Iconicity and Variation in the Choice of Object Forms in Korean*

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The naturalness with which case ellipsis occurs in certain environments in Korean has been attributed to the information status and markedness of arguments, although few studies have compared the two factors explicitly. Through experimentation, the present study demonstrates that both factors simultaneously and independently influence object case ellipsis. The present study also provides a possible explanation of why case-marked and case-ellipsed objects are distributed the way they are by going beyond the mere descriptive level and looking at how the choice between the two variants is motivated by extra-linguistic, cognitive factors. In particular, we argue that the factors of focus, animacy, and definiteness can be linked to an iconic principle, which predicts the correlation between conceptual markedness and structural markedness. This general prediction is shown to be confirmed by the results of the experiment as well as corpus analyses.

Keywords: iconicity, focus, animacy, definiteness, case ellipsis

1. Introduction

Korean has been described as a language in which all subjects and objects are case-marked, though case marking is optional in colloquial speech. An example of ellipsis of case markers is given in (1):

(1) ecey myengswu-ka maykcwu manhi masyesse.
yesterday Myoungsoo-Nom beer(-Acc) a lot drank
'Myoungsoo drank a lot of beer yesterday.'

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In (1), the object *meykowu* 'beer' appears without the following accusative case marker *-lul*, which would normally indicate the object of the verb. In colloquial Korean, this kind of ellipsis occurs frequently. The same phenomenon has been observed in Japanese and studied extensively in the literature (e.g., Hinds 1983, Tsutsui 1984, Masunaga 1988, Matsuda 1996, Yatabe 1999, Minashima 2001, Fry 2001, etc.).

Why do speakers sometimes omit case markers? This question can be asked from two closely related perspectives: (i) What factors influence the choice between case-marked and case-ellipsed forms of argument NPs, and (ii) Why do the factors influencing the choice between the two forms have the effects they do?

The present study addresses both of these questions. For the first question, we focus on proposals that the information status (focus) and the animacy/definiteness of arguments are crucial factors affecting variation in case ellipsis in Korean. Although the factors of focus, animacy and definiteness have been considered by different scholars (e.g., E-S Ko 2000; H Lee 2003, 2005, 2006), few studies have investigated these factors simultaneously in relation to case ellipsis, and most studies have overlooked the possible effects of animacy and definiteness. This led us to ask whether the factors of focus, animacy, and definiteness are relevant factors, or whether just one can account for variation in case ellipsis. We investigated this question through an elicitation experiment. Our results show that both focus and prominence in animacy, and definiteness affect variation in object case ellipsis in Korean and that they differ in the relative importance or strength. The results further show that the choice between case-marked and case-ellipsed forms of object NPs according to these three factors is not a matter of categoriality but of preference and that this preference follows cross-linguistic patterns.

The present study differs from previous empirical work on case ellipsis in another important way. While previous studies analyzing the variation between case-marked and case-ellipsed forms of arguments have focused mainly on a description of the factors involved, the present study aims at providing a possible explanation of why the two variants are distributed the way they are by going beyond the mere descriptive/structural level and looking at how the choice between the two variants is motivated by extra-linguistic, cognitive factors. In particular, we will argue that the factors of focus, animacy, and definiteness can be linked to an iconic principle, which predicts the correlation between conceptual markedness/complexity and structural markedness/complexity. This general prediction will be shown to be confirmed by the results of the experiment as well as corpus analyses.
2. The Effects of Focus, Animacy, and Definiteness on Case Ellipsis

Past investigations of case ellipsis (henceforth CE) have generally attempted to explain the naturalness of CE in terms of discourse-pragmatic or semantic factors or in terms of information status (what role do the interpretations of different phrases play in the information the speakers wish to convey to the listener?). There has been a good deal of previous research on CE in Korean over the years, including work by H S Lee and Thompson (1985), E-S Ko (2000), D-Y Lee (2002), H-D Ahn and S Cho (2006), and H Lee (2003, 2005, 2006). However, past work has focused on only one factor at a time. Moreover, many analyses have been based on grammaticality judgments or data based on intuition and have not considered the statistical significance of their results. In this study, we provide a more detailed quantitative analysis, by examining the significance and relative strength of the major factors claimed in past studies to favor the phenomenon of CE. In this way, we seek to establish more precisely than in previous studies what the factors are that favor CE, and how closely CE is linked to them. Before we discuss details of our experimental study, this section presents a brief summary of the generalizations we can make about the effects of focus, animacy, and definiteness on CE, which are the topic of the present study.

2.1. Focus Effects

It is often claimed that CE in Japanese and Korean is constrained by discourse and semantic factors such as focus and exclusive/exhaustive interpretations. The notion of focus, although not always very well defined, has been claimed to be one of the strongest factors affecting CE. This claim has been formulated in various ways by different researchers:

My assumption is that whenever the pertinent NP is deemphasized or defocused, the case marker can be deleted (Masunaga 1988: 147).

The ellipsis of the case particles (CP) of an NP-CP is unnatural if the NP-CP conveys the idea of exclusivity (Tsutsui 1984 (cited from Yatabe (1999))).

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1 Additional factors affecting the naturalness of CE which will not be discussed here include the following: the formality of the extralinguistic context, familiarity among interlocutors (H S Lee and Thompson 1985, E-S Ko 2000), the kind of semantic role that a nominal argument bears (D-Y Lee 2002), length of the argument NP, utterance length and proximity of the NP to the predicate (Fry 2001). For extensive reviews of previous studies, see Fry (2001) and H Lee (2005, 2006).
The nominative case particle *ga* in Japanese cannot be dropped when the expression it marks is focused, i.e., when the expression it marks is interpreted as contrasting with some other object(s) of the same type (Yatabe 1999: 79).

I suggest that *-lul* is a focus marker in the sense of the alternative semantics of Rooth (1985) which is elaborated in Vallduvi and Vilkuna (1998): a set of alternatives for the 'focused' constituent is generated as an additional denotation (E-S Ko 2000).

E-S Ko (2000), in her study of ellipsis of the accusative case marker *-lul* in Korean, suggests that *-lul* cannot be dropped when the object it marks is focused, i.e., when it is interpreted as contrasting with some other object(s) of the same type. She further contends that *-lul* functions as an operator just like other delimiters such as *-man* 'only' and *-to* 'also' in Korean. The following examples from E-S Ko (2000) illustrate this function of *-lul*. In (2a), os 'clothes' is a ‘shared knowledge’ between the two speakers which does not generate a membership set. In (2b), however, *os-ul* identifies an element from a 'wh-set', analogous to the set of alternatives.

(2) a. A: nana-hanthey **os** ponay-ess-ni?
   ‘Did you send the clothes to Nana?’
   B: I'm sorry. I forgot to do it.
   b. A: What's in the packet?
   B: **nana-ka** **os-ul** ponay-ess-e.
   ‘Nana sent clothes.’

Other studies in the generative tradition which analyze Korean case markers such as *-i/-ka* and *-lul* as a morphological realization of underlying informational features include K-s Kim (1990), H-W Choi (1995) and H-R Chae (1999), among others. These studies would predict that CE becomes unacceptable or unnatural when the NP marked by *-i/-ka* and *-lul* is focused.

2.2. Effects of Animacy and Definiteness Hierarchies

Person, animacy and definiteness are important properties in the systems of voice, direction and case marking in a number of languages. In particular, that they have effects on case marking has been demonstrated by work on split case marking phenomena in various languages, where certain classes of subjects and objects are marked, but not others. The standard example of a subject
marking split is from Dyirbal, in which first and second person are overtly case-marked when they function as objects, but are not overtly marked as subjects (Dixon 1972, 1979; Silverstein 1976). Conversely, third persons are overtly case-marked when they function as subjects (of transitive clauses), but are not overtly case-marked as objects. Aissen (2003), following Bossong (1985), refers to splits in subject and object marking as differential subject marking (DSM) and differential object marking (DOM) respectively.

An intuition which recurs in the literature on DOM and DSM is that they arise from the need to maximally differentiate subject and object. In other words, as emphasized by the functional approach of Silverstein (1976), subjects prototypically have features that are high on the hierarchies of person, animacy, and definiteness, while objects prototypically have low features which are low on the hierarchy. When objects have high features, they need to be marked as atypical, because they are the ones most likely to be confused with subjects if left unmarked. Conversely, subjects which have low features are the ones most in need of being distinguished from objects because they are the ones most likely to be confused with objects if left unmarked.

Dyirbal and other Australian languages exhibit both DSM and DOM. It is also common for languages with overt case marking to exhibit either DSM or DOM, but not both. The former possibility is realized in languages like Fore, where neither personal pronouns nor names may be marked in subject function, but inanimates must be (Scott 1978, Donohue 1999). Case marking systems which exhibit DOM only are found in a wider range of languages. In DOM languages, the split is very often triggered along the lines of animacy and definiteness. These dimensions are often given on referentiality scales, where the cut-off point is taken to vary from language to language:

(3) a. Animacy hierarchy: Human > Animate > Inanimate

The general pattern, observed in more than 300 DOM languages, can be summarized by the following implicational universal: if a given object O can be case-marked in language A, then objects which are more prominent than O on one or both of the hierarchies in (3) above can also be marked in A. Given the cross-linguistic tendency that more marked types of arguments are overtly case-marked, one can expect that language-internal variation within languages like Korean where DSM and DOM are not categorial grammatical rules reflects grammaticalized patterns across languages (Givón 1979; Bresnan, Dingare and Manning 2001; Aissen and Bresnan 2002). In a series of recent cor-
pus studies, we have investigated evidence of markedness\(^2\) in the dimensions of animacy and definiteness on CE in Korean which have been unexplored in previous studies. Our data, drawn from the CallFriend Korean corpus (LDC 1996), show that the animacy and definiteness of subjects and objects are significantly correlated with the choice of case-marked and case-ellipsed forms.

**Animacy Effects:** Examples of CE\(^3\) for animate arguments and inanimate arguments are given in (4) and (5):

(4) CE for animate subject (a) and object (b)
   a. ipen hakki-nun sensayngnim kwamok-ul seys kaluchi-si-e.
      this semester-Top teacher course-Acc three teach
      ‘The teacher teaches three courses this semester.’
   b. wu1i hoysa-to nay nyen cikwon kamchwuk hay.
      our company-also next year employee reduce
      ‘Our company too will reduce the number of employees next year.’

(5) CE for an inanimate subject (a) and object (b)
   a. say catongcha kilum-ul manhi sopihay.
      new car gas-Acc a lot consume

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\(^2\) The term “markedness” is used by a wide variety of linguists, with a whole range of different meanings. In the functional/typological literature, markedness has been used to mean various types of asymmetric relations between linguistic categories, such as implicational universals and binary asymmetries among opposed linguistic categories. The marked/unmarked relation is also characterized as a relation between elements on prominence hierarchies. For example, the markedness of elements of the definiteness hierarchy in (3b) must be understood in connection with the grammatical function (GF) hierarchy (Subject > Non-subject); there is a correlation between types of an NP and the grammatical function of the NP. In other words, pronouns are not inherently less marked than names and other referring expressions: they are less marked qua (transitive) subjects and more marked qua objects. Conversely non-pronouns are not inherently more marked than pronouns: they are more marked as subjects but less marked as objects (Silverstein 1976, Giv6n 1984, Croft 1990, Aissen 2003).

\(^3\) In the present corpus study, we define instances of CE in subjects and objects as those cases where subject and object nouns are not overtly marked by case markers. We will not, however, count all cases in which case markers are missing in subject and object NPs as instances of CE. Cases in which subject and object nouns are not marked by case markers but by focus and discourse markers like -(n)un (topic), -to ‘also’, and -lato ‘even’ were not counted as instances of CE. The justification for this was that in these cases nominative and accusative markers cannot appear after the nominal head because of a purely formal requirement coming from the morphology: the focus and discourse markers and the case markers (nominative, accusative and genitive) occupy the same morphological slot in the nominal structure and hence cannot co-occur (I-S Yang 1972, Y-m Y Cho and Sells 1995). This is a morphological process that is distinct from CE, which is conditioned by the degree of formality of the extralinguistic context. In addition, the light verb construction of the form ‘noun(-acc) + ha’ (e.g., kongpwu(-lul) ha ‘do study’) was excluded from our annotations. The use of the accusative case marker after the complement noun of the light verb ha is considered optional in all genres and styles of Korean speech and writing. For this reason, the light verb construction was not considered to avoid unnecessary complications.
‘The new car consumes a lot of gas.’
b. khun kenmwul-i cenlyek tel sse-ya hay.
Big building-Nom energy less consume must
‘Big buildings should consume less energy.’

As Table 1 shows, human and (non-human) animate subjects exhibited a higher rate of CE than inanimate subjects. The results for direct objects are the converse: human and animate objects are overtly marked by the accusative case marker more often than inanimate objects. For both argument roles, the interaction of case marking and animacy was significant in the CFK data. In particular, the rate of CE for human and animate subjects is significantly higher than the rate for inanimate subjects ($x^2 = 33.26, p < .001$). Conversely, in the case of direct objects, the CE rate for human and animate NPs is significantly lower than the rate for inanimate NPs ($x^2 = 25.47, p < .001$).

(6) Table 1. Interaction of case marking and animacy in CFK

<table>
<thead>
<tr>
<th>Animacy</th>
<th>Subject</th>
<th>Direct object</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CE</td>
<td>N-Nom</td>
</tr>
<tr>
<td>Human</td>
<td>221 (52.7%)</td>
<td>224 (47.3%)</td>
</tr>
<tr>
<td>Animate</td>
<td>68 (36%)</td>
<td>126 (64%)</td>
</tr>
<tr>
<td>Inanimate</td>
<td>66 (28%)</td>
<td>170 (72%)</td>
</tr>
</tbody>
</table>

These results are consistent with the findings of Fry’s (2001) study of CE in Japanese. Fry found that subject marking and object marking in Japanese exhibit a reversed pattern with respect to animacy, although in his data the animacy effects are significant in subjects but not in objects.

**Definiteness Effects:** Examples of CE for strongly definite arguments (pronouns and names) and indefinite arguments are given in (7) and (8):

(7) CE for strongly definite subject (a) and object (b)
    a. ce hyuka-lul taum tal-lo milwu-ess-e-yo.
       I vacation-Acc next month-Loc postponed
       ‘I [Humble] postponed my vacation until next month.’
    b. wuyenhi hakkyo-eyse hyenswu mannass-e.
       accidentally school-Loc Hyunsoo met
       ‘(I) came across Hyunsoo at school.’

(8) CE for indefinite subject (a) and object (b)
    a. etten haksayng sihem-ul an machiko nay-ss-e-yo.
       some student exam-Acc not complete submitted
‘Some student submitted the exam without completing it.’

b. kongchay-eye yeça wutay hapnita.
   hiring-Loc women give priority
   ‘We give priority to women in hiring.’

It was found that definiteness interacts with the choice of case-marked and unmarked forms of subjects and direct objects in the CFK data. As Table 2 shows, the CE rate for strongly definite subject NPs (pronouns and names) is significantly higher than the rate for other low definite NPs ($\chi^2 = 6.98$, $p < .001$). Turning to direct objects, we find stronger results in the opposite direction. In particular, the CE rate for strongly definite object NPs is significantly lower than the rate for other object NPs ($\chi^2 = 53.72$, $p < .001$).

(9) Table 2. Interaction of case marking and definiteness in CFK

<table>
<thead>
<tr>
<th>Definiteness</th>
<th>Subject</th>
<th>Direct object</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CE</td>
<td>N-Nom</td>
</tr>
<tr>
<td>Pronoun</td>
<td>129 (47.6%)</td>
<td>142 (52.4%)</td>
</tr>
<tr>
<td>Name</td>
<td>36 (46.8%)</td>
<td>41 (53.2%)</td>
</tr>
<tr>
<td>Other</td>
<td>190 (38.3%)</td>
<td>306 (61.7%)</td>
</tr>
</tbody>
</table>

The relative frequency of unmarked forms over case-marked forms was found to increase with subjects high in animacy and definiteness and objects low in those dimensions, and to decrease with low-prominence subjects and high-prominence objects.

To summarize the discussion in this section, despite the large literature on the role of focus and markedness in grammar, few studies have taken both into account simultaneously in relation to variation in the choice of object forms in Korean. In the following section, we present new evidence from an elicitation experiment showing that focus and markedness in the dimensions of animacy and definiteness both influence case ellipsis.

