Focus Types and Subject-Object Asymmetry in Korean Case Ellipsis: A New Look at Focus Effects[*]

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Abstract. Acceptability of case ellipsis on focused subjects and objects exhibits clear asymmetry which so far has not received a plausible explanation. Case ellipsis on focused direct objects occurs naturally, whereas case ellipsis on focused transitive subjects is unnatural whether the subject is contrastively focused or not. The main purpose of this paper is to provide experimental evidence that the degree of acceptability of case ellipsis on focused argument NPs in Korean is sensitive to the usage probability of their properties. Our experiment shows that the degree of acceptability of case ellipsis on focused argument NPs in Korean and the strength of the influence of focus types on case ellipsis both correlate with the likelihood for the argument's referent to be new information. We argue that this finding lends support to the view that language users' intuitions of acceptability in context are probability-sensitive in that their preferences are affected by the usage probability of properties of argument NPs.

Keywords: case ellipsis, case marking, focus types, predictability, usage probability

1   Introduction

Particle ellipsis is the phenomenon whereby speakers omit NP-final particles. One common type of particle ellipsis in Korean is case ellipsis, whereby case markers like *–i/-ka* and *-(l)ul* are omitted. An example of ellipsis of case markers is given in (1):

(1) a. ecey   Minswu-ka   chinkwu-lul   manna-ss-ta.
       yesterday Minsoo-Nom   friend-Acc   meet-Pst-Ind
       'Minsoo met his friend yesterday.'
    b. ecey   Minswu-ka   chinkwu   manna-ss-ta.
       yesterday Minsoo-Nom   friend(-Acc)   meet-Pst-Ind
       'Minsoo met his friend yesterday.'

In (1b), the object *chinkwu* 'friend' appears without the following accusative case marker *-lul*, which would normally indicate the object of the verb. While (1a) and (1b) are semantically equivalent, i.e., in both cases the agent is *Minswu* and the theme is *chinkwu* 'friend', they may differ in contextually determined meanings, pragmatic functions, and attitudes of interlocutors.

It is often claimed that case ellipsis in Japanese and Korean is constrained by discourse and semantic factors such as focus and contrastiveness. A number of previous studies have suggested that case markers in Japanese and Korean cannot be dropped when the argument they mark is contrastively focused (Tsutsui, 1984; Masunaga, 1988; Yatabe, 1999; Ko 2000; D. Lee, 2002). However, these studies were not based on careful comparison of patterns of case ellipsis when subject and object are in focus. As observed by H. Lee (2009a, 2009b), the ellipsis of the case markers marking a focused direct object occurs much more naturally than that of the case

markers marking a focused transitive subject, and in certain cases object case ellipsis is favored even though the object is contrastively focused.

In this paper we will report a rating experiment which compared speakers' judgments of acceptability of sentences containing the case-marked or unmarked form of a focused subject and their judgments of sentences containing the case-marked or unmarked form of a focus object. We will first demonstrate that focus subjects exhibit a strong preference for explicit case marking over case ellipsis, whereas focus objects do not show such a preference. Our experiment further shows that focused objects show a stronger sensitivity to focus types, exhibiting a great difference in average ratings between sentences with three different subtypes of argument focus, whereas average ratings between sentences with the same three subtypes of focus did not show a statistically significant difference. We propose a new usage-based account of variable case marking that explains these asymmetries between focus subjects and focus objects in case ellipsis in terms of the usage probability of properties of arguments. In particular, it is shown that both the degree of acceptability of case ellipsis on focused argument NPs in Korean and the strength of the influence of focus types on case ellipsis correlate with the frequency in which the argument NP accommodates new information.

2 Focus Types and Case Ellipsis

Focus is usually defined as the portion of the sentence that the speaker assumes is not known to the hearer. Focus is distinguished into two types: contrastive focus and non-contrastive focus. Contrastive focus involves an explicit choice among the limited set of contextually given alternatives, whereas non-contrastive focus does not require the contrast set (Chafe 1976; Rooth 1992; Kiss 1998; Vallduví and Vilkuna 1998). Non-contrastive, informational focus simply marks new information in the sentence without explicitly contrasting it with something in the discourse. A very common example of informational focus is an answer to a *wh*-question:

(2) A: Who wants to marry Jane?
   B: John wants to marry her.

B's utterance is non-contrastive if it is an answer to A's question: the focus indicates the referent is novel, or newly activated. Note that formally identical sentences may receive either a contrastive or non-contrastive interpretation, depending on context:

(3) A: Who wants to marry Jane, John or Tom?
   B: John wants to marry her.

B's answer in (3) is contrastive because it selects *John* from the contrast set provided in the context. If, however, no such context set were provided by A, *John* in B's answer would be non-contrastive focus, as in (2).

A number of previous studies have suggested that case markers in Japanese and Korean cannot be dropped when the argument they mark is contrastively focused (Tsutsui, 1984; Masunaga, 1988; Yatabe, 1999; Ko 2000; D. Lee, 2002). However, these studies were not based on careful comparison of patterns of case ellipsis when subject and object are in focus. As observed by H. Lee (2009a, 2009b), the ellipsis of nominative case markers on focused subjects is much less natural compared to the ellipsis of accusative case markers on focused objects. Consider the following example in (4), which illustrates case ellipsis on the contrastively focused transitive subject.

(4) A: i   computer cikum-un toy-ne.   Ney-ka   kochi-ess-e?
      this computer   now-Top   work-FP you-Nom fix-Pst-Ind
      'This computer is working now. Did you fix (it)?'
   B: ani, i   chinkwu-ka/???i   chinkwu   kochi-ess-e.

   no, this guy-Nom/this guy(-Nom)   fix-Pst-Ind
   'No, this guy fixed (it).' [subject−contrastive replacing focus]

In this context, the version of (4B) with an unmarked subject is much less natural than that with
the case-marked counterpart and judged to be nearly unacceptable by native speakers. The near-
unacceptability of case ellipsis in this utterance is in accordance with the previous observation
that case markers in Korean and Japanese cannot be dropped when the argument they mark is
contrastively focused. However, although few studies have compared the effect of focus types
on subject marking and object marking explicitly, case ellipsis on contrastively focused objects
generally does not result in unacceptability. (5B) below is an example that contains a
contrastively focused object. All native speakers we have consulted agree that both versions of
(5B) are acceptable.

(5) A: Cinmi-ka   computer(-lul)   sa-ss-e.
       Jinmi-Nom   computer(-Acc) buy-Pst-Ind
       'Jinmi bought a computer.'
   B: aniya, hywutaephon(-ul)   sa-ss-e.
       no,   cell phone(-Acc)   buy-Pst-Ind
       'No, (she) bought a cell phone.' [object−contrastive replacing focus]

Ellipsis of the accusative case marker is even favored when the object it marks is what Dik and
others (1981) refer to as a 'contrastive selecting focus':

(6) A: Cinmi-ka   computer(-lul)   sa-ss-e, hywutaephon(-ul) sa-ss-e?
       Jinmi-Nom computer(-Acc) bought, cell phone(-Acc)   buy-Pst-Ind
       'Did Jinmi buy a computer or a cell phone?'
   B: computer/?computer-lul   sa-ss-e.   molla-ss-e?
      computer(-Acc)/computer-Acc buy-Pst-Ind   didn't know
      '(She) bought a computer. Didn't you know?' [object−contrastive selecting focus]

By contrast, case ellipsis on the selecting focus subject results in near-unacceptability:

(7) A: i necktie   nuka   sa cwu-ss-e?   emma? animyen   yeca chinkwu?
       this nekctie(-Acc) who.Nom buy-Pst-Ind   mom   or   girl   friend
       'Who bought this tie for you? Your mom or your girl friend?'
   B: yeca chinkwu-ka/???yeca chinkwu   senmwul-lo   sa cwu-ss-e.
      girl friend-Nom/girl friend(-Nom)   gift-as   buy-Pst-Ind
      'My girl friend bought (it for me) as a gift.' [subject−contrastive selecting focus]

It appears that the ellipsis of case markers marking a focused transitive subject is unnatural
whether the focused subject is contrastive or not. As illustrated in (8), case ellipsis on the
noncontrastive, informational focus subject is judged to be quite degraded by native speakers.
However, with few exceptions, hardly any linguistic treatments of case ellipsis in Korean have
neither recognized nor provided a persuasive account of such differences between subject case
ellipsis and object case ellipsis.

