participants to finish the task. It should also be noted that participants in our post-experimental survey reported they reproduced the acc-acc construction following the question form in some of their answers while they thought the construction is awkward. All these show that speakers regard the acc-acc construction as an unusual way of constructing a ditransitive meaning in Korean while it can be comprehensible to them.

The present result may be, together with the results of in Experiments 1 and 2 above, partly due to the skewed frequency effect. Research showed speakers' acceptability of a construction is closely related to its frequency in use and the constructional frequency is correlated with speakers' choice of constructions (Gries and Stefanowitsch 2004; Featherston 2005; Kempen and Harbusch 2005; Arppe and Järvikivi 2007; Divjak 2017). However, what the results of the judgment and production experiments altogether show is closer to a doubt that the acc-acc construction is a grammatical construction. The results only revealed the acc-acc construction is highly dispreferred (or almost never used without priming) and perceived as awkward but somehow highly *comprehensible*. This might be possible due to the lexical information of the event participants and the verb. Speakers may easily extract a ditransitive meaning from possible combinations of the lexical meanings. It seems worth re-examining the acc-acc construction from different perspectives, since previous research showed acceptability and comprehensibility may diverge depending on different language processes (Beltrama and Xiang 2016), e.g., ease or difficulty of processing, good-enough processing, coercive interpretation, etc. We discuss the results in connection with other grammatical phenomena in Korean in the next section.

4. General discussion

We found, above chance level, new information focus improves the perception of the acc-acc construction in Experiments 1 and 2 and the *wh*-question and answering context

also increases the production of the construction in Experiment 3. The results partly confirmed our prediction that focus supports acc-marking on recipients in the acc-acc construction. But as noted above, there are two other important findings against our predictions: First, contrastive focus (at least the three types we tested) had null effects in improving the acceptability of the acc-acc construction and second, the improvement in the perception and production of the construction with new information focus was only minimal and far less than expected, particularly, compared to the results of previous research on syntactic coordination in question answering. Overall the acc-acc construction is far from being similar to the dat-acc construction in its perception and use. And the huge difference does not seem to be solely attributed to skewed frequencies between the two constructions in actual use. Rather, the results seem to call for a study that asks anew whether the acc-acc construction is truly a grammatical alternative to the canonical ditransitive (dat-acc) construction for the majority of Korean speakers. In what follows, we discuss various linguistic and psycholinguistic phenomena that may explain (or provide a clue to explain) the results.

First, the phenomena may be related to what is called ‘grammaticality illusion’ and ‘good-enough processing.’ English resumptive pronouns such as *her* in (13a) are known to have the effect of rescuing island violations, namely, perceived as more or less acceptable, although they are not grammatical (Ross 1967; Kroch 1981; Asudeh 2004, 2011), e.g., (13a) sounds better than (13b). A more recent study showed that such a rescuing effect can be task-dependent (Beltrama and Xiang 2016). That is, the effect only emerges when participants are asked to judge how *comprehensible* the target sentences are but not when asked to judge how *acceptable* they are. This suggests a further investigation of the acc-acc construction based on comprehensibility. It is possible that speakers do not accept the construction but they could comprehend it based on the combination of lexical meanings and general knowledge. They can also produce it when they think the construction is comprehensible enough although it is not a completely grammatical structure. Psycholinguistic research showed speakers do not always process language to perfection. Rather, they may create merely ‘good-enough’ linguistic representations given the task in comprehension (Ferreira et al. 2002) and may produce non-optimal but semantically relevant construction as far as communication is reasonably successful (Goldberg and Ferreira 2022).

- (13) a. I'd like to meet the linguist that Peter knows a psychologist that works
for *her*. (island with RP)
b. I'd like to meet the linguist that Peter knows a psychologist that works
for _____. (island with gap)