3. Case Ellipsis in a Broader Cross-linguistic Perspective

Having discussed the factors to be investigated in the present study, i.e., focus, animacy, and definiteness, the question arises why these factors should affect the choice of object forms in the first place. In the following we will first elaborate on the notion of focus and then address the question of why the factors of focus, animacy, and definiteness are relevant in Korean.
3.1. The Notion of Focus and Distinction between Focus Types

Many researchers have recognized that the information status of discourse entities plays a crucial role in the form of their morphosyntactic realizations. While there is a vast literature of information structure and informational distinctions such as topic and focus, it is beyond the scope of the present study to evaluate a variety of theories and characterizations of information structure that have been proposed so far. Instead, we will adopt the definition of focus and the distinction between types of focus, originally proposed by Simon Dik and his colleagues (Dik et al. 1981, Dik 1989).

Dik (1989) provides the following definition for focus:

The focal information concerns the changes that the speaker (S) wishes to bring about in the pragmatic information of the addressee (A). Such changes may take different forms: S may wish to add pieces of information to A's pragmatic information, or he may wish to replace some piece of information X which he assumes A possesses by some piece of information Y which he possesses himself. In either case, there must be some difference between the pragmatic information of S, and S's picture of the pragmatic information of A. ... Typically, then, the focal information in a linguistic expression pertains to the difference between $P_S$ and $(P_A)_S$, and the focal information is thus presented as being 'new' to A. (Dik 1989: 326)

As Dik (1989) points out, however, the focused information is not completely new to A. S may also focus on a piece of information judged to be already available to A, in order to put special emphasis on that piece of information. In such cases there will usually be implicit or explicit contrast between that piece of information and some other piece of information which is either presupposed, or explicitly presented in the context.

Dik et al. (1981) distinguish (narrow) focus into two types: completive focus and contrastive focus (see also Prince 1981, Dik 1989, Bearth 1992). Compleitive focus is the answer to a yes-no or WH-question, as in (10). Contrastive focus, on the other hand, involves an explicit choice among alternatives, as in (11) and (12).

(10) A: What did Mary give to Harry?
    B: She gave a SHIRT to Harry.

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4 A very useful and succinct summary is provided by Vallduvi (1992) and H-W Choi (1999).
(11) A: I heard your motorcycle broke down?
   B: My CAR broke down/It was my CAR that broke down.

(12) A: Did John give the job to you or to Mary?
   B: He gave it to HER.

In (11) there is a definite presupposition associated with the sentence, 'something broke down'. And the assertion is that it is the speaker's car rather than something else. In (12) B presumes that A believes John gave the job to B or to Mary, but does not know to whom it was given. Usually, such a presupposition would be created through a disjunctive question and B thus selects a correct piece of information from a list of possibilities offered by A.

Dik et al. (1981) propose several different types of contrastive focus: replacing, rejecting, selecting, expanding, and restricting. All these subtypes, either implicitly or explicitly, assume a set of alternatives:

**Replacing Focus:** In the case of Replacing Focus, S presumes that A possesses some incorrect piece of information X, which is to be replaced by some correct piece of information Y:

(13) A: cinmi-ka ecey khempyute (-lul) sa-ss-e.
     Jinmi-Nom yesterday computer (-Acc) bought
     'Jinmi bought a computer yesterday.'

   S: aniya, say hyutaephon(-ul) sa-ss-e.
     No, new cell phone(-Acc) bought
     'No, she bought a new cell phone.'

**Rejecting Focus:** In the case of Rejecting Focus, S presumes A has a piece of information X for which, however, S has not-X. S corrects A’s piece of information by rejecting it.

(14) A: cinmi-ka ecey khempyute(-lul) sa-ss-e.
     Jinmi-Nom yesterday computer(-Acc) bought
     'Jinmi bought a computer yesterday.'

   S: aniya, khempyute an sa-ss-e.
     No, computer not bought
     'No, she didn’t buy a computer.'

**Selecting Focus:** S presumes that A believes that X or Y is correct, but does not know which. Usually, such a presupposition would be created through a disjunctive question offered by A.
(15) A: cinmi-ka khempyute(-lul) sa-ss-e, hyutaephon(-ul) sa-ss-e?
   Jinmi-Nom computer(-Acc) bought, cell phone(-Acc) bought
   'Did Jinmi buy a computer or a cell phone?'
B: khempyute(-lul) sa-ss-e.
   'She bought a computer.'

Expanding Focus: In the case of Expanding Focus S Presumes that A possesses a correct piece of information X, but that X is not complete. S knows that there is at least one piece of information Y which it is also relevant for A to know.

(16) A: cinmi-ka ecey khempyute (-lul) sa-ss-e.
   Jinmi-Nom yesterday computer(-Acc) bought
   'Jinmi bought a computer yesterday.'
B: ung, hyutaephon-to sa-ss-e.
   Yes, cell phone-also bought
   'Yes, she also bought a computer.'

Restricting Focus: In the case of Restricting Focus S presumes that A possesses a correct piece of information X, but also (incorrectly) believes that Y is the case.

   Jinmi-Nom comyuter-also buy-and, cell phone-also bought
   'Jinmi bought a computer and a cell phone.'
B: aniya, khempyute-man sa-ss-e.
   'No, she ony bought a computer.'

All of the subtypes of contrastive focus illustrated above involve some kind of contrast between the focused constituent and alternative piece of information which may be explicitly presented or presupposed. That is, the information presented stands in opposition to other, similar information which S presupposes to be entertained by A. For this reason, contrastive focus is referred to as counter-presuppositional focus (Dik et al. 1981, Dik 1989).5

5 There are various notions of contrastive focus in the literature, some of which differ from the one adopted here. For example, Kiss (1998) subsumes contrastive focus under a focus type she refers to as 'identificational focus'. Identificational focus is a type of focus which performs exhaustive identification on a set of entities given in the context or situation. In English it can be realized by a constituent preposed into the preverbal identificational focus slot like a cleft constituent. For instance, in a sentence like it was to Mary that I introduced Peter last night, the identificational focus expresses that of a set of individuals present in the domain of discourse, I introduced Peter to Mary last night and not to anyone else. Dik's notion of contrastive focus adopted here is broader than Kiss' notion in that it subsumes under contrastive focus expanding focus, which does not
It has been noted by many researchers that the information status of contrastive focus differs from that of completive focus in terms of the degree of accessibility or context-construability (Herring 1990, Rochemont 1986, Rochemont and Culicover 1990). For example, Dik (1989) and Rochemont (1986) argue that contrastive focus does not have to be totally new information unlike purely-new information type of focus including completive focus. Consider the contrastive focus in (12) as an example. Here her refers to Mary and is old information by virtue of the fact that it was previously mentioned. At the same time her is focused and as such is new. This apparent paradox can be resolved by distinguishing between the familiarity status of Mary considered as an entity, a person (from this point of view Mary is old information), and Mary considered as the value assigned to the variable in the presupposition John gave it to x (from this point of view Mary is new information). This property of being part of a presupposition together with the capability of generating a set of alternatives contextualizes contrastively focused elements and hence makes them highly prominent as compared to purely-new information type of focus such as completive focus or presentational focus.\footnote{H-W Choi (1999) suggests that topic and contrastive focus share the property of being singled out among potential alternatives and refers to this property as ‘prominence’.
}

One of the goals of the experiment, which will be reported in section 4, will be to examine whether contrastive focus (prominent or strong focus) and purely new information focus (weak focus) exert distinct influences on object case ellipsis.

3.2. Major Functions of Case Marking

Having established the operational definitions for the factor of focus, the question arises why this factor should affect the choice of object forms. Previous studies on CE have mainly focused on a description of how the factor focus can affect the naturalness of CE but do not attempt any explanation of why focus is relevant in the choice of object forms. It is not clear from previous studies why, in Korean, it is the contrastively focused arguments that tend to resist CE, and not the ones that are not contrastively focused.

One possible account of the role of contrastive focus on the case-marking patterns of arguments comes from the functional/typological literature which has distinguished two main functions of case-marking. Dixon (1972, 1979) and others, especially Comrie (1978), hold the view that the primary function of case
marking of core arguments in a transitive clause is simply to discriminate between different syntactic and semantic categories, especially where these are most likely to be confused. This function of case marking is generally referred to as the “distinguishing” or “discriminating” function (see also Aissen (2003)).