(8) A: i   computer cikum-un toy.   nwuka   kochi-ess-e?
       this computer now-Top   work   who.Nom fix-Pst-Ind
       'This computer is working now. Who fixed (it)?'
   B: i   chinkwu-ka/???i   chinkwu   kochi-ess-e.
      this guy-Nom/this guy(-Nom)   fix-Pst-Ind
      'This guy fixed (it).' [subject−noncontrastive focus]

In sum, case ellipsis on focused direct objects occurs naturally, and in certain cases, it is preferred over explicit case marking even though the object is contrastively focused, whereas case ellipsis on focused transitive subjects is unnatural whether the subject is contrastively focused or not.

3   Usage Probability, Focus Predictability and Case Ellipsis

Our account of case ellipsis based on usage probability of properties of argument NPs is motivated by by a broader research program that seeks to investigate to what extent preferences in grammar and language use exhibit signs of efficiency. One of the earliest observations related to efficient language production is the link between word frequency and phonological as well as phonetic form (Horn, 1921; Zipf, 1935). It has long been noted that frequent words generally have shorter linguistic forms (Zipf, 1935). More recent evidence suggests that word length (in phonemes or syllables) correlates even more strongly with words' average predictability in context than with their frequency (Manin, 2006; Piantadosi, Tily and Gibson, 2009). This inverse link between probability and phonological form is expected given the nature of language as an efficient sign system in which costs correlate with signal length. The more probable (expected) a word is in its context, the more redundant it is. Hence, it is intuitively efficient to produce more probable instances of words with shorter duration, thereby trading off redundancy and reduction.

If language is organized to be efficient in that speakers prefer to avoid the articulation of complex material when its properties are readily inferable contextually, it is expected that the inverse link between probability/ predictability and linguistic form would be found in syntactic reduction as well, i.e., the form with more linguistic material should be less likely for more probable syntactic elements or for more predictable meanings or referents (Haiman, 1983; Hawkins, 2004). A growing body of research supports this idea, suggesting that potentially all levels of language could be organized to be efficient (see Jaeger (2006) for detailed discussion) and follow the following economy principles (Hawkins, 2004; Haspelmath, 2008):

(9) a. The more predictable a sign is, the shorter it is.
　　b. The more frequent a sign is, the shorter it is.

Evidence from syntactic reduction provides support for a pervasive effect of the principles in (9). In a study on the data base of spontaneous English, Wasow *et al*. (in press) found that speakers are less likely to mention the relativizer that in non-subject-extracted relative clauses (e.g., I like the way (that) it vibrates) when the relative clause is predictable (see also Jaeger, 2006). Additional evidence comes from optional that-mentioning in English complement clauses. Jaeger (2006) analyzed the same spontaneous data base that was employed for the study by Wasow *et al*. (in press) and found that speakers are less likely to mention the complementizer that when the complement clause is predictable.
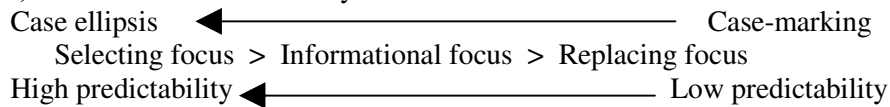
Principle (9a) predicts that subtypes of focus exert distinct influences on case ellipsis relative to their predictability. Although focus is usually defined as the portion of the sentence the speaker assumes is not known to the hearer, there are obvious predictability asymmetries between subtypes of focus. For instance, the referent of selecting focus exemplified in (6) and (7) is explicitly mentioned and assumed by the previous speaker as a possible instantiation of the variable in the presupposed open proposition generated by a disjunctive question. Moreover, unlike replacing focus exemplified in (4) and (5), selecting focus does not involve any explicit contradiction of some other previously stated alternative and satisfies the previous speaker's expectation or presupposition that his or her question will be answered with one disjunct (C. Lee 2007), thus leading to more predictable continuation of the discourse.