In addition, the acc-acc construction can be considered in relation to the idiomatic expressions of transfer. In our experiments, we used ditransitive stimuli consisting of a person recipient and a theme of three semantic types such as concrete objects (*money*, *certificate*, *key*, *parcel*, *food*, *bouquet*) and relatively abstract benefits (*bonus*, *right*, *leave*) and skills (*driving* for the verb *to teach*). They constitute prototypical ditransitive meanings across languages as speakers can conveniently package the themes as what is physically or metaphorically transferred to and/or possessed by the given recipients at the end of the event. But, the sentences were overall not well-received by Korean native speakers with acc-marked recipients. However, there are other themes that go relatively well with either acc- or dat-marked recipients, as illustrated in (14a), such as abstract nouns referring to negative psychological effects imposed on a person such as *phincan* 'rebuff,' *sangche* 'wound,' *nwunchi* 'sign of displeasure,' *mangsin* or *changphi* 'shame/disgrace,' *moyok* 'insult,' *kwulyok* 'humiliation,' and *myenpak* 'refutation to one's face.' They are acc-marked and followed by the verb *cwu-* 'to give.' Similarly, some idiomatic expressions consisting of a theme and a particular verb also occur with either acc- or dat-marked recipients, e.g., *ton* 'money' plus *meki-* 'to feed' as in (14b).

- (14) a. Mina-ka Jisu-eykey/lul moyok-ul cwu-ess-ta
Mina-NOM Jisu-DAT/ACC moyok-ACC give-PAST-DECL
'Mina insulted Jisu.' Or (literally) 'Mina gave Jisu an insult.'
b. Mina-ka Jisu-eykey/lul ton-ul mek-i-ta.
Mina-NOM Jisu-DAT/ACC money-ACC eat-CAUS-DECL
'Mina bribed Jisu.' Or (literally) 'Mina fed Jisu money.'

These types of expressions seem to truly alternate between the dat-acc and acc-acc constructions. It should be noted, however, that such combinations of a theme and a verb are highly fossilized to form a phrasal verb that differ in transitivity. For example, while verbs like *cwu-* 'to give' or *meki-* 'to feed' are ditransitive verbs in isolation, they can constitute transitive phrasal verbs such as *moyok-cwu-* 'to humiliate' or *ton-meki-* 'to

bribe.’ Semantically, the person object who is humiliated or bribed can be easily marked with the accusative case in that it is the affected entity like a patient (Beavers 2011), similar to what Yang (1998) referred to as ‘total affectedness’ of the recipient.⁹ Given the presence of these expressions, it is possible that one can extend this syntactic frame and its associated meaning on-the-fly in comprehending and producing non-idiomatic and thus unnatural acc-acc sentences such as those in our experiments. This can be viewed as a coercive application of the construction (Boas 2011; Yoon 2019).

The rarity and low acceptance of the acc-acc construction is an intriguing phenomenon that merits investigation beyond the alternation with the dat-acc construction. A thorough investigation of the phenomenon requires examining the construction in comparison to various other ditransitive patterns that also involve an acc-marked recipient. The fact that these structures are well-received by Korean speakers suggests that the acc-marking on the recipient cannot be the sole reason why the acc-acc construction is unacceptable and rarely produced among Korean speakers. As shown in (15), an acc-marked recipient can occur as the sole internal argument of the ditransitive verb, where the argument has no surface realization but is implicit in interpretation. Typically, the missing theme is discourse-given or highly accessible in the sense that its reference is explicitly introduced in prior discourse, e.g., in the previous clause as in (15a) or in the previous sentence as in (15b). A discourse-old theme may also appear with the topic marker *-(n)un*, as shown in (16). This is another means or constructional choice by which double accusatives are prevented from being realized.¹⁰

9 An anonymous reviewer pointed out that acc-acc constructions with affected recipients, e.g., (14a), pattern differently from the simple acc-acc construction in that only the former can freely alternate with causative constructions with little change in meaning, i.e., (iia) and (iib) are not semantically equivalent. We thank the anonymous reviewer for the data and observation.

- (i) akun-i cekkun-ul thakyek-ul cwu-ess-ta/ip-hi-ess-ta
ally-NOM enemy-ACC strike-ACC give-PAST-DECL/inflct-CAUS-PAST-DECL
‘An ally struck an enemy.’
- (ii) a. emma-ka atul-ul kothu-lul ip-hi-ess-ta
mother-NOM son-ACC coat-ACC dress-CAUS-PAST-DECL
‘Mother put a coat on her son.’
b. emma-ka atul-ul kothu-lul cwu-ess-ta
mother-NOM son-ACC coat-ACC dress-CAUS-PAST-DECL
‘Mother gave a coat to her son.’

10 Examples (15)-(16) are natural sentences found in Google search.

- (15) a. ecey cip-ey hongsi-ka iss-ese ai-lul
 Yesterday home-LOC persimmon-NOM exist-CONN child-ACC
 cwu-ess-ta
 give-PAST-DECL
 ‘There was a soft persimmon at home yesterday, so I gave it to (my) child.’
- b. appa-nun sikye-lul sa-cwu-sy-ess-ta. na-nun chama
 dad-TOP watch-ACC buy-BEN-HON-PAST-DECL I-TOP NPI
 coychaykkam-ey nay-ka kac-ci-lul mos-ha-ko
 guilt-out.of I-NOM have-NML-ACC not-do-COMP
 tongsayng-ul cwu-ess-ta
 younger.sibling-ACC give-PAST-DECL
 ‘Dad bought me a watch. I couldn’t have it out of guilt and so gave it to a younger sibling.’
- (16) a. maykcwu-lul palo cip-ey kac-yew-ase nayngcangko-ey
 beer-ACC instantly home-at bring-CONN fridge-LOC
 neh-ko han kay-nun yecachinkwu-lul cwu-ess-ta
 put-and one can-TOP girlfriend-ACC give-PST-DECL
 ‘I brought beer home right away and put it in the fridge, and gave (my) girlfriend a can.’
- b. ciwukay-lul pan-ulo call-a hana-nun nay-ka kac-ko, nameci
 eraser-ACC half-in cut-CONN one-TOP I-NOM get-and remaining
 pan-un tongsayng-ul cwu-ess-ta
 half-TOP younger.sibling-ACC give-PST-DECL
 ‘I cut the eraser in half and got one for myself, and gave the other half to a younger sibling.’

Acc-marked recipients also often appear when they form semantic relations with multiple verbs within a sentence. For example, *salam-tul* ‘people’ in (17) plays the role of recipient to whom an invitation is sent (indirect object for *ponay-* ‘to send’) as well as the role of patient who is caused to attend (direct object for *chamsekha-key ha-*) in (17a) or invited (direct object for *chotayha-*) in (17b). Korean prefers implicit arguments when the arguments can be understood or retrieved from contexts or other sources, e.g., pronouns are underdeveloped in Korean. When *salam-tul* is a semantic argument, for

example, for both verbs ‘to send’ and ‘to invite,’ its roles differ and the canonical case markers for them also differ if they occur explicitly, e.g., the dative case as an argument of ‘to send’ and the accusative case for the argument of ‘to invite.’ The acc-marked recipients in (17a) and (17b) seem to be generally more acceptable with the verb ‘to send’ when they also play the object function for the latter verb ‘to cause to attend’ or ‘to invite.’ An acc-marked person argument usually occurs with this kind of complications in natural use.

- (17) a. kicungha-keyss-ta-ko ha-n motun salam-tul-ul
 donate-MOD-DECL-COMP do-ADN all person-PL-ACC
 chotaycang-ul ponay-cwu-e chamsekha-key hay-cwu-si-myen
 invitation-ACC send-BEN-CONN attend-CAUS do-BEN-HON-if
 coh-keyss-ta
 be.nice-MOD-DECL
 ‘It will be nice if you send an invitation to all the people who promised
 to donate and make them attend (the event).’
- b. phathi-lul kihoykha-l ttay salam-tul-un congcong kakkawun
 party-ACC arrange-ADN time person-PL-TOP often close
 chinkwu-tul-ul chotaycang-ul ponay-nun taysin cenhwa-lo
 friend-PL-ACC invitation-ACC send-ADN instead phone-by
 chotayha-n-ta
 invite-PRES-DECL
 ‘When arranging a party, people often invite close friends by phone, not
 sending them an invitation.’

The above data suggest the puzzle of the acc-acc construction does not stem solely from acc-marking on recipient. The problem emerges when it occurs in this particular construction. Thus, another possible direction of inquiry is to explore the question how a pattern emerges in a language and becomes grammaticalized into a *construction*. It has long been recognized by linguists that natural language contains marginal yet fully comprehensible patterns which tend to be found in colloquial usage. Zwicky (2002) and Ross (2018) discuss special cases of ‘blended coordination’ whose grammatical status is in question. Ross analyzes (18a) as a combination of the constructions *I try ...* and *try and ...* and (18b) as a blend of the directional *be going to* and the future expression *going*

to go and Each local construction is legitimate but the global structure is considered not entirely regularized or compositional. In the case of the acc-acc construction, too, it may be a provisional combination of an acc-marked recipient, i.e., a well-formed local construction, and the global ditransitive construction, whose combination does not seem to work well. Assuming such a combination is possible but not stable or fully grammaticalized, one may expect the construction is treated in a puzzling way and can be perceived and produced differently by different speakers.