Besides the function of case marking to discriminate between subjects and objects, case marking can also have the function of marking high-prominence arguments, hence coding prototypical subject properties or object properties. This function of case marking is referred to as the identifying or indexing function of case.

De Hoop and Narasimhan (2004, to appear) argue that in its identifying function case-marking identifies arguments that are strong or prominent subjects or objects in order to distinguish between arguments of the same type. A classic example of this function of case-marking is the ergative case-marking of the volitional subject of a perfective transitive clause in Hindi (Mohanan 1994; Butt and King 2003; H Lee 2003; de Hoop and Narasimhan 2004, to appear). Subjects which function as the agent of actions which bring an event to completion (i.e., agent in perfective contexts) are usually characterized as being typically agentive (Dowty 1991), high on the transitivity scale (Hopper and Thompson 1980), hence strong or more prominent in the terminology of de Hoop and Narasimhan (2004, to appear). DSM in Turkish is another well-known case where overt marking of subjects seems to fulfill an identifying role, identifying strong or prominent agents. In Turkish specific subjects in nominalized indicative (argument) clauses may be overtly case-marked, while non-specific ones are not (Kornfilt, to appear). On the basis of these and other facts, Kornfilt (to appear) argues that DSM in Turkish is identificational, rather than distinguishing (between subjects and objects).

The degree of argument strength varies on the basis of a number of factors, including agentivity, referentiality, animacy, definiteness, specificity, discourse prominence, etc. in different languages. De Hoop and Narasimhan (to appear) suggest that there are two ways to measure the “strength” of arguments. One possibility of measuring the strength of arguments is by using the notion “discourse prominence”. Legendre, Raymond and Smolensky (1993) recognize the importance of argument prominence and translate the notion into their Optimality Theoretic constraints. Although their constraint system does not account for phenomena of DSM and DOM in a straightforward way, the basic insight that discourse prominence of arguments plays a crucial role in case-marking patterns can still be maintained. Another way of measuring the strength of an argument is by looking at its semantic prototypicality, i.e., the degree to which it possesses certain features that characterize the argument’s role in the expressed event (Dowty 1991). On the one hand, features such as volitionality (being in control) and the ability to cause an event or change of state in another participant determine a “prototypical” agent. On the other
hand, a prototypical patient is usually characterized in terms of "affectedness". Following de Hoop and Narasimhan (to appear), we will use strength measured in different ways as a comprehensive term for the different factors.

(18) The degree of argument strength

a. Discourse prominence and referential prominence

<table>
<thead>
<tr>
<th>Strong</th>
<th>High-promptence in</th>
<th>High-promptence in</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>topicality and focality</td>
<td>animacy, definiteness, specificity, etc.</td>
</tr>
</tbody>
</table>

b. Prototypicality

<table>
<thead>
<tr>
<th>Strong</th>
<th>Proto-agent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Proto-patient</td>
</tr>
</tbody>
</table>

We further assume that languages can vary in which features determine argument strength. In Hindi, perfectivity and volitionality can make an agent strong, while animacy/specificity can make a patient strong. In Turkish, it is specificity which determines the strength of an agent or patient (Kornfilt, to appear).

In languages like Korean and Japanese where discourse prominence (i.e., prominence in focality) plays a crucial role in variation in case marking, which arguments are more likely to be case-marked, the strong or the weak ones? Clearly, in its identifying function, case marking identifies strong arguments or prototypical types of arguments. Thus for Korean the identifying function predicts more prominent or stronger focus type, i.e., [+Contrastive focus] to be more frequently case-marked than weaker focus type, i.e., [-Contrastive focus].

Hence the identifying function explains the tendency observed in the experiment that objects left unmarked more frequently when they have low prominence in the dimension of focus (i.e., [-Contrastive focus]) than when they are more prominent (i.e., [+Contrastive focus]).

Interestingly, the distinguishing function predicts the same pattern of case variation for objects: in the case of objects, the high-prominence ones in animacy and definiteness (e.g., human definite objects) are the ones that are more likely to be confused with subjects and are therefore potential candidates for case-marking on the basis of distinguishability. Thus, overt case should be assigned to objects that are more marked (or more subject-like) and case ellipsis

---

7 To say that [+Contrastive focus] is a strong focus and [-Contrastive focus] is a weak focus is not suggesting that being a contrastive focus makes an agent more agentive and a patient more patient-like. As emphasized in the above discussion of argument strength, agentivity and prominence in focality are distinct factors independently contributing to argument strength.
should be more frequently applied to objects that are less prominent and hence are less marked. As we will see in section 4, this prediction is confirmed by the results of the experiment.

It must be noted that, with respect to subject marking, the two explanations make the opposite predictions: the identification function marks the prominent or strong argument (i.e., contrastive focus), while the distinguishing function marks the argument that is more marked as the grammatical role of subject and hence confusable with objects (i.e., low-prominence subjects such as inanimate or indefinite subjects). Whether this is indeed the case we leave for future research.

In the following section, we present new evidence from an elicitation experiment showing that focus and markedness both influence the choice of object forms in Korean.

4. Effects of Focus and Markedness: Experimental Study

To test how the factors of focus and markedness hierarchies affect variation in case ellipsis, we conducted an experimental study with 132 native speakers of Korean, a methodological tool, which has to my knowledge hitherto not been applied to case ellipsis. Although an experimental study would probably not reflect actual performance in the same way as naturally occurring speech data would, it is promising for the following reasons. First, given the multitude of factors involved in CE, an experimental design allows the researcher to investigate the effects of the factors focus, animacy, and definiteness, controlling other factors known to bias the choice between case-marked and case-ellipsed object forms. Second, given the high correlation between the three factors (highly definite referents are very often animate, and indefinite referents are often focused), it allows us to keep their effects apart in the empirical analysis, thereby considering not only their interaction but also enabling us to evaluate their relative importance.

4.1. Methods

Conditions: The three variables tested in this experiment were contrastive focus, animacy and definiteness of objects:

(19) a. Contrastive focus: [+Contrastive focus], [-Contrastive focus]
b. Animacy: Human ([+Human, -Animal]), Inanimate ([-Human, -Animal])
c. Definiteness: Definite (personal pronoun, proper name and definite NP), Indefinite
For the purpose of this study, [+Contrastive focus] refers to the distinction between contrastive focus and other types of focus that are less prominent. As discussed in 3.1, [+Contrastive focus] is the type of focus which involves contrast between the focused element and alternative pieces of information which may be explicitly presented or presupposed; A [-Contrastive focus] object was either completive focus (answer to a yes-no or WH-question) or new information which did not function as completive focus. The term ‘animacy’, as used in this study refers to the distinction between a human-referring object and a genuine inanimate object. With the term ‘definiteness’ I refer to the distinction between the definite NP categories (Definite) and indefinite NPs (Indefinite). Objects considered [Definite] included personal pronouns, proper names and definite NPs of the form ‘demonstrative determiner + noun.’; [Indefinite] objects included indefinite expressions (e.g., etten haksayng ‘some student’, nwuk-wunka ‘someone’).

The three variables tested ([±Contrastive focus], [Animacy], [Definiteness]) resulted in 8 conditions specified in Table 3. There were 10 items per condition, 80 items altogether.

(20) Table 3. Experimental conditions

<table>
<thead>
<tr>
<th>+Contrastive focus</th>
<th>-Contrastive focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human</td>
<td>Inanimate</td>
</tr>
<tr>
<td>Definite</td>
<td>Indefinite</td>
</tr>
<tr>
<td>Human</td>
<td>Inanimate</td>
</tr>
<tr>
<td>Definite</td>
<td>Indefinite</td>
</tr>
<tr>
<td>Human</td>
<td>Inanimate</td>
</tr>
<tr>
<td>Definite</td>
<td>Indefinite</td>
</tr>
<tr>
<td>Human</td>
<td>Inanimate</td>
</tr>
<tr>
<td>Definite</td>
<td>Indefinite</td>
</tr>
</tbody>
</table>

Participants: 132 students from Sungkyunkwan University, ages 21-27, participated in this experiment. The time to complete the experiment was approximately 25 to 30 minutes. All participants were native speakers of Korean, defined as having learned Korean before age five.

Procedures: Each participant was asked to fill in a questionnaire, which contained short conversations between two speakers. These conversations provided contexts for the choice of case-marked and case-ellipsed forms of an object. The participants had to choose as spontaneously as possible between the two object forms in the given contexts. Two examples of what the task looked like are given in (21) and (22) (A full list of experimental items is given in Appendix):

8 Of the five subtypes of contrastive focus illustrated in section 3.1, only replacing focus and selecting focus were included in the questionnaire used the current experiment.
(21) [+Contrastive focus (replacing focus), Human, Definite]\(^9\)
A: Jinswu said that Youngmi was looking for her mother all night
long.
B: No, she was looking for you-Acc/you-ø.

(22) [-Contrastive focus, Human, Indefinite]
A: It's been more than two years since Mijin got a job. How has she
been doing lately?
B: She's been doing well. She bought a house last year and is dating
a nice guy-Acc/a nice guy-ø.

4.2. Results

In most quantitative investigations, there is one variable called the depend­
ent (response or outcome) variable that we want to explain, and another vari­
able that we believe affects the first called the independent (or predictor) vari­
able. In an experiment, the conditions that we vary are the independent vari­
ables, while we measure the response of the dependent variables. “Regression”
is a way of predicting the behavior of the dependent variable according to the
values of one or more independent variables. The present study analyzed the
experimental data using stepwise logistic regression. Logistic regression is a
type of loglinear analysis where there is one dependent variable which is to be
explained by a set of other variables. (Leech, Francis and Xu 1994; Williams
1994; Arnold, Wasow, Losongco and Ginstrom 2000; Wasow 2002; Bresnan,
Cueni, Nikitina and Baayen 2004). The logistic regression analysis of the ex­
perimental data makes it possible to determine (i) which of the factors are sig­
ificantly associated with the choice between case-marked and case-ellipsed
objects and (ii) which of the factors are most important in determining the
choice of object forms.

The factors entered into SPSS's logistic regression module are listed in (23):

(23) Factor groups
a. Dependent variable: Object form (case ellipsis or case marking)
b. Independent variables:
   Contrastive focus ([+Contrastive focus] or [-Contrastive focus])
   Animacy (human or inanimate)
   Definiteness (definite or indefinite)

\(^9\) Note that replacing focus does not simply convey new, non-presupposed information. This type
of focus is counter-presuppositional and hence contrastive since the information presented (you)­
stands in opposition to the other, similar information which the speaker presupposes to be enter­
tained by the addressee (the baby’s mother).
We analyzed the relationship of the factors \([\pm\text{Contrastive focus}], \text{animacy},\) and definiteness to CE by submitting our data to stepwise logistic regression, using SPSS 10.1. To test the reliability of patterns observed for each factor and potential interactions, we used SPSS to calculate the log likelihood ratio for each factor, comparing the model with that factor to a model without that factor.\(^{10}\)

Figure 1 shows that CE correlated with contrastive focus, animacy, and definiteness, such that participants used the case-ellipsed objects more frequently when the objects had low-prominence in the dimension of focus (i.e., \([-\text{Contrastive focus}]) than when they were more prominent (i.e., \([+\text{Contrastive focus}]\)). Furthermore, CE was more frequent when the objects had low-prominence in animacy and definiteness (i.e., inanimate and indefinite) than when they were more prominent (i.e., human and definite).

(24) Figure 1. Logistic regression analysis (% of CE)

Statistical analyses by means of logistic regression showed that the sub-factors of \([-\text{Contrastive focus}], \text{[Inanimate]}\) and \([\text{Indefinite}]\) are all significant predictors of CE for objects:\(^{11}\) the logistic regression selected \([-\text{Contrastive focus}]\)

\(^{10}\) A likelihood is a probability, specifically the probability that the observed values of the dependent may be predicted from the observed values of the independents. Like any probability, the likelihood varies from 0 to 1. The log likelihood (LL), which is the basis for tests of a logistic model, is its log and varies from 0 to minus infinity (it is negative because the log of any number less than 1 is negative). LL is calculated through iteration, using maximum likelihood estimation. The likelihood ratio is a function of log likelihood.

\(^{11}\) -2LL (minus 2 times the log of the likelihood) is a badness-of-fit indicator, that is, large numbers mean poor fit of the model to the data. Because -2LL has approximately a chi-square distribution, it can be used for assessing the significance of logistic regression. The -2LL statistic is the likelihood ratio and reflects the significance of the unexplained variance in the dependent. In SPSS output, this statistic is found in the ‘-2 Log Likelihood’ column of the ‘Iteration History’
(-2LL = 105.5, p = .000), [Inanimate] (-2LL = 97.5, p = .000) and [Indefinite] (-2LL = 120.5, p = .000) as significant factors. This means that these are three distinct factors independently influencing CE. The model also selected the following interactions of the sub-factors as significant: [-Contrastive focus] × [Inanimate] (-2LL = 145, p = .000), [-Contrastive focus] × [Indefinite] (-2LL = 98.5, p = .000), [Inanimate] × [Indefinite] (-2LL = 145, p = .000), [-Contrastive focus] × [Inanimate] × [Indefinite] (-2LL = 98.5, p = .000). These results show that the factors [-Contrastive focus], [Inanimate] and [Indefinite] favor CE by themselves and that CE is strongly favored when these factors converge.

Let us now look at how the two object forms are distributed over each factor. Table 4 below shows the relative frequency of accusative-marked objects and case-ellipsed ones according to the three factors. We can see that case-ellipsed forms are more frequent (i) in the [-Contrastive focus] condition (71%) than in the [+Contrastive focus] condition (29%), (ii) in the inanimate condition (57.7%) than in the human condition (42.3%), and (iii) in the indefinite condition (52.1%) than in the definite condition (47.9%). This pattern of distribution of object forms is consistent with the result of the logistic regression analysis, which showed that CE is highly favored when the object has low-prominence and when the low-prominence values of the independent variables converge.

(25) Table 4. Relative frequency of case-ellipsed objects within a single factor

<table>
<thead>
<tr>
<th>Relative distribution of case-ellipsed objects</th>
</tr>
</thead>
<tbody>
<tr>
<td>[+Contrastive focus]: 1531 (29%) &lt; [-Contrastive focus]: 3749 (71%)</td>
</tr>
<tr>
<td>[Human]: 2233 (42.3%) &lt; [Inanimate]: 3047 (57.7%)</td>
</tr>
<tr>
<td>[Definite]: 2529 (47.9%) &lt; [Indefinite]: 2751 (52.1%)</td>
</tr>
</tbody>
</table>

Table 4 also indicates that CE varies in frequency with respect to the factors of focus, animacy, and definiteness. The frequency of case-ellipsed objects decreases along the following cline:

[-Contrastive focus] > [Inanimate] > [Indefinite] > [Definite] > [Human] > [+Contrastive focus]

The factor [+Contrastive focus] exerts the strongest influence on the choice of object forms, since most cases of CE occur with [-Contrastive focus], while least...
cases of CE are found with [+Contrastive focus]. Likewise, definiteness has the least impact on the choice of object form; case markers for indefinite objects are less frequently omitted than [-Contrastive focus] or inanimate objects, while definite objects are more frequently case-marked than [+Contrastive focus] or human objects. This suggests that [+Contrastive focus] is the strongest factor, followed by animacy, followed by definiteness.

Moreover, looking at the internal distribution of object forms within each single factor, case-ellipsed forms are more frequent with low-prominence than with high-prominence, while the distribution of case-marked forms reveals the opposite pattern:

(26)

<table>
<thead>
<tr>
<th>high prominence:</th>
<th>low prominence:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[+Contrastive focus]</td>
<td>[-Contrastive focus]</td>
</tr>
<tr>
<td>Human</td>
<td>Inanimate</td>
</tr>
<tr>
<td>Definite</td>
<td>Indefinite</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>favor overt marking</td>
<td>favor CE</td>
</tr>
</tbody>
</table>

Let us now look at how the two object forms are distributed in all possible combinations of the factors [+Contrastive focus], animacy, and definiteness, thereby taking into account how these factors interact. This will enable us to evaluate whether or not the relative importance of these factors as suggested by the results obtained for the single factors, i.e., [+Contrastive focus] > animacy > definiteness, does indeed hold true. In evaluating the strength of the factors involved, those contexts are particularly important in which the factor favoring CE and the one that does not favor CE (see (19) above) go together. That is, the cases in which objects are [-Contrastive focus] but [human] or cases in which objects are [inanimate] but [definite], just to give a few examples.

In this way we can then make predictions as to the relative strength of the three factors. If, for example, contrastive focus is more important than animacy for the choice of unmarked objects, then unmarked objects should be more frequent in the [-Contrastive focus][human] condition than in the [+Contrastive focus][inanimate] condition (factors that favor CE are in bold). As we can see in Table 5, this is indeed the case. When balanced for definiteness, ellipsis of accusative case markers occurred more frequently with [-Contrastive focus][human][definite] (64.1%) than with [+Contrastive focus] [inanimate][definite] (38.3%) ($\chi^2 = 175.24, p < .001$). Similarly, for in-
definite objects, ellipsis of accusative case markers occurred more frequently with [-Contrastive focus][human][indefinite] (72.7%) than with [+Contrastive focus] [inanimate][indefinite] (39.8%) ($\chi^2 = 289.84, p < .001$).

(27) Table 5. Frequency of case-ellipsed objects

<table>
<thead>
<tr>
<th></th>
<th>+Contrastive focus</th>
<th>-Contrastive focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definite</td>
<td>429</td>
<td>737</td>
</tr>
<tr>
<td>Inanimate</td>
<td>444</td>
<td>855</td>
</tr>
<tr>
<td>(26.1%)</td>
<td>(23.9%)</td>
<td>(64.1%)</td>
</tr>
<tr>
<td>Human</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definite</td>
<td>610</td>
<td>737</td>
</tr>
<tr>
<td>Inanimate</td>
<td>644</td>
<td>855</td>
</tr>
<tr>
<td>(38.3%)</td>
<td>(39.8%)</td>
<td>(72.7%)</td>
</tr>
<tr>
<td>Human</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definite</td>
<td>985</td>
<td>985</td>
</tr>
<tr>
<td>Inanimate</td>
<td>1127</td>
<td>1127</td>
</tr>
<tr>
<td>(82.9%)</td>
<td>(94%)</td>
<td>(94%)</td>
</tr>
</tbody>
</table>

If contrastive focus is more important than definiteness, then we would expect to find more cases of CE with [-Contrastive focus][definite] than with [+Contrastive focus][indefinite]. We can observe in Table 5 that this is indeed the case, since ellipsis of accusative case markers occurred more frequently with [-Contrastive focus][definite] than with [+Contrastive focus][indefinite] for both human ($\chi^2 = 479.95, p < .001$) and inanimate objects ($\chi^2 = 517.06, p < .001$).

In addition, animacy turns out to be more important than definiteness. As is apparent from Table 5, ellipsis of accusative case markers occurred more frequently with [inanimate][definite] (82.9%) than with [human][indefinite] (72.7%) ($\chi^2 = 39.9, p < .001$) for [-Contrastive focus] objects. Likewise, for [+Contrastive focus] objects, ellipsis occurred significantly more frequently with [inanimate][definite] (38.3%) than with [human][indefinite] (23.9%) ($\chi^2 = 64.46, p < .001$).

The results of the interaction of the three factors thus confirm the relative importance already indicated after the analysis of the single factors, i.e., [-Contrastive focus] > animacy > definiteness.

The relative importance of the independents or predictors measured by means of the chi-square statistic was found to be consistent with the result obtained using logistic regression. The relative importance of the independents can be seen in SPSS by examining the Exp(B) values for each independent variable. Exp(B) values for the six sub-factors of interest here are shown in (28). As can be noted in Table 6, [-Contrastive focus] is the strongest predictor of CE, with an Exp(B) value of +2.76. Next to [-Contrastive focus], [Inanimate] is the strongest predictor of CE, followed by [Indefinite].
Table 6. The relative importance of the independents

<table>
<thead>
<tr>
<th>Subfactor name</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>[-Contrastive focus]</td>
<td>+2.76</td>
</tr>
<tr>
<td>[Inanimate]</td>
<td>+1.21</td>
</tr>
<tr>
<td>[Indefinite]</td>
<td>+1.13</td>
</tr>
<tr>
<td>[Definite]</td>
<td>-1.17</td>
</tr>
<tr>
<td>[Human]</td>
<td>-1.77</td>
</tr>
<tr>
<td>[+Contrastive focus]</td>
<td>-3.16</td>
</tr>
</tbody>
</table>

Note that the Exp(B) show the direction of preference: positive values favor CE, and negative favor case marking. In Table 6 we see, for example, that the independent variable [-Contrastive focus] has a positive value of +2.76, thus favoring CE. In contrast, the independent variable [+Contrastive focus] has the negative value -3.16. Compared to a contrastively focused object, an object that is not contrastively focused has a greater tendency to be case-ellipsed. Note further that all of the low-prominence values of [+Contrastive focus], animacy, and definiteness have positive values, while all of the high-prominence values have negative values. These results thus confirms the results of the chi-square test for the relative importance of the independents discussed above.

4.3. Summary

The data presented in this section, resulting from a questionnaire elicitation, show that variation in object case ellipsis in Korean is influenced by both prominence in focality and markedness. As has been shown in section 4.2, low-prominence in focality, animacy, and definiteness generally favor CE, while high-prominence objects more frequently take overt case. Statistical analyses further showed that the relative importance or strength of the three factors is: [+Contrastive focus] > animacy > definiteness. These findings point to a preference structure for the choice of object forms in Korean as outlined below:

(29) Preference structure for object forms

```
[+Contrastive focus]          [-Contrastive focus]           
[Human]  [Inanimate]          [Human]  [Inanimate]          
[Definite][Indefinite][Definite][Indefinite] [Definite][Indefinite][Definite][Indefinite]
```

Overt marking Null marking

This preference structure predicts that the relative frequency of unmarked ob-
Iconicity and Variation in the Choice of Object Forms increases from the least optimal context on the left ( [+Contrastive focus] [human] [indefinite] ) to the most optimal context on the right ( [-Contrastive focus] [inanimate] [indefinite] ).

5. Iconic Motivation for the Choice of Object Forms

The experiment supports the conclusion that variation in object case ellipsis is influenced by both prominence in focality and markedness and that [+Contrastive focus] is the strongest factor affecting the choice of object forms, followed by animacy, followed by definiteness. The strong effect of the factor [+Contrastive focus] suggests that in Korean the identifying function of case-marking is more dominant than the distinguishing function.

Going one step further, we might now ask whether the effect of [+Contrastive focus] and that of animacy and definiteness can be explained in a unified way. In section 3.2 we analyzed the effect of [+Contrastive focus] as a reflection of the identifying function of case-marking and the effect of animacy and definiteness as a reflection of the distinguishing function. What still needs to be explained is what ties the effects of these three factors. Simply claiming that these effects reflect different functions of case-marking is not providing a theoretically satisfying solution to the problem of the systematicity of variation in the choice of object forms.

In the following, we will propose a unifying functional explanation for the effects of [+Contrastive focus], animacy, and definiteness on the basis of the notion of iconicity. We will first discuss what notions of iconicity prevail in the linguistic literature and under which premises the term iconicity will be used in the present study. We will then go to the question of how the factors of [+Contrastive focus], animacy, and definiteness can be linked to the iconic principle.

The main assumption of the concept of iconicity is that the relation between a concept and its linguistic expression is not arbitrary but potentially motivated in that properties of the concept may be reflected in those of the linguistic sign. Various subtypes of iconicity operating in various areas of grammar have been proposed (cf. e.g., Haiman 1985a, 1985b; Fischer and Nanny 1999), and what is directly relevant to the present study is what Haiman (1985a, 1985b) refers to as the principle of “constructional isomorphism”, a principle which predicts the correlation between conceptual markedness and structural markedness. Applied to the Korean case, this principle predicts that nominals which express more marked or more complex content are morphologically more complex than ones which express less marked or less complex content.

Let us first consider what the principle of iconicity predicts about preferences in the choice of the formal realization for [+Contrastive focus] objects. The distinction between [+Contrastive focus] and [-Contrastive focus] estab-
lished in sections 3.1 and 4.1 above reflects their difference in conceptual complexity: contrastively focused elements are not only new in that they serve as the value assigned to the variable in the pragmatic presupposition but also counter-presuppositional in that they contradict a stated or predicted alternative. Therefore, contrastive focus can be considered informationally more complex than new information types of focus since the latter types of focus lack the counter-presuppositional property and should thus be more likely to receive a more complex formal marking. This prediction for the factor \([\pm\text{Contrastive focus}]\) is strongly confirmed by the results of the experiment discussed in section 4.2.

Having discussed the prediction arising from the iconic principle for \([\pm\text{Contrastive focus}]\) objects, we can now turn to the question of how the animacy/definiteness effects are linked to the iconic principle. A functional explanation of the animacy/definiteness effects on differential case marking across languages has already been proposed by Comrie (1989) and Aissen (2003). The general correlation between marked content and marked expression is succinctly stated by Comrie (1989) as follows (\(A\) and \(P\) refer to subject and object of transitive verb, respectively):

... the most natural kind of transitive construction is one where the \(A\) is high in animacy and definiteness, and the \(P\) is lower in animacy and definiteness; and any deviation from this pattern leads to a more marked construction. (Comrie 1989: 128)

Although Korean is not a language in which the animacy/definiteness effects have been grammaticalized in the case-marking system, the iconic principle nonetheless reflects the preferences in the choice of object form well: the relative frequency of case-ellipsed forms over case-marked forms is predicted to increase with more natural argument types (subjects high in animacy and definiteness and objects low in those dimensions), and to decrease with more marked argument types (low-prominence subjects and high-prominence objects). These general predictions for the factors of animacy and definiteness are confirmed by the results of the current experiment and our previous corpus analyses.

To summarize, we have argued that the factors of \([\pm\text{Contrastive focus}]\), animacy, and definiteness can be linked to the iconic principle. In particular, we have argued that contrastive focus is informationally more complex than types of focus which involve purely new information and accordingly is morphologically more complex. The iconic principle further predicts that more marked argument types (subjects low in animacy and definiteness and objects high in those dimensions) receive a more complex formal marking than more natural or less marked argument types (subjects high in animacy and definiteness and objects low in those dimensions), as argued by Comrie
ness and objects low in those dimensions), as argued by Comrie (1989) and Aissen (2003).

6. Conclusion

Variation in Korean case ellipsis has been attributed to the information status and markedness of arguments, although few studies have compared the two factors explicitly. Through experimentation, we have demonstrated that both factors simultaneously and independently influence variation in object case ellipsis. The results of the experiment further show that the choice between case-marked and case-ellipsed forms of object NPs, according to these two factors is not a matter of categoriality but of preference and that this preference follows cross-linguistic patterns.

The present study also attempted to provide a possible explanation of why the two variants are distributed the way they are by going beyond the mere descriptive/structural level and looking at how the choice between the two variants is motivated by extra-linguistic, cognitive factors. In particular, we have argued that the factors of focus, animacy, and definiteness can be linked to the iconic principle, which predicts the correlation between conceptual markedness/complexity and structural markedness/complexity.

References


**Appendix: Materials for the Experiment**

[+Contrastive focus, Human, Definite]

1. **A:** 애, 너 습직히 누굴 더 좋아하니? 백만이? 아님 영수?
   **B:** 음. 난 영수를/영수 더 좋아해! 습직하고 뒤파 없는 게 정말 맛에 들어.

2. **A:** 그 날 거긴 소회 만나려 왔던 거죠?
   **B:** 당신을/당신 만나려 간 거지, 소회는 무슨.

3. **A:** 일어 선생님이 흥에하는 학생? 당신히 영아 야나?
   **B:** 몰랐어? 요즘엔 영아보다 경식이를/경식이 더 예뻐서하!

4. **A:** 여가 네 조카야? 진짜 예쁘다. 엽마 답았어, 아빠 답았어?
   **B:** 음 나를/나 가장 많이 답았어. 믿거나 말거나지만.

5. **A:** 어머, 길수써씨 사진이네? 녀여전히 이 작가 썰이구나?
   **B:** 아니야, 요즘은 여진경씨/여진경씨 더 좋아해. 사람이 글만큼이나 매력 있
경도.
  B: 나 야. 오늘은 너를/너 만나러 온 거야. 내가 하나 들어 줄 거라고 내가 그러agedList. 미안!
7. A: 야, 그 남자 애, 하는 짓이 어때 그렇게 민우량 돕 같니?
  B: 민우보단 진수를/진수 더 답았다고 봐야지. 민우는 그런 사고는 안 치잡아.
8. A: 이거 인사를 나무라는 거잖아. 우리랑 상관없는데 왜 과민반응이야?
  B: 잘 좀 잡아 봐. 실은 우리를/우리 비난하고 있다구.
  B: 난 미숙이를/미숙이 추천해. 경험도 많고 말도 조리 있게 잘 해.
10. A: 야, 저번에 그 무용과 여학생, 같은 여자가 바로 진짜 몇있길래?
    B: 못하면 또 너를/너 빼뜨릴 수 없지. 자부심을 가져.

[+Contrastive focus, Human, Indefinite]
1. A: 이번에도 그 배우가 주인공이겠네?
  B: 이번엔 신인을/신인 쓴대. 좀 모험일 수도 있었지만.
2. A: 국장님 지금 사모님 발고 계시지?
  B: 아니. 한 손님을/한 손님 만나시고는 잠시 나가셨는데.
  B: 그래 가봐 어떻게 학생을/어떤 학생 혼자하려고 소크 먹였다.
4. A: 사고? 차를 받았단 말이야?
  B: 아니. 그래 아니고, 사람을/사람 쳤어. 심하지 않지만 병원 데려 가보고 다시 연락 줄게.
5. A: 또 아빠한테 가는구나. 데이터 좀 해라, 퇴근만 하면 아빠 만나지 말고.
  B: 오늘은 누구를/누구 좀 만나야 해. 내일 봐!
6. A: 강아지 찾으러 오셨죠? 강아지 이름이?
  B: 아니요. 누구를/누구 좀 찾는데요. 혹시 이런 사람 여기 있나요?
7. A: 영호 개 교사 사귀어 보고 싶다고 했지?
  B: 그랬지. 근데 요즘은 또 강호사를/강호사 사귀어보고 설대나 워라나.
8. A: 소영인 전에 사귀던 남자 친구 지금도 잘 만나고 있나?
  B: 아니. 최근엔 어떤 사업가를/어떤 사업가 새로 만난다는 소문이 있더라.
  B: 어? 엄마가 누구를/누군 대신 보내신다니 직접 오셨냐 보네.
10. A: 내 남자 친구? 오늘 진한 군대 동기 만난 땐어. 근데 왜?
    B: 어떤 여자들/어떤 여자 만나고 있는데? 요 앞 커피숍에서. 내가 봤어!

[+Contrastive focus, Inanimate, Definite]
1. A: 네 맛은 어릴 더 좋아해야? 2030 인원 영아트?
  B: 겸 2030을/2030 더 좋아해야. 거기 옷들이 완전 자기 취향이라고.
2. A: 이 사진은 지금 탐을 적은 거야. 해서강을 적은 거야?
  B: 해서강/해서강 적었고 한 건데 너무 감 катал어서 잘 안 나왔어.
3. A: 그럼 저 절로 하시겠어요?
B: 그건 좋은데 색깔이 아무래도 야해요. 이것을/이것 살게요.
B: 자연관을/자연관 꺼 왔어요. 사람들이 거기 진짜 잘 때 있다는데.
5. A: 이 책 살까 아니면 저 책 살까. 조언 좀 해 주라.
B: 넌 개념 설명을 보려고 하는 거지? 그렇다면 저 책을/저 책 고르는 게 아마도 나을 거야.
B: 그것보다 ‘참도’를/‘참도’ 사줘. 역사책인데 애들 판으로 정말 잘나와서 인기래.
7. A: 네 아들 명산대학이 목표지?
B: 그랬는데, 요즘엔 호국대학을/호국대학 생각하더라고. 거기가 국제화시대에 적합한 대학이래.
B: 아니야. 저것을/저것 살까봐. 내 피부색이 어두워서 이건 좀 속저히 부담스러워.
9. A: 너 요즘도 영남대교 주로 타지(cross)?
B: 아니, 요즘은 강남대교를/강남대교 주로 타. 거기가 혼린 한가해.
10. A: 이 그림을 나는 꼭 사고 싶어. 신비스러운 색감이 너무 좋지 않니?
B: 나라면 저 그림을/저 그림 사겠다. 평온을 추는 듯한 느낌이 들어.

[+Contrastive focus, Inanimate, Indefinite]
1. A: 이번 행사 기념품으로 젤을 생각 중인데 어떻게 생각해?
B: 젤은 쉽게 캐셔블 수 있으니까 수건을/수건 들리는 게 어때?
B: 음? 웬 편지? 명함을/명함 하나 달라고 했을 뿐인데?
3. A: 너 또 홍지 서럼에 잡지 사러 가지?
B: 아니야. 노트/노트 사야 데. 잡지는 내용도 없이 광고만 많아서 이제 안 사.
B: 예 전신 좀 배. 포크로 어떻게 먹니? 슬기로운/슬기라취야.
5. A: 너 내 생일날 그 구두 선물 받았구나?
B: 아니, 이건 있던 거고. 실은 나 노트북/노트북 선물로 받았어!
6. A: 현상이 얘기 줄 선물로 그림책을 살 까 하는데 어때?
B: 글쎄. 근데 아직은 너무 어려니가 장난감을/장난감 사는게 낫지 않을까?
B: 나는 양산을/양산 쓰려고. 쓸 만한 모자가 없어서.
8. A: 너 나 조카 입학선물로 MP3 산 댓지?
B: 웅. 근데 차라리 가방을/가방 살까봐. 생각해 보면 MP3는 있어.
9. A: 철물점엔 왜 또? 전구 사러 가?
B: 아니. 열쇠를/열쇠 하나 사야 해서. 애가 도서관 사물함 때문에 필요하네.
10. A: 이번 여름도 아주 덥겠다. 선동기를 고쳐놔야 되겠어.
B: 이번 기회에 애어으면/애어 언제 장만하지 그래?

[-Contrastive focus, Human, Definite]
1. A: 밖에 손님 계시네?
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B: 몸, 나를/나 만년러 온 사람이야. 이것 좀 정리하고 나가려고.

2. A: 발표 준비할 것 있는 모양이구나. 이렇게 일찍 도서관에 오고.
   B: 너를/너 만년러 온 거야. 실은 부탁할게 좀 있어.

   B: 당분간은 우리를/우리 생각할 틈이나 있겠니? 이번 가면 적응하기도 힘들
   텐데.

   B: 오다가 그 갑도를/그 갑도 봅시. 따라올까봐 너무 무서다.

5. A: 한국 나오면 뭐할 거야?(전화)
   B: 당연히 당신을/당신 만나야지. 이번엔 우리 휴가다운 휴가 좀 가져 보자구.

6. A: 이렇게 날 곳은 날에 누굴 만나러 가는 거야?
   B: 음, 영속이를/영속이 좀 만나려고. 상의할게 좀 있어.

   B: 있지, 실은 개가 나를/나 좋아한데. 어제 고백받았어!

8. A: 아가 그 사람 뭐래? 누굴 찾아온 거야?
   B: 뭐래? 그림 빨리 오지 그랬어. 너를/너 찾아인데!

   B: 김영순씨/김영순씨 섭외해보는 게 어떨까? 왜 있지 저축왕.

10. A: 그렇게 결국은 누군 외한 건지 알아?
    B: 잘 알지. 설은 우리를/우리 위한 일이잖아. 그래서 나도 내림대로는 최선을
        다하고 있다구.

[-Contrastive focus, Human, Indefinite]

1. A: 요새 너네 회사 시끄럽다며?
   B: 음. 사장이 최근에 직원을/직원 뽑았는데, 사장 조카라고 말이 많아.

2. A: 너 컴퓨터 제대로 배우고 싶다고 했지? 내가 좋은 학원 알려줄까?
   B: 고맙지만, 지난달에 과외 선생님을/과외 선생님 구해서 별세 배우고 있어.

3. A: 우리 동아리 회원 수 좀 늘려야 하는데 문제네.
   B: 글쎄 말이야. 방금 신입생을/신입생 잡고 얘기해 봤는데, 잘 안 됐어.

   B: 고생은 괜찮은데, 아무래도 일에 지치가 커서 간병인을/간병인 구해야겠어.

5. A: 그 사람 참 낳이 익어. 어디서 본 것 같기도 하고.
   B: 나도 그래서 생각해 봤는데 누구를/누군 담았어. 근데 이름이 생각이 안 나네.

6. A: 무슨 좋은 일 있니?
   B: 설은 최근에 유학생을/유학생 소개 받았는데, 그냥 느낌이 좋아. 잘 될 것
      같아.

7. A: 너 오늘 누굴 만나갈래 이렇게 몇을 부렸어?
   B: 친구들/친구 좀 만나려고. 아주 특별한 얘기 거든.

8. A: 너는 편하게 그렇게 열심히 공부하는 거야?
   B: 변리사들/변리사 목표로 하고 있는데, 응 해는 잘 되겠지.

9. A: 참! 전영이 잘 지내니?
   B: 회사원들/회사원 사귄다는는데, 성적도 좋고 참 편한 사람은 사람이라더라.
   B: 누군가를/누군가 업정 좋아하니까 가는 거겠지만 내가 뭐 아름을 알아야지.

[-Contrastive focus, Inanimate, Definite]
1. A: 와, 개, 진짜 화가로 성공 하나 보다.
   B: 그래. 곧 현대 걸러리협/현대 걸러리 빌려서 전시회 또 한다.
2. A: 부정남한테 가는데 뭐 부탁할 것 없어?
   B: 잘했다. 나서진 이 서류를/이 서류 좀 전해 줘.
3. A: 시험에 어떻게 대비해야 할지 정말 막막하다.
   B: 저 상자를/저 상자 손기는 거 좀 도와줘. 그럼 내가 너 도와줄게.
4. A: 요즘 왜 이렇게 소나기가 자주 오지?
   B: 그러게, 이 기사들/이 기사 좀 읽어 봐. 기후변화에 관해 잘 설명해놔.
5. A: 요즘 이상하게 자꾸 어지러워.
   B: 너 그 약을/그 약 잘 안 먹고 있니? 내가 하루도 빠뜨리지 말고 먹으러는데.
6. A: 여기서 우리집 어떻게 가는지 알지?
   B: 저 큰 길을/저 큰 길 타다가 병원 앞에서 우회전하면 되잖아.
   B: 아들이 초등학교를/초등학교 다니는데 학생 수가 계속 줄다는 문제도 있어.
8. A: 삼촌, 토목공학과 나오셨지? 이번에 어디 지원하신대?
   B: 삼오건설협/삼오건설 지원 하신 다지, 아마?
9. A: 나 거기 초행길인데 뒤 운전에 도움될 거 없을까?
   B: 이 지도를/이 지도 미리 잘 본 다음 떠나. 도움이 좀 될 거야.
10. A: 네 아주 산사람 다 봤구나. 그래 다음번엔 무슨 산 탈 거야?
    B: 해화산을/해화산 좀 타라고. 바위산인데 가도 가도 매력 있어.

[-Contrastive focus, Inanimate, Indefinite]
1. A: 요즘 재선이가 왜 저렇게 조용하니?
   B: 하루 종일 무슨 게임기/무슨 게임기 가지고 써름하니 그렇지.
   B: 날도 오늘 수업 중에 볼펜을/볼펜 계속 빼끼리는 애한테 아무 말도 못 했어.
3. A: 어어요! 하늘이 텅텅해. 비가 많이 오려나 왔.
   B: 그냥 출근하려고 했는데 우산을/우산 가져야가야 되겠네.
4. A: 왜 이렇게 웃었어?
   B: 미안해. 오다가 지하철 사고가 나서 급히 택시를/택시 잡느라고.
5. A: 여행 갈 집은 이 정도면 됐겠지.
   B: 참, 친숙했/친숙 빼프였다. 치약만 넣은 것일지.
   B: 카메라를/카메라 보러 가신대. 쓰시면 게 너무 구식이라고.
7. A: 야, 너 이번엔 무슨이야?
   B: 소설책을/소설책 빌려했는데, 아직 못 끝냈어. 왜 진도 안가는 셀 있잖아.
8. A: 벽이 너무 헛간해. 뭐로 제워야 몇었을까?
B: 엽자들/엽자 절면 어떻게? 요 앞에 꺼낸은 엽자집도 생겼더라.
9. A: 내일 수업시간에 뭐가 필요하지?
   B: 실습시간이라 계산기를/계산기 가져오라고 해놔.
10. A: 넌 휴가갈 때 뭐 준비해 올래?
    B: 집심도시락/집심도시락 준비할게. 가는 길에 식사할만한 테가 없을 거야.

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