Replacing focus and informational focus differ from selecting focus in that in neither case, the focused argument is previously mentioned or assumed as a possible value of the variable in the presupposed open proposition. Replacing focus is further distinguished from the other types

of focus by its counter-presuppositionality, i.e., explicit contradiction of some other previously stated alternative(s). Thus, replacing focus can be considered the most unexpected instance of focus by virtue of being counter-presuppositional, while selecting focus can be considered the most predictable case of focus in terms of givenness and presuppositionality (i.e., satisfaction of the previous speakers expectation that his or her question will be answered with one disjunct). The ordinary informational focus, which functions as an answer to a wh-question, is neither given nor counter-presuppositional and hence corresponds to the intermediate level of focus predictability.

As focus predictability can be thought of as scalar, the account of case ellipsis based on this notion makes a clear prediction about rates of case ellipsis for different subtypes of focused NPs. Due to economy motivation, more readily predictable or expected entities tend to be referred to by shorter or less complex form. Thus, rates of case ellipsis are expected to increase relative to the predictability status of the focused NP:

(10) Prediction of Predictability:
 Case ellipsis ◄——————————————— Case-marking
  Selecting focus > Informational focus > Replacing focus
 High predictability ◄——————————— Low predictability

One of the main goals of this paper is to examine whether the strength of the effect of focus predictability as well as the degree of acceptability of case ellipsis on focused subjects and objects correlate with the usage probability of properties of arguments, i.e., the probability of accommodating new information. Crosslinguistically and also in Korean, focus is more frequently associated with direct objects than subjects in transitive clauses.[1] Because focus is rare and unexpected property for subjects, they are expected from (9b) to show a strong overall preference for a more complex form, i.e., explicit case marking over a simpler alternative, i.e., case ellipsis when they are in focus, and hence to exhibit a weaker sensitivity to relative focus predictability compared to the focused object. In section 3, we present experimental evidence which confirms this prediction made by the current account of particle ellipsis based on usage probabilities.

4   Usage Probability and S-O Asymmetry in Case Ellipsis: An Experiment

In this experiment participants were asked to indicate relative goodness of sentences on a 5-point scale. 60 students from Sungkyunkwan University, ages 20-26, participated in this experiment. Each participant was asked to read short conversations between speakers and indicate to what degree the two argument forms were suitable in the given context. To do this, their task was to rate the acceptability of sentences containing a case-marked or unmarked argument by assigning them grades from 1-5 on a five-point rating scale with 1 indicating completely unacceptable and 5 perfectly acceptable.

The focus type of subject NPs and object NPs was manipulated by means of variation in context sentences (questions uttered by the first speaker and sentences preceding the conversation that set the context). In the case of replacing focus condition, the second speaker presumes that the addressee (the first speaker) possesses some incorrect piece of information X, which is to be replaced by some correct piece of information Y. The contrastiveness of replacing focus NPs was further manipulated by means of context sentences so that both the referent of the replacing focus NP and the excluded alternatives are explicitly given in the

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[1]   The rarity of new information subjects in Korean is supported by empirical data from M. Kim (2001). Her data consist of 418 clausal units extracted from the scenario of a Korean TV drama titled "Under the Cherry Tree", which was aired by Korean Broadcasting System (KBS) in 2000. She found that a substantial majority (65. 1%) of referents in the A role are given information whereas the percentage of given Os is only 11.8%. Conversely, the A slot shows the smallest proportion of new information (34.9%), while the O shows a considerably higher proportion (88.2%).

context and the replacing focus NP is chosen from a clearly delimited contrast set. A sample stimulus is shown in (11):

(11) Example stimuli

Instruction: Please read through the following conversations, then make a judgment on underlined sentences in each conversation by assigning them grades from 1-5. Use the following scale to make your judgments:
          1 = Completely Unacceptable
          2 = Unacceptable
          3 = Just Barely Acceptable
          4 = Acceptable
          5 = Completely Acceptable

1) [Context: A, B, and C (being referred to as i chinkwu 'this guy' in B's utterance) are technicians who are working in the same computer shop. They are having a conversation in the office about who fixed which computers today.]

A: i computer-lul   ney-ka   kochi-ss-e?
   this computer-Acc you-Nom   fix-Pst-Int
    'Did you fix this computer?'
B-1: ani, i chinkwu-ka   kochi-ss-e.   1   2   3   4   5
     no, this guy-Nom   fix-Pst-Ind
      'No, this guy fixed (it).'
B-2: ani, i chinkwu   kochi-ss-e.   1   2   3   4   5
     no, this guy(-Nom)   fix-Pst-Ind
      'No, this guy fixed (it).'

In contrast, in the case of the informational focus condition, neither the actual element in focus nor the potential alternative(s) are explicitly given in the context. In the case of selecting focus, the speaker presumes that the addressee believes that X or Y is correct, but does not know which. In the experimental items, such a presupposition is created through a disjunctive question offered by the addressee. To keep the influence of factors other than focus type and argument type to a minimum, we have further controlled the items in the questionnaire such that the head of subject and object NPs is limited to a countable noun which refers to a human and definite entity.

The experiment has 3 independent variables in a within-subject design: 2 (argument type: subject vs. direct object) X 3 (focus type: replacing, selecting, informational) X 2 (argument form: case-marked vs. unmarked), creating 12 conditions (10 items per condition = 120 total items). Each participant rated all 120 items (The questionnaire was given to the participants in Korean orthography.). They were combined with 40 fillers belonging to another experiment. Time of participation was approximately 35-40 minutes.

The ratings for each participant were submitted repeated measures analyses of variance(ANOVA) with participants ($F1$) and experimental items ($F2$) as random factors and with argument type, focus type and object form as factors. The results of the ANOVA showed that the effect of argument type and argument form was significant in both the subject analysis and the item analysis (argument type: $F1(1, 357) = 97.38$, $p = .000$; $F2(1, 117) = 61.07$, $p = .000$; argument form: $F1(1, 357) = 153.06$, $p = .000$; $F2(1, 117) = 47.70$, $p = .000$), whereas the effect of focus type was not significant ($F1(2, 357) = 2.86$, $p = .059$; F2(2, 117) = .646, $p = .526$). The ANOVA also indicated significant interaction between focus type and argument form ($F1(2, 357) = 16.28$, $p = .000$; $F2(2, 117) = 6.65$, $p = .002$) and between argument type and argument form ($F1(1, 357) = 530.86$, $p = .000$; $F2(1, 117) = 197.37$, $p= .000$).

To examine whether focus predictability has distinct influences on speakers' judgments of sentences, we carried out separate ANOVAs on the two subexperiments (the subexperiment on subject and the subexperiment on object). As we will see in the following, the results confirm our prediction that the focused object would show a stronger sensitivity to focus predictability, exhibiting a great difference in average ratings between sentences with different subtypes of focus.

Crucially, unlike in the overall ANOVA, a significant main effect of focus type was obtained in the subject analysis of the data on direct objects ($F1(2, 177) = 6.24$, $p = .002$).

Table 1: Mean judgments for each subtype of focus objects

	Replacing	Selecting	Informational	Means
Obj-Acc	3.82	2.30	3.17	3.10
Obj-∅	2.97	3.99	3.18	3.38

Table 1 further shows that the average ratings for each category showed that when the sentence contained an accusative-marked object, the stimuli with a replacing focus object were rated highest, and the stimuli with a selecting focus object were rated lowest. In contrast, when the sentence contained an unmarked object, the stimuli with a selecting focus object were rated highest, and the stimuli with a replacing focus object were rated lowest. This result corroborates the findings of H. Lee (2009a, 2009b), who found that the pattern of object case ellipsis cannot be accounted for in terms of the dichotomous distinction between contrastive vs. non-contrastive focus but is sensitive to subtypes of focus.

However, unlike in the subexperiment on direct object, the main effect of the factor focus type did not reach significance in the subexperiment on subject ($F1(2, 177) = 6.22$, $p = .538$; $F2(2, 57) = .733$, $p = .485$). While there was a considerable difference in average ratings between sentences with different subtypes of focused objects, sentences with the three subtypes of focus subjects of the same form were not judged to be considerably different:

Table 2: Mean judgments for each subtype of focus subjects

	Replacing	Selecting	Informational	Means
Subj-Nom	4.15	4.05	4.06	4.09
Subj-∅	1.37	1.44	1.26	1.36

Table 2 further shows that as predicted, focused transitive subjects showed a strong preference for explicit case marking over case ellipsis: while there was no significant difference in average ratings between sentences with a case-marked focus object versus sentences with an unmarked focus object (3.10 vs. 3.38), sentences with an unmarked focus subject were judged as significantly less acceptable than sentences with a case-marked focus subject (1.36 vs. 4.09).

The non-significance of predictability in the subexperiment on subject naturally follows from the relative infrequency of focus as subjects. Crosslinguistically and in Korean, focus is more frequently associated with objects than subjects but is a rare and unexpected property for subjects. Therefore, fine-grained differences within the category of focus in relative predictability are more important for marking of objects and less important for that of subjects. This may account for why object marking shows greater sensitivity to predictability as focus but subject marking does not.

In summary, this section has presented new experimental evidence which confirms the predictions of the account of case ellipsis based on usage probability. Our results show that native speakers' judgments of acceptability of sentences containing case-marked or unmarked focus objects are sensitive to focus predictability whereas their judgments of acceptability of those containing focused transitive subjects are not. We have argued that the current usage-

based account is capable of explaining why predictability has strong effects on object marking but not on subject marking in terms of the usage probability of properties of argument NPs.

5   Conclusion

In this paper we have discussed a rating experiment which compared speakers' judgments of acceptability of sentences containing the case-marked or unmarked form of a focused subject and their judgments of sentences containing the case-marked or unmarked form of a focus object. We have demonstrated that focus subjects exhibit a strong preference for explicit case marking over case ellipsis, whereas focus objects show do not show such a preference. Our experiment has further shown that focused objects show a stronger sensitivity to focus types, exhibiting a great difference in average ratings between sentences with three different subtypes of argument focus, whereas average ratings between sentences with the same three subtypes of focus did not show a statistically significant difference. We have proposed a new usage-based account of variable case marking that explains these asymmetries between focus subjects and focus objects in case ellipsis in terms of the usage probability of properties of arguments, i.e., asymmetry in the frequency in which the argument accommodates new information. In particular, it has been shown that both the degree of acceptability of case ellipsis on focused argument NPs in Korean and the strength of the influence of focus types on case ellipsis correlate with the likelihood for the argument's referent to be new information.

These findings lend support to the view that language users' intuitions of acceptability in context are probability-sensitive in that their preferences are affected by the usage probability of properties of argument NPs (Bresnan, 2007; Bresnan and Ford, 2001). Nevertheless, this study has an important limitation in its scope in that it examined only one particular kind of subject-object asymmetry in argument encoding, namely the asymmetry found in the encoding of different argument types that are in focus. Previous studies on particle ellipsis in Japanese and Korean have revealed that case marking and case ellipsis for subjects and objects show a reverse pattern with respect to factors such as verb adjacency (Fry, 2001; T. Kim, 2008), occurrence as *wh*-words (Matsuda, 1996; Fry, 2001), and animacy, definiteness and person of argument NPs (Fry, 2001; Minashima, 2001; H. Lee, 2006, 2007; T. Kim, 2008), but they do not show such a pattern with respect to factors such as length of the argument NP (Tsutsui, 1984; Ono *et al.*, 2000; Fry, 2001; T. Kim, 2008), utterance length (Fry, 2001; T. Kim, 2008) and occurrence inside questions (Makino and Tsutsui, 1986; Backhouse, 1993; Fry, 2001). Whether a broader range of such subject-object (a)symmetries in particle ellipsis noted in the literature can be explained in terms of differences or similarities in the usage probability of subjects and objects is an empirical question that remains for future research.

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