- (18) a. We already try and eat well. (cf. *He always tries and eat(s) well.)
 b. I'm going to school and study.

As a last note, we briefly report on an extensive corpus study using the Daily Conversation Corpus (2020) published by the National Institute of Korean Language.¹¹ Conversation data can provide any other valuable insight into examining this rare phenomenon in a context. We found only five instances of the acc-acc construction, based on the search pattern ‘accusative-marked recipient and theme arguments with a ditransitive verb.’ Two of them are shown in (19) and they exhibit the variable linear ordering between the two arguments. (19a) shows the default order with the recipient preceding the theme and (19b) the reverse order with the recipient immediately preceding the verb, taking the default focus position (Choi 2009).

- (19) a. oppa-ka icye cikcang-ey ka-se ohilye icye **maknay-lul**
 brother-NOM now work-LOC go-and rather now **the.youngest-ACC**
 yongton-ul cwu-nun kulen kyengwu-to iss-ko
 allowance-ACC give-ADN such case-also exist-and
 ‘In some cases, the older brother gets a job and rather gives the youngest
 pocket money.’ (SDRW2000000456.1.1.171)
- b. senswu-tul yenpong-ul ta cwu-n taum-ey nameci-lul
 player-PL annual.salary-ACC all give-ADN after-LOC rest-ACC
na-l cwu-la
me-ACC give-IMP

¹¹ Daily Conversation Corpus 2020 (version 1.2) consists of 2,232 dialogues with the approximate duration of 15 minutes each (500 hours in total) and is part of the Modu Corpora (<https://corpus.korean.go.kr/main.do>). It is fully transcribed and available in the form of a JSON dictionary format.

‘Pay all the players’ salaries and then give me the rest.’
(SDRW2000001228.1.1.213)

Among the five cases we found, one had the verb *citoha-* ‘to instruct’ while the other four all had the verb *cwu-* ‘to give.’ Although the overall frequency is too low to draw any firm conclusion here, this is in line with the claim that only *cwu-* and a few other verbs are allowed in the acc-acc construction (Whong-Barr and Schwartz 2002; Jung and Miyagawa 2004; Oh 2010; Kim 2015). It is perhaps also noteworthy that the first-person pronoun is a favored recipient in our data, i.e., three out of the five examples we found had *na-lul* or the contracted *nal* as the recipient argument. The data suggests further investigations on the effects of verb exemplar (i.e., *cwu-*) of the construction, argument length, and word order as well.

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Appendix

A. Stimuli for Experiments 1 & 2:

Stimuli (a), (b) and (c) are for Experiment 1; (a), (d) and (e) are for Experiment 2.

- | | |
|------------------------------------|------------|
| 1. (a) 아버지가 아들을 운전을 가르쳤다. | NO FOCUS |
| (b) 아버지가 누구를 운전을 가르쳤는지 알고 싶다. | NEW INFO |
| (c) 아버지가 딸이 아니라 아들을 운전을 가르쳤다. | CORRECTIVE |
| (d) 아버지가 딸을 낳시를, 아들을 운전을 가르쳤다. | PARALLEL |
| (e) 아버지가 어린 아들을 운전을 가르쳤다. | MIRATIVE |
| | |
| 2. (a) 경찰서장이 시민을 감사장을 전달했다. | |
| (b) 경찰서장이 누구를 감사장을 전달했는지 규명해야 한다. | |
| (c) 경찰서장이 경찰이 아니라 시민을 감사장을 전달했다. | |
| (d) 경찰서장이 경찰을 훈장을, 시민을 감사장을 전달했다. | |
| (e) 경찰서장이 법을 어긴 시민을 감사장을 전달했다. | |
| | |
| 3. (a) 사장이 비서를 성과급을 지급했다. | |
| (b) 사장이 누구를 성과급을 지급했는지 궁금하다. | |
| (c) 사장이 부사장이 아니라 비서를 성과급을 지급했다. | |
| (d) 사장이 운전사를 용돈을, 비서를 성과급을 지급했다. | |
| (e) 사장이 불성실한 비서를 성과급을 지급했다. | |
| | |
| 4. (a) 세입자가 집주인을 열쇠를 반납했다. | |
| (b) 세입자가 누구를 열쇠를 반납했는지 확인해야 한다. | |
| (c) 세입자가 경비아저씨가 아니라 집주인을 열쇠를 반납했다. | |

- (d) 세입자가 새 세입자를 안내문을, 집주인을 열쇠를 반납했다.
 - (e) 세입자가 도둑질을 한 집주인을 열쇠를 반납했다.
5. (a) 의사가 환자를 영양제를 권했다.
- (b) 의사가 누구를 영양제를 권했는지 모른다.
- (c) 의사가 보호자가 아니라 환자를 영양제를 권했다.
- (d) 의사가 인턴을 휴식을, 환자를 영양제를 권했다.
- (e) 의사가 과영양인 환자를 영양제를 권했다.
6. (a) 직원이 고객을 물품을 배송했다.
- (b) 직원이 누구를 물품을 배송했는지 모른다.
- (c) 직원이 가족이 아니라 고객을 물품을 배송했다.
- (d) 직원이 우수회원을 카탈로그를, 고객을 물품을 배송했다.
- (e) 직원이 주문 안 한 고객을 물품을 배송했다.
7. (a) 이사회가 대주주를 경영권을 부여했다.
- (b) 이사회가 누구를 경영권을 부여했는지 알려지지 않았다.
- (c) 이사회가 일반주주가 아니라 대주주를 경영권을 부여했다.
- (d) 이사회가 일반주주를 거부권을, 대주주를 경영권을 부여했다.
- (e) 이사회가 무능한 대주주를 경영권을 부여했다.
8. (a) 여자가 동창을 초대장을 보냈다.
- (b) 여자가 누구를 초대장을 보냈는지 비밀에 부쳐졌다.
- (c) 여자가 직장동료가 아니라 동창을 초대장을 보냈다.
- (d) 여자가 선배를 감사문을, 동창을 초대장을 보냈다.
- (e) 여자가 전학 간 동창을 초대장을 보냈다.
9. (a) 중대장이 이등병을 휴가를 승인했다.
- (b) 중대장이 누구를 휴가를 승인했는지 적혀있지 않다.
- (c) 중대장이 소대장이 아니라 이등병을 휴가를 승인했다.
- (d) 중대장이 상병을 외출을, 이등병을 휴가를 승인했다.
- (e) 중대장이 문제 많은 이등병을 휴가를 승인했다.
10. (a) 시어머니가 며느리를 반찬을 부쳤다.
- (b) 시어머니가 누구를 반찬을 부쳤는지 잊어버렸다.
- (c) 시어머니가 딸이 아니라 며느리를 반찬을 부쳤다.

- (d) 시어머니가 아들을 편지를, 며느리를 반찬을 부쳤다.
(e) 시어머니가 연락 없는 며느리를 반찬을 부쳤다.
11. (a) 아이가 누나를 세뱃돈을 맡겼다.
(b) 아이가 누구를 세뱃돈을 맡겼는지 찾아야 한다.
(c) 아이가 엄마가 아니라 누나를 세뱃돈을 맡겼다.
(d) 아이가 형을 선물을, 누나를 세뱃돈을 맡겼다.
(e) 아이가 도벽있는 누나를 세뱃돈을 맡겼다.
12. (a) 신부가 하객을 부케를 던졌다.
(b) 신부가 누구를 부케를 던졌는지 생각이 안 난다.
(c) 신부가 신랑이 아니라 하객을 부케를 던졌다.
(d) 신부가 신랑을 코사지를, 하객을 부케를 던졌다.
(e) 신부가 이미 결혼한 하객을 부케를 던졌다.

B. Stimuli for Experiment 3

1. 아버지가 누구를/누구에게 운전을 가르쳤습니까?
2. 경찰서장이 누구를/누구에게 감사장을 전달했습니까?
3. 사장이 누구를/누구에게 성과급을 지급했습니까?
4. 세입자가 누구를/누구에게 열쇠를 반납했습니까?
5. 의사가 누구를/누구에게 영양제를 권했습니까?
6. 직원이 누구를/누구에게 물품을 배송했습니까?
7. 이사회가 누구를/누구에게 경영권을 부여했습니까?
8. 여자가 누구를/누구에게 초대장을 보냈습니까?
9. 중대장이 누구를/누구에게 휴가를 승인했습니까?
10. 시어머니가 누구를/누구에게 반찬을 부쳤습니까?
11. 아이가 누구를/누구에게 세뱃돈을 맡겼습니까?
12. 신부가 누구를/누구에게 부케를 던졌습니까?

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