Optional Case Marking of the Possessor in Korean:

A Study of Double Accusative Marking of Possessor/Possessee in Korean Based on Corpus Study and Optimality Computation

BY

Jaehee Bak

A Thesis submitted to
the Faculty of Graduate Studies
In Partial Fulfillment of the Requirements for the Degree of

MASTER OF ARTS

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THE UNIVERSITY OF MANITOBA

FACULTY OF GRADUATE STUDIES
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Abstract

This thesis examines one specific construction (the possessor raising construction) as an example of "optional" case marking in Korean from the perspective of optimality theory. In traditional theory, the main function of the case markers is to assign/determine the grammatical role of the NP in a clause. The relationship between the case marker and the grammatical role is mainly regarded as one-to-one mapping such as subject-nominative case marker, object-accusative case marker, possessor-genitive case marker etc. When the possessor is marked with the accusative case marker in Korean (the so-called possessor raising construction), this one-to-one mapping fails. This unusual case marking is recognized as being conditioned by 'inalienability', 'affectedness' and 'entailment' (Kim 1999; Kang 1998; Cho 2002). However, I claim that the genitive case marker, the accusative case marker, and the zero case marker can each optionally occur with the possessor in the possessor raising construction, even where the possessor satisfies these three conditions. The key concept is that the interaction between the grammatical role and information status of the NP provides the proper form of case marking for the possessor.

Acknowledgment

When I enjoy a beautiful moment in my life, I always feel thankful to my father and my mother. Right now, I am preparing for another time to feel thankful. If it were not for their support and dedication, I could not have completed my MA thesis. With the memory of my father, and the love of my mother, I was able to run to the finish line. "Thanks Mom and Pa. I love you so much."

I cannot forget the support of my advisor, Kevin Russell, who has been an excellent teacher and mentor. I really appreciate his dedication and commitment. He showed me valuable ideas and made comments on my thesis. The discussions every week for 2 years with Dr. Russell made me into a person who will forever study language. Especially, he cheered me up whenever I was in a hole while writing my thesis.

Also, I wish to extend my appreciation to my examiner Lorna Macdonald. When I asked her to be the examiner for my thesis, she gave her acceptance without any hesitation. Her excellent comments and suggestions on this thesis also became the foundation to develop my core ideas. Terry Jansen is my co-examiner and directed me to the best ways to improve my thesis. I deeply thank him. I also thank the external examiner, Christal Kemke in the computer science department at the University of Manitoba. Even though she was busy, she accepted the request to become my examiner.

For me to stand in this position is definitely due to the help of Dr. Jila Ghomeshi. If I had not met her, I would not be the person who I am right now. Her strong training in academic areas and her deep understanding geared me up to concentrate on my studies. I really appreciate Dr.Ghomeshi. Also, I thank Dr. H.C. Wolfart, Dr. Rob Hagawara, and Dr.David Pentland, and my professors in Korea, DungRyong Yi, Si-up Kim, and Yang-Kyu Park. I want to say thanks Ms. Debbie Spendler who is the secretary in the linguistic department.

I show my deep appreciation to my friends Mark Hubert and HeeyJin Kim. Whenever I was blue and in a hole, they always helped me to complete my hard work. I appreciate my friends Heynsuk Song and his wife Satomi, who always understood my position. From the bottom of my heart, I appreciate my friend Sky Onosson,

who helped me with his best even when he suffered great sadness. I also thank my friends Minja Kim, Youngkun Lee, Sungjun Kim, Chelho He, Youngja Park, Toshi and his wife Youngsuk, Nima, Saeed, Shaws (Ninda and her family), Minyoung, Jiyoung, Saheyn, Sun's family, Jinek Kim, Beyngjin Na, Peter, Youngha, Armik, Hanyoung, Sunghoon, Greg, Kotomi and Kei, Kwanjoo Cho, Nanda, Teresa, Ms. Jones, and Mr. Murry MacDonald. My soul mates Youmi Se, Sangkun, and Kyunam, I also thank for their great support.

My family have always supported and trusted me. They made me confident in my studies and the completion of my thesis. Here, I also want to say thanks to them; my brother Inhee Bak, my sisters Heeyja Bak, Sewoo Bak, and Heeykeyng Bak, my sister-in-law Sujung Yang, my borther-in-laws Suhan Ko, Sunchwul Hwang, and Younghan Ji, my lovely nieces Dayeon Ko, Doheyn Bak, Dowun Bak, Sunwoo Ji, and Sehee Hwang, and my nephews Jongheyn Ji and Jeheyn Ji.

I do not forget my father, Sangchel Bak, whose greatness was to devote his whole life to raise us. I love him and his memory will live forever in my heart. The dedication and the love of my mother will be forever in my soul and my heart. I really thank my mother Suntae Kim.

I will dedicate my MA thesis to my parents; the memory of my father and the love of my mother.

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1.Introduction

1-1. Overview

The NPs in a clause have their own grammatical roles (i.e. subject, object and possessor, etc.). These grammatical roles are mainly determined by the semantic roles of the NP (theta-roles: agent, patient, experience, etc.), and they are indicated cross-linguistically by agreement, word-order, or case marking. Of these three possibilities, case marking is the one mainly used to denote the grammatical role of the NP in Korean. The selection of Case Markers (i.e. nominative, accusative, and dative, etc.; henceforth: CM), which are the assigners of the grammatical roles of each NP, depends on the result of the mapping between the two, CM and grammatical role. However, occurrence of the CM is not obligatory in Korean, and it is commonly deleted. The occurrence or deletion of the CM seems to be affected by the information status of the NP (Aissen 2001, 2003; Ko 1998). Therefore, both of these factors, the grammatical role of the NP and the information status of the NP, intervene in deciding the grammatical well-formedness of the CM in Korean.

The relationship between the CM and either the grammatical role or the information status of the NP seems to be most ideal when one-to-one mapping (CM-to-

grammatical role or CM-to-information status of the NP) occurs. However, in real language performance, such ideal relations are not always found. The various double case marking constructions[1] found in Korean are examples of how one-to-one mapping can not always be applied. In intransitive constructions, it is unusual for two NPs to be marked with the nominative case marker (henceforth: NOM), and in transitive constructions, it is also cross-linguistically odd for two NPs to be marked with the accusative case marker (henceforth: ACC).

In this thesis, I attempt to analyze one of these unusual case marking constructions in Korean, called the possessor raising construction (henceforth: PRC). The goal of this study is to illustrate that two decisive factors, namely the grammatical role of the NP and the information status of the NP, work together and interact with each other in the selection of the CM.

Optimality Theory (henceforth: OT) offers a method of analysis that allows for interaction between the two factors mentioned previously, and the CM. At first glance, it provides for separate sets of *constraints* which permit each factor to

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[1] Double case marking constructions are not the same as conjunctions. A conjunction construction connects two NPs which have an identical grammatical role, and the construction can be interpreted as two separate clauses. However, the grammatical functions of the two NPs in a double case marking construction are different; they are separate arguments of a single verb in a single clause.

individually determine the proper CM. Then, both sets of constraints are unified and able to interact. Two specific OT studies directly and technically support the development of this thesis. Aissen's study (2003) can help to manage the optional CM forms in the PRC. The stochastic OT model (Boersma and Hayse 2001, Boersma 2004) can offer an opportunity to handle grammatical judgments of the statistical results of corpus studies.

1-2. What is the Possessor Raising Construction?

The double case marking constructions most often seen in Korean are the double nominative construction and the double accusative construction. The following examples display the double nominative construction in Korean:

(1.1) A. Jina-uy/ka   enni-ka   ipu-ta
           Jina-GEN/NOM   sister-NOM   pretty-DEC
               'Jina's sister is pretty.'

       B. Jina-uy/*ka   kay-ka   ipu-ta
           Jina-GEN/*NOM   dog-NOM   pretty-DEC
               'Jina's dog is pretty.'

In Example (1.1A), the possessor *Jina* can be optionally marked with NOM, the same as the possessee *enni* 'sister'. In Korean the possessor should generally be marked with the genitive case marker *–uy* (henceforth: GEN). When the possessor is instead

marked with NOM, the relationship between the selection of CM and the grammatical role of the NP, which is the possessor, becomes weakened. This is because the possessor in the possessive construction is normally marked with the genitive, and the nominative generally denotes the subject in a clause. The expected mapping between the selection of CM and the grammatical role of the NP seems to require revision. However, not all possessors can be marked with the nominative, as in Example (1.1B). In order for possessor to be marked with NOM, the possessor should be in a specific semantic relation with its possessee, such as a kinship or inalienable relationship. This relationship will be examined in the next chapter.

Similar to the double nominative construction are the double accusative constructions. The following examples show three different double accusative constructions:

(1.2)   A. Jina-ka   na-uy/Ø/lul   phal-ul   ttayli-ess-ta
            Jina-NOM   I-GEN/Ø/ACC   arm-ACC   hit-PAST-DEC
                'Jina hit my arm.'

         B. Sehee-ka   Minsu-eykey/lul/Ø   TV-lul   cwu-ess-ta
            Sehee-NOM   Minsu-DAT/ACC/Ø   TV-ACC   give-PAST-DEC
                'Sehee gave Minsu a TV'

         C. Sehee-ka   swuhak-ul   kongbwu-Ø/lul   ha-ess-ta
            Sehee-NOM   math-ACC   study-Ø/ACC   do-PAST-DEC
                'Sehee studied math'

These examples show the three major types of double accusative constructions in

Korean. In Example (1.2A), two NPs marked with ACC are in the semantic relationship of possessor and possessee. In Example (1.2B), the indirect object *Minsu* is marked with ACC the same as the direct object *TV* in a ditransitive construction, and in Example (1.2C), the predicate noun *kongbwu* 'study' is marked by ACC, the same as the direct object *swuhak* 'math', in the so-called light verb construction.

Let us examine the differences between these three constructions. In the light verb construction, the morpheme *ha-* 'to do' can play two roles: that of an independent verb, and that of a derivational morpheme. As the derivational morpheme, *ha-* 'to do' is joined with a noun, and together they function as a verb. When *ha-* 'to do' functions alone as an independent verb, the direct object is marked with ACC. In this thesis I will not examine the light verb construction in any further detail.

In comparison with the other double accusative constructions in (1.2B) and (1.2C), only in the PRC is a non-core argument, namely the possessor, marked with the ACC. In the PRC, the question remains open as to whether the ACC marking of the possessor is caused by the alternation of grammatical roles (possessor → direct object).

As mentioned, the double nominative marking of the possessor may occur when there is a kinship relation between the possessor and the possessee. "Inalienable relations", "affectedness", and "entailment" seem to be the crucial conditions for the possessor to be marked with the ACC in the PRC. These conditions will be discussed in the following chapter.

Based on my corpus research, grammatical judgment about the PRC is shaky because the frequency of the PRC is pretty rare. Only one example was found in my corpus research[2], and when an internet search was conducted with *Google,* only about 20 examples[3] were discovered where the possessor is marked with ACC in the PRC. In comparison, GEN marking and zero-case marking (henceforth: Zero-CM) of the possessor commonly occur. This infrequent occurrence of ACC marking may indicate that the PRC is ungrammatical in Korean. However, the 21 real examples occur under the same distributional conditions, which are based on the information status of the NP. The occurrence of the same conditions implies that the PRC should be included as a grammatical form, even though it rarely occurs in the corpus.

In this thesis, I attempt to analyze the PRC, which is found in only 21 examples in

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[2] The corpus research was conducted based on the "Sejong Project Corpus". The specific result and the processing of the research will be present in Chapter 4.

[3] Detailed data is in Appendix B.

real data. The status of the CM of the possessor in the PRC confirms simultaneous interaction between the grammatical role and the information status of the NP. In terms of the core interests of my research, I will examine the grammatical conditions which allow the PRC to occur in Korean possessive constructions.

1-3. Reviews of OT-models

1-3.1 Aissen (2003)

In the computation of case marking in the PRC, the information status of the NP may determine either covert case marking or overt case marking. Aissen's study of "Differential Object Marking" provides the theoretical groundwork regarding how the information status of the NP interacts with the choice of covert versus overt case marking. In more practical terms, the devices of OT computation in her study provide the technical foundation for computing case marking in the PRC. This subsection briefly reviews her study, and particularly those points of her study which will be connected with the examination of the PRC.

According to Aissen, the distribution of overt/covert case marking is cross-linguistically diverse, and this distribution is not in free variation. In her viewpoint, in each language the semantic and pragmatic status of the direct object are able to

influence the decision of covert versus overt case marking.

It is common for language with overt case-marking of direct objects to mark some objects, but not others, depending on semantics and pragmatic features of the object.

(Aissen, 2003: 435)

    a.   Sinhalese, in which case-marking is optional, but only animate-referring objects may be case-marked. (Gair,1970)

    b.   Hebrew, in which object case-marking is obligatory but is limited to definite object (Givon 1978)

    c.   Romanian, in which object case-marking is obligatory for some objects, optional for others, and excluded for a third set.   Those for which it is obligatory are animate-referring personal pronouns and proper noun (Farkas 1978)

(Aissen, 2003: 436)

Her insights provide a theoretical schema of case marking, and if applied to the PRC,

the optional case marking of the possessor can be seen to be possibly associated with

semantic and pragmatic factors.

Even though differential object marking is cross-linguistically common, not all

languages have it.   In addition, the semantic and pragmatic factors, which both

decide upon the choice of overt/covert case marking, are applied differently

depending on the particular language.

...even among those that do have DOM, languages differ according to which dimensions are relevant...

(Aissen, 2003: 437)

According to Aissen, the semantic and pragmatic values of the direct object are

unearthed as the dimensions of animacy, definiteness, and person etc.   In some

languages, the hierarchical scale of animacy, definiteness, and person etc is in a direct relationship with the choice of overt/covert case marking.   In other languages, however, the hierarchical scale does not directly interact with the grammatical relation of the NP.   Aissen's Relation and Definiteness Scales are presented here:

(1.3)   The relation scale and the definiteness scale

    A.   Relation Scale: Subject > Object

                                   Su >   Obj

    B.   Definiteness Scale: Pronoun>Name>Definite>Indefinite-Specific>Non-Specific

                                   Pro>   PN   > Def   > Spec   >NSpec

                                                      (Aissen, 2003: 444)

The Relation Scale refers to the hierarchy of obligatory grammatical roles in a clause. As the scale indicates, subjects are more obligatory than objects.   The Definiteness Scale indicates the relative definiteness of various types of nominals.   Aissen devises interaction constraints based on *Harmonic Alignment Constraints* in OT.   One example of the interaction between the relation scale and the definiteness scale is illustrated as follows:

(1.4)   Application of Harmonic Alignment

    <Markedness Hierarchies on Object>

    A. Obj/NSpec > Obj/Spec > Obj/Def> Obj/PN > Obj/Pro

    < The constraints Sub-hierarchies derived from (1.4A)>

    B. *Obj/Pro >> *Obj/PN >> *Obj/Def >>* Obj/Spec >> *Obj/NSpec

                                                            (Aissen, 2003: 445)

The scale presented in (1.4 A) is a development from the Definiteness Scale (1.3 B),

as applied to objects through Harmonic Alignment. The scale begins at the left with the least marked, which are non-specific objects, and continues to the most marked, which are pronominal objects. The constraints in (1.4 B) are the inverse of scale (1.4 A), indicating that highly marked objects are a greater violation than those which are lower or unmarked. Talking about covert/overt case marking, Aissen suggests one relevant notion, which is the "non-audible exponent". In the general linguistic view, covert case marking is a deletion process which takes place after the case marking has already occurred. In contrast, unlike the notion 'deletion of CM', Aissen's non-audible exponent always invites the absence of case marking.

"…I assume that the presentation of nominal arguments may include a value for the CASE, e.g., ACCUSATIVE, GENITIVE, DATIVE. Such specification will normally have an audible exponent. But, CASE may also be left with no value, in which case there can be no audible exponent. We want then to penalize the absence of case specification most forcefully for high prominence object…the absence of case specification is penalized by …*$\emptyset_c$ (read: Star zero), subscripted with C for CASE "

(Aissen, 2003: 477)

If covert-case marking is necessary for NPs in some language, overt marking must be violated according to *STRUC$_c$. For instance, the indefinite object cannot be marked with an overt case marker in Hebrew, so *STRUC$_c$ plays a crucial role in the expression of definiteness in that language (Aissen, 2003: 477-478). Aissen proposes two constraints for overt/covert case marking in Differential Object Marking:

(1.5)   Two constraints for overt/covert case marking

$*\emptyset_c$: Penalizes the absence of a value for the feature CASE

$*STRUC_c$: Penalizes the value for the morphological category CASE

(Aissen, 2003: 477-478)

These new constraints are necessary because the constraint ranking presented above

(1.4B) does not account for the relative markedness of covert/overt case marking on

NPs in Hebrew.   For instance, in Hebrew, an overt case marker obligatorily occurs

with a definite direct object:

(1.6)   Hebrew Examples:

'et is obligatory with definite objects, but does not occur with indefinite

a. Ha-seret   her'a   'et-ha-milxama (Obj/Def)
   the-movie   showed   ACC-the-war
      'The movie showed the war.'

b. Ha-seret   her'a   (*'et)-ha-milxama (Obj/Indef)
   the-movie   showed   (ACC-)war
      'The movie showed a war'

(Aissen, 2003: 453)

In order to produce the correct winning candidate, $*STRUC_c$ must be located between

*Obj/Def and *Obj/Indef:

(1.7)   <Constraint Ranking for Hebrew>

$*Obj/Def\&*\emptyset_c \gg *STRUC_c \gg *Obj/Spec\&*\emptyset_c \gg *Obj/NSpec\&*\emptyset_c$

Tableau (1.7A) OT computation of Hebrew differential object case marking

Role:PATIENT DEF:Specific/Indefinite	$*Obj/Def\&*\emptyset_c$	$*STRUC_c$	$*Obj/Spec\&*\emptyset_c$	$*Obj/NSpec\&*\emptyset_c$
GF:Obj DEF:Specific/Indefinite CASE: ACC		*!		
☞GF:Obj DEF:Specific/Indefinite CASE: ∅			*	

(Aissen, 2003: 455)

Tableau (1.7B) Tableau based on (1.7A) with a definite object

Role:PATIENT DEF: Definite	$*Obj/Def\&*\emptyset_c$	$*\emptyset_c$	$*Obj/Spec\&*\emptyset_c$	$*Obj/NSpec\&*\emptyset_c$
☞GF:Obj DEF: Definite CASE: ACC	*		*!	
GF:Obj DEF: Definite CASE: ∅	*	*!		

Aissen's study can be summarized in three points:

1) Differential case marking is common across languages

2) Differential case marking is affected by the semantic and pragmatic values

of the NP (definiteness, specificity, animacy etc)

3) Covert case marking is obligatory in $*STRUC_c$.

In order to conduct a sound analysis of the PRC, Aissen's study can serve as a firm

theoretical basis.   First, the semantic and pragmatic values of the possessor can cause

differential case marking of the possessor in the PRC.   The information status of the

possessor provides for the selection of the proper CM form.   Second, I assume that

the covert-case marking of the possessor is the obligatory result of the constraint

*STRUC$_c$.   In this thesis, Aissen's research will be used as the theoretical base in

examining the information status of the NP in the corpus data in Chapter 4, and in

Chapter 5 the constraints (OT model application) in her study will be applied to the

PRC in Korean.

1-3.2 Stochastic OT-model

While Aissen's approach provides the theoretical OT background for analysis of the

PRC, the stochastic OT-model offers a practical approach to the optional occurrence

of CM (GEN, ACC, and covert-case marking) and permits the occurrence of ACC

marking on the possessor, even if it does not occur frequently.   According to

Boersma (2004), the frequency of occurrence in a corpus does not directly reflect on

the consideration of grammatical judgment:

It has been observed that the grammaticality judgment does not necessarily reflect relative corpus
frequencies: it is possible that structure A is judged as more grammatical than structure B, whereas as
the same time structure B occurs more often in actual language data than structure A.

(Boersma, 2004: 1)

In OT, if a candidate violates a more highly ranked constraint, it is chosen as the

optimal output. However, in the Stochastic OT model, constraints are ranked along

a continuous scale, and this scale responds to input data in a relative way. Therefore,

the relative distance between constraints in the continuous scale may correspond to

optimal and optional outputs. The following illustrates how Boersma develops this

model:

(1.8) Categorical Ranking of Constraints along a continuous scale:

Constraints Ranking : C1 >> C2 >> C3

$$C_1 \qquad C_2 \qquad C_3$$

strict   lax
(high ranked)   (low ranked)
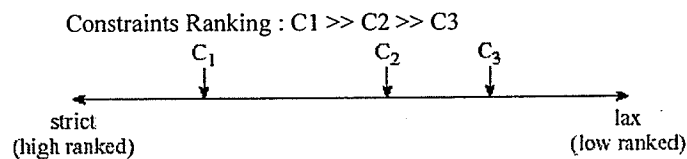
(Boersma and Hayes, 2001: 4)

In his words, the constraint pair C2 and C3 is less fixed than that of C1 and C2

because the relative distance between C2 and C3 is closer than that between C1 and

C2. In addition, he assumes that "the constraints act as if they are associated with

range value instead of single point". Therefore, the above diagram is modified:

(1.9) Constraints Ranking : C1 >> C2 >> C3

  A. Categorical Ranking with Range:

$$C_1 \qquad C_2$$

strict   lax

  B. Free Ranking:

$$C_2 \qquad C_3$$

strict   lax
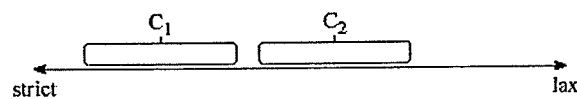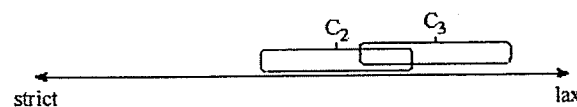
(Boersma and Hayes, 2001: 4-5)

In the above diagrams (1.8, 1.9), the constraint pair C2 and C3 may overlap more than

the pair C1 and C2 because their relative distance is smaller, and C1 is closest to the

strict end of the scale, being the highest ranked constraint.

(1.10)   Hypothetical Overlapping Ranking Distribution
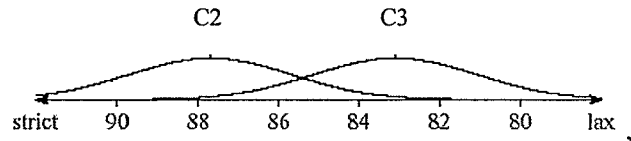
"In the overlapping distribution, the ranking values for C2 and C3 are at the hypothetical value 87.7
and 83.1...C2 will outrank C3 at evaluation time in most cases, but the opposite ranking will
occasionally hold.   Simple calculations show that the percentages for these outcomes will tend
towards the values 94.8 % (C2>> C3) and 5.2 % (C3 >> C2)"   (Boersma and Hayes, 2001: 5)

According to the hypothetical diagram, the overlapped range is located between 87.7

and 83.1.   When the constraint range overlaps, an optional candidate can be

considered as the output.   Therefore, if a candidate is the optimal output as evaluated

by the constraint ranking (C2>>C3), the candidate has a 94.8 % chance to occur.   If

the constraint ranking (C3>>C2) is satisfied by a candidate, there is only a 5.2 %

chance of occurrence.

Boersma and Hayes (2001) provide an example using "Ilokano metathesis" to

demonstrate the acceptability of optional outputs.   Two optional outputs can be

accepted when the constraints are re-ranked.   The following is Boersma and Hayes's

application:

1

(1.11)   Ilokano metathesis

"The basic analysis of metathesis seems fairly straightforward: it reflects a dynamic competition between a constraint that bans glottal stop in coda position (*ʔ]σ) with a constraint that requires faithfulness to underlying linear order (LINEARITY). A form like **taw.ʔen** avoids coda [ʔ], whereas a form like **taʔ.wen** preserves the order of /ʔ/ and /o/ (→ [w]), as seen in the underlying form /taʔo-en /. Both candidates alter the syllabicity of /o/, thus violating a constraint IDENT-IO(syllabic). The basic idea is summarized in the following tableaux, which derive the two alternative outcomes:"

A. *Glade Formation*

/taʔo-en /	LINEARITY	*ʔ]σ	IDENT-IO(syllabic)
☞taʔ.wen		*	*
taw.ʔen	*!		*

B. *Glade Formation and Metathesis*

/taʔo-en /	*ʔ]σ	LINEARITY	IDENT-IO(syllabic)
taʔ.wen	*!		*
☞taw.ʔen		*	*

(Boersma and Hayes, 2001:12)

In the above tableaux, two candidates **taʔ.wen** and **taw.ʔen** can be accepted as optional outputs if the constraints are re-ranked. The fully faithful output [ta.ʔo.en] cannot occur because it violates the highly ranked constraint MAX-IO(V), and both possible candidates violate other constraints ranked higher than *ʔ]σ or LINEARITY (Boresma and Hayes 2001). In addition, both candidates in the above tableaux violate the lowest ranked constraint, so this constraint is not crucial to select the optimal output from the two possible candidates shown. However, the constraints cannot be freely re-ranked to accept any candidate as the optimal output. The following is the frequency of occurrence of constraints in the corpus in Boersma and Hayes (2001):

(1.12) Ranking for Ilkano

     All constraints have ranking value of 100

     ONSET   :164.00

     MAX-IO(V)   :162.00

     *ʔ]σ   :111.08

     LINEARITY   :110.92

     IDENT-IO (syllabic)   :55.60

We started with all constraints at a ranking value (selected arbitrarily) of 100. The algorithm was provided with 21,000 underlying/surface pairs… each one had an equal probability (i.e. 50% each for **taʔ.wen** and **taw.ʔen.**

                       (Boersma and Hayes, 2001: 17)

According to the above ranking, the arithmetic result of the two constraints *ʔ]σ and LINEARITY are nearly identical when compared with the other constraints. Boersma and Hayes (2001) assume "the algorithmic ranking assigns close or near-identical values (for example, free ranking of *ʔ]σ and LINEARITY, needed for optional metathesis)."

The ranking value of the lowest-ranked constraint IDENT-IO (syllabic) is relatively small, and the ranking values of two highly ranked constraints are quite different from the two free ranking constraints. As a result, Boersma and Hayes consider that the optional outputs result from the evaluation of the free ranked constraints.

In the PRC, the choice of case marking of the possessor occurs under similar conditions to those described above. In other words, the optional occurrence of CM types (the ACC, the GEN and cover marking) is grammatically acceptable, for the

same reason that the relevant violable constraints will be low-ranked and close to each

other in terms of their individual rankings.

1-4. Outline

In this thesis, I attempt to examine the PRC in Korean based on the corpus study and

OT computation. In Chapter 2, I review the conditions mentioned in previous

studies such as inalienability, affectedness, and entailment conditions. In Chapter 3,

I examine the NP forms and the notions of Aboutness Topic, newness, and oldness,

based on information structure. In Chapter 4, I mainly focus on the results of my

corpus study. In Chapter 5, based on the examination of the previous chapter and

the corpus studies, I propose to examine PRC with respect to OT computation. In

the last Chapter I review the thesis.

2. Conditions on the Possessor Raising Construction in Korean

The main focus of this chapter is to investigate the conditions discussed in previous studies[4] as applied to the PRC. These conditions in previous studies are not *the sufficient conditions* but they may close to being *the necessary conditions* in view of the statistical tendencies of my corpus study.

The first condition, the notion of inalienable relation between possessor and possessee is emphasized by many Korean linguists as the relevant condition for constructing the PRC. According to Kim (1999), only this relationship is essential for the possessor to be marked with ACC.

(2.1) A. Youngsu-ka   Chelsu-uy/lul   phal-ul   ttayli-ess-ta.
       Y-NOM   C-GEN/ACC   arm-ACC   hit-PAST-DEC
            'Youngsu hit Chelsu's arm'

       B. Youngsu-ka   Chelsu-uy/*lul   cup-ul   ttayli-ess-ta
       Y-NOM   C-GEN/*ACC   cup-ACC   hit-PAST-DEC
            'Youngsu hit Chelsu's cup'

In the above example (2.1A), the possessor and the possessee are in an inalienable relationship, so the possessor can be marked with ACC. The reason why the

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[4] Double case marking in Korean has been examined based on generative grammar because the case marker has been considered as an assigner of structural CASE. Most conditions related to the PRC in previous studies come from the tradition of generative grammar.

possessor in (2.1B) cannot be marked with ACC, is that the possessor and the possessee are not in an inalienable relationship. The notion of 'inalienability' is a type of conceptual relation about the real-world relationship between the possessor and the possessee. However, the reflection of this real-world relation to language expression seems cross-linguistically diverse. Inalienability seems meaningful in the possessive construction in Korean, because it allows for the possessor to be marked with ACC in the PRC. In the first section of this chapter, I attempt to examine the inalienable relation between the possessor and the possessee in two ways: 1) whether inalienability is the necessary condition for the PRC or not; 2) what kind of noun reflects the grammatical notion of inalienability in Korean.

The second condition to be looked at is affectedness. A transitive verb in Korean can be categorized as belonging to one of two groups depending on whether or not the transitive verb can take an affected theme as the direct object. The term 'affected' means being under physical influence. For instance, the verb *think* does not give a lot of physical influence to its direct object, so it cannot take an affected theme as a direct object. However, the verb *hit* does, and can. When ACC marks the possessor in the PRC, the possessor is an affected theme and it corresponds with those verbs that can take an affected theme as a direct object (Kang, 1999).

(2.2) A. Youngsu-ka Chelsu-lul   sayngkakha-ess-ta.
          Y-NOM   C-ACC   think-PAST-DEC
             'Youngsu thinks of Chelsu'

        B. Youngsu-ka   Chelsu-lul   ttayli-ess-ta
           Y-NOM   C-ACC   hit-PAST-DEC
             'Youngsu hit Chelsu'

        C. * Youngsu-ka sarang-ul   ttayli-ess-ta
           Y-NOM   love-ACC   hit-PAST-DEC
             * 'Youngsu hit love.'

In both examples (2.2A and 2.2B), *Chelsu* is the direct object, but the degree of

affectedness of the object by the verb is different in each case.   In (2.2B) *Chelsu* is

more directly affected by the verb *ttayli-* 'to hit' than in (2.2A) with the verb

sayngkakha- 'to think'.   A verb such as *ttayli-* 'to hit' cannot take an abstract noun

such as *sarang* 'love' (2.2C).   In Section 2, I will explore 'affectedness' as the

necessary condition for the PRC with both pro- and counter-examples.

As the third condition, entailment will be examined in Section 3.   According to Cho

(2003), in order for the possessor to be marked with the same CM as its possessee, the

possessor should be entailed by the main verb in a clause through the possessee.   In

other words, the possibility of a noun being the object for a given verb is determined

by that verb, and a possessor and possessee may or may not both satisfy the

requirements of any particular verb.   For instance, 'hitting Chelsu's arm' entails

'hitting Chelsu', but 'drinking John's blood' does not entail 'drinking John':

(2.3)	A.Youngsu-ka	Chelsu-uy/lul	phal-ul	ttayli-ess-ta.
	Y-NOM	C-GEN/ACC	arm-ACC	hit-PAST-DEC

        'Youngsu hit Chelsu's arm'

	B.Vampire-ka	John-uy/*lul	phi-lul	masi-ess-ta
	V-NOM	J-GEN/*ACC	blood-ACC	drink-PAST-DEC

        'A vampire drank John's blood.'

                                   (Cho, 2003: 345)

In (2.3 A), the verb *ttayli-* 'to hit' can entail *Chelsu* as being its object, by virtue of the inalienable relationship between *Chelsu* and *phal* 'arm'. In contrast, the verb *masi-* 'to drink' cannot entail the possessor of *phi-* 'blood' to be its object, even though the same inalienable relationship is present. In Section 3, I will examine whether this entailment condition is actually necessary in the PRC.

2-1. Inalienable Relations

Not every possessor can be marked with the same CM as its possessee in Korean. For this to occur, the semantic relationship between the possessor and its possessee should be 'inalienable'. The notion of inalienability, which is a semantic expression, reflects the real-world conceptual relationship between the possessor and its possession. For instance, if we compare the real-world objects represented by JAEHO'S ARM with JAEHO'S POEM, the relationship between JAEHO and ARM

is closer than the relationship between JAEHO and POEM in the real-world. This real-world conceptual closeness is reflected in language by semantic notions such as 'kinship', 'inalienability' etc. The linguistic expression of this reflection seems diverse across languages. In Korean, inalienability is not revealed at all by a distinctive morpheme or syntactic modification, so the inalienability of a noun to its owner is not obvious. I will discuss more about degrees of inalienability at the end of this section.

Even though the notion of kinship is a sub-type of inalienability, these two notions are employed as two different conditions in the double case marking constructions found in Korean. A highly inalienable relationship between the possessor and the possessee acts as the crucial condition for the possessor to be marked with ACC in the PRC, whereas the kinship relationship, which is a lower-degree inalienable relationship in Korean, does not (Kim 1999).

(2.4)   Sehee-ka   Minsu-uy/lul   meli-ul   chi-ess-ta.
          S-NOM   M-GEN/ACC   arm-ACC   beat-PAST-DEC
               'Sehee beat Minsu's head'

In Example (2.4), the possessor *Minsu* can be optionally marked with GEN or ACC. Both case markings are grammatical. According to Kim, it is the high degree of 'inalienable relation' between the possessor and the possessee which accounts for the

suitability of ACC marking on the possessor.

(2.5)   A. Chelsu-uy/ka   emeni-ka   apu-si-ta
            C-GEN/NOM   mother-NOM   sick-HON-DEC
                Chelsu's mother is sick'

         A' Younghee-ka   Chelsu-uy/*lul   emeni-lul   mosi-(e)-o-ta
            Y-NOM   C-GEN/*ACC   mother-NOM   take-come-DEC
                Younghee took Chelsu's mother'

         B. Younghee-uy/ka   kabang-i   yeyppu-ta
            Y-GEN/NOM   bag-NOM   pretty-DEC
                Younghee's bag is pretty'

         B' Chelsu-ka   Younghee-uy/*lul   kabang-ul   ppayas-ass-ta
            C-NOM   Y-GEN/*ACC   bag-ACC   snatch-PAST-DEC
                Chelsu snatched Younghee's bag'

                                                              (Kim,1999: 503)

Kim argues that the kinship relationship allows for double nominative marking on the

possessor in (2.5A), but it does not do so in the PRC.   In Example (2.5A') where the

possessor and the possessee are in a kinship relationship, the possessor cannot be

marked with ACC because the condition of 'inalienable relation' is not satisfied.

As mentioned earlier, the degree of inalienability often is not very clear in Korean.

For instance, Kim considers that the possessee *kabang* 'bag' in (2.5B') only has the

"kinship"[5] relationship with its possessor, but not a highly inalienable relationship.

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[5] 'Kinship Relation' means a family member (mother, father, son etc).   Kim uses the notion 'Kinship' in a broader way to include material objects.

However, his judgment about this example is debatable because I believe that in

(2.5B') the possessor may in fact be marked with ACC, despite its indicated

ungrammaticality.

According to You (1998), he states the difficulty of recognizing the degree of

inalienability, especially the distinction between kinship and inalienability.   In

addition, he argues that the inalienable relationship sometimes does not work as the

necessary condition in the PRC.

(2.6)   Yitolyeng-i   Chwunhyangi-uy/lul   chima-lul   capatangki-ess-ta
         Y-NOM   C-GEN/ACC   skirt-ACC   pull-PAST-DEC
              'Yitolyeng pulled Chwunhyang's skirt.'

                                                              (You, 1998: 331)

Even though the possessee *chima* 'skirt' in Example (2.6) is an inanimate noun, like

kabang 'bag' in (2.5B), the possessor *Chwunhyangi* can be marked with ACC.   If

Kim's judgment is right, and high inalienability is a necessary condition for the

possessor to be marked with ACC, the degree of inalienability of *chima* 'skirt' and

kabang 'bag' must be different (*chima* 'skirt' has higher inalienability than *kabang*

'bag') or Example (2.6) could not be grammatical.   However, they do not seem to be

different in their degree of inalienability, close to a "kinship" relationship with the

possessor based on Kim's judgment.

To measure the degree of inalienability in Korean, I attempted to search for actual

data of the double accusative case marking construction through the *Google* search

engine.   The search words, for the possessee, were such things as body parts, family,

clothing, intimate inanimate materials, and regular inanimate materials[6].   When the

words were body parts, 20 actual examples (See Appendix B) were found, but when

the search words were others, unfortunately, there were no actual examples at all.

As a result, even though the degree of inalienability seems to vary depending on the

individual judgment, in terms of actual examples, only body parts seem to

demonstrate high inalienability.[7]   The degree of inalienability in Korean can be

expressed as a continuum:

(2.7)   Continuum of Inalienable Relationship in Korean

Inalienable ← ---→ Alienable
body-parts -----family member---clothing-----the object material such as car, TV

Even though I did not find similar examples in actual data, Example (2.6) seems to be

grammatical, and the possessor can be marked with ACC in Example (2.5B').   In

addition, these examples works as counterexamples to show that inalienability is not

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[6] Search words with human possessors: 20 different body parts (hand, foot, leg, head etc) , family (mother, father, son etc) , clothing, intimate inanimate nouns (car, bag, house etc) and regular inanimate nouns (rock, river etc)

[7] Based on the result of the internet search, when the body part is the possessee and the person is the possessor, there are more opportunities to find the PRC.   Therefore, body parts will be used as the token of the corpus research in Chapter 4.

always the necessary condition in the PRC.

2-2. Affectedness

"Affectedness" has been considered to be another sufficient condition in the PRC in previous studies.   As mentioned before, transitive verbs in Korean can be distinguished by whether or not they can take an affected theme as a direct object.

According to Kim (1999), the notion of "affectedness" means that the verb has a physical effect on the NP.   The transitive verb in the PRC usually takes an affected theme, so the possessor, as the affected theme in the PRC, is marked with ACC.

(2.8)   A. Chelsu-ka   Swuni-uy/*lul   kabang-ul   cap-ass-ta
             C-NOM   S-GEN/*ACC   bag-ACC   catch-PAST-DEC
               'Chelsu caught Swuni's bag.'

         B. Chelsu-ka   Swuni-uy/*lul   phal-ul   po-ass-ta
             C-NOM   S-GEN/*ACC   arm-ACC   see-PAST-DEC
               'Chelsu saw Swuni's arm'

                                                           (Kim, 1999: 505)

Swuni-lul in Example (2.8A) is not marked with ACC because the possessor *Swuni* and its possessee *kabang* 'bag' do not satisfy the condition of a high inalienable relationship.   Based on the previous section, the inalienable relationship mostly works as the necessary condition when the possessor is marked with the ACC.

Unlike Example (2.8A), the possessor and its possessee in (2.8B) are in a high inalienable relationship, but the possessor *Swuni* cannot be marked with ACC. If a high inalienable relationship is the only condition for ACC marking on the possessor, then the possessor in (2.8B) could be marked with the ACC; but it cannot. The reason for this is that the verb in (2.8B) cannot take an affected theme, so the possessor cannot be marked with ACC. According to Kim (1999) and Kang (1999), the degree of "affectedness" of the transitive verb is another condition in the PRC.

In some sense, the possessor in (2.8B) seems to be able to be marked with ACC, because the notion of "affectedness" is determined by semantic judgment. Kim points out the fact that the judgment of affectedness seems relative, but not absolute. For instance, the verb *ccaylyepo-* 'to look intently' can take an affected theme as the direct object even though this verb is not a 'highly-affected' verb[8].

(2.9)   nay-ka   Swuni-uy/lul   phal-ul   ccaylyepo-ass-ta
        I-NOM   S-GEN/ACC   arm-ACC   look(hard/intently)-PAST-DEC
                 'Chelsu looked intently Swuni's arm.'
                                                        (Kim, 1999: 506)

Unlike Example (2.8B), the verb *ccaylyepo-* 'to look intently' in Example (2.9) acts like those verbs which have a physical effect on the possessor.

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[8] 'Highly-affected verb' means that the verb usually takes an 'affected theme' as its direct object. Examples are hit, catch, beat etc.

As a result, there seems to be no clear standard for distinguishing which verb is a highly-affected verb or not in Korean. Kim mentions this difficulty, and suggests that the degree of affectedness of the verb may be illustrated as a continuum:

(2.10) Degree of affectedness effects depending on verbs

     MAX ← .....- cha---- cap-...----ccaylyepo------------po--...............→MIN
        ...- kick---catch-...---look intently------- see-...

                                          (Kim, 1999: 507)

According to Cho (2003), affectedness is doubtful as the necessary condition in the PRC. The following is suggested as a counterexample:

(2.11)   A. Vampire-ka   John-uy/ul   phi-lul   ppal-ass-ta
             V-NOM   J-GEN/ACC   blood-ACC   suck-PAST-DEC
              'A vampire sucked John's blood.'

        B. Vampire-ka   John-uy/*ul   phi-lul   masi-ass-ta
             V-NOM   J-GEN/*ACC   blood-ACC   drink-PAST-DEC
              'A vampire drank John's blood.'

                                         (Cho, 2003: 345)

The verb *masi-* 'to drink' seems to be a highly affected verb, so it should take an affected theme as its direct object, and the possessor should be marked with ACC. However, the possessor in (2.11B) cannot be marked with ACC. In the above examples, both verbs *ppal-* 'to suck' and *masi-* 'to drink' are 'highly-affected verbs'. Both verbs may extend physical influence to the possessors, and cause the possessors to be marked with ACC. Example (2.11A) follows the condition of affectedness, but

(2.11B) does not. According to Cho, the "entailment" condition is the solution for these problematic cases. In the next section, this entailment condition will be discussed.

In addition, Cho illustrates another counterexample, questioning whether affectedness is an absolutely necessary condition for the PRC. The verbs *po-* 'to see', *kuli-* 'to draw', and *sacin ccik-* 'to take a picture' may take an affected theme as their direct object, even though they are not 'highly-affected verbs' according to Kim.

(2.12) A. Mary-ka   John-uy/ul   elkwul-ul   po-ass-ta
       M-NOM   J-GEN/ACC   face-ACC   see-PAST-DEC
       'Mary saw John's face.'

     B. Mary-ka   John-uy/ul   elkwul-ul   kuli-ess-ta
       M-NOM   J-GEN/ACC   face-ACC   draw-PAST-DEC
       'Mary drew John's face.'

     C. Mary-ka   John-uy/ul   elkwul-ul   sacin   ccik-ess-ta
       M-NOM   J-GEN/ACC   face-ACC   picture   take-PAST-DEC
       'Mary took a picture of John's face.'

                                                         (Cho, 2003: 345-346)

According to Cho, the possessors in the above examples are able to be marked with ACC because the relationship between the verbs and the possessors in these examples can satisfy the so-called 'entailment' condition, even though it cannot satisfy the affectedness condition.

2-3. Entailment

Even though high inalienability and affectedness seem to be the necessary conditions in which the possessor is marked with ACC, there are still counterexamples. For instance, the inalienable relationship is not satisfied, but the possessor can be marked with ACC in Example (2.6). Regarding affectedness, the possessor cannot be marked with ACC even if the verb *masi-* 'to drink' is considered to be a highly-affected verb in (2.11B). On the contrary, even though the verbs are not highly-affected verbs in Example (2.12), the possessors are marked with the ACC.

According Cho (2003), an entailment pattern allows us to solve the problematic cases. Cho's entailment assumption about the possessor and the possessee is as follows:

(2.13)   A Conditioning Factor in Possessor Agreement
          Verb (Possessor, Possessee) → Verb (Possessor)

                                                      (Cho, 2003: 346)

   A.   Tom   hit   Mark's arm.
          Hit (Mark, Arm)→ Hit (Mark) OK
   B.   Tom   hit   Mark's brother
          Hit (Mark, Brother)→ Hit (Mark) Not-OK

The qualification of an entailment condition is shown in the above two Examples (2.13A, and 2.13B). "Hitting Mark's arm" in (2.13A) implies "hitting Mark" but "hitting Mark's brother" does not imply "hitting Mark" at all. In the entailment pattern, the possessor should be the semantic argument of the main verb in a clause.

In addition, in order for the possessor to be marked with the same CM as its possessee, the possessor should satisfy the entailment condition. A double case marking construction is the result of the expression of this co-argument of the verb.

When the possessor is marked with ACC, it should be a semantic theme of the main verb, based on the entailment condition. If this is applied to the problematic cases in the previous section, the result is as follows:

(2.14) Yitolyeng-i   Chwunhyangi-uy/lul   chima-lul   capatangki-ess-ta
        Y-NOM   C-GEN/ACC   skirt-ACC   pull-PAST-DEC
        'Yitolyeng pulled Chwunhyang's skirt.'

(You, 1998: 331)

Example (2.6) is repeated here. In Example (2.14), even though the relationship between the possessor *Chwunhyangi* and the possessee *chima* 'skirt' does not satisfy the condition of a high inalienable relationship, the possessor is marked with ACC. If we apply the entailment condition to Example (2.14), we can see the reason for the possessor to be able to be marked with ACC.

(2.15) verb [capatanki-]: to pull
capatanki- 'to pull' (Chwunhyangi ,chima) → capatangki- 'to pull' (Chwunhyagi)   OK
Interpretation : "Pulling Chwunhyangi's skirt" implies "Pulling Chwunhyangi"

Based on (2.15), the possessor *Chwunhyangi* is a co-argument of the main verb *capatangki-* 'to pull', and satisfies the entailment condition. Therefore, the action of

the verb 'pulling' semantically influences the possessor, which can be marked with ACC without the consideration of the condition of inalienable relationship.

Affectedness seemed to be another necessary condition in the PRC. The problematic example (2.11B) can be explained by the entailment condition. Even though the verb *masi-* 'to drink' is a highly-affected verb, the action of the verb 'drinking' cannot affect the possessor at all because the verb *masi-*'to drink' always requires liquid material as its semantic theme.

(2.16)   A.   verb [ppal-]: to suck
                 ppal- 'to suck'(John, blood) → ppal- 'to suck' (John) OK
                 Interpretation: "Sucking John's blood" implies "Sucking John"

         B.   verb[masi-]:to drink
                 masi- 'to drink' (John, blood) → masi- 'to drink' (John) Not-OK
                 Interpretation: "Drinking John's blood" cannot imply "Drinking John"

According to (2.16A), the possessor *John* can be the co-argument of the verb *ppal-* 'to suck', so the possessor can be marked with the ACC. However, the possessor in (2.16B) is not an argument of the verb *masi-* 'to drink', so this possessor cannot be marked with the ACC.

The entailment condition does not, however, seem to be an absolute condition. In the following examples, the possessor can be marked with ACC, but it is not the co-

argument of the main verb.

(2.17) A. uysa-ka   Jinhee-uy/lul   phyentosen-ul   cal-ass-ta
            doctor-NOM   J-GEN/ACC   tonsil-ACC   amputate-PAST-DEC
        'The doctor amputated Jinhee's tonsil.'

        verb[cal-] to amputate
        cal- 'to amputate' (Jinhee, tonsil)→ cal- 'to amputate' (Jinhee) Not-OK
        Interpretation: "Amputate Jinhee's tonsil" cannot imply "Amputate Jinhee"

        B. ...혈관이 막힌 환자를 혈관을 뚫어주기...[9]
        hyelkwan-i   makhi-n   hwanca-lul   hyelkwan-ul   ttwul-e-cwu-ki..
        blood-vessel-N plugged-R patient-A   blood-vessel-A dilate
        (N:NOM, A: ACC, R-REL)
        'Dilating the patient's blood vessel, who is suffering from plugged blood vessel'

        verb[ttwul-]: to dilate
        ttwul- 'to dilate' (patient, blood-vessel) → ttwul- 'to dilate' (patient)   Not-OK
        Interpretation: "Dilating the patient's blood-vessel" cannot imply "Dilating the patient"

In Example (2.17A), the possessor *Jinhee* cannot be the semantic theme of the verb *cal-* 'amputate', so the possessor cannot satisfy the entailment condition (2.13). However, the possessor in (2.17) can be marked with ACC even without satisfaction of the entailment condition.   Example (2.17B) was discovered in the internet search. Even though this example also cannot satisfy the entailment condition, the possessor *hwanca* 'patient' is marked with ACC.   Therefore, the entailment condition is not an absolute condition, but the partial necessary condition for the possessor to be marked

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[9]Data Source : http://impulse.medigate.net/webzine/impulse_special/impulse_special_3_2.html

with ACC in the PRC.

2-4. Closing

In this chapter, three conditions, the inalienable relationship, affectedness and the entailment condition, of the PRC are examined. Based on the examples, they are noteworthy conditions for the possessor to be marked with ACC. These conditions are not *sufficient conditions*, but they may be closer to being necessary conditions. In addition, all of these have counterexamples, and they are certainly not absolute conditions.

3.Information Packaging in the PRC

Optional case marking, such as covert versus overt marking, is common across languages (Aissen, 2003). According to Aissen, this differential case marking does not seem to be the result of free variation, but is caused by features of the NP itself, such as animacy, definiteness, person, or information status. Therefore, case marking is not only affected by the grammatical role of the NP but also by the discrepancy among these features of the NP. Optional case marking such as overt marking (ACC or GEN) and covert marking (zero-CM) of the possessor in the PRC is also rendered by the nature of the possessor itself (including information status).

According to Lambrecht (1994), the information status of the NP in a clause is cross-linguistically marked by prosody and morpho-syntax. For instance, 'pitch' as a prosodic coding property, in English, can indicate that the discourse status of the NP is focused, or emphasized, in a clause; while in Korean a morphological marker such as the 'topic marker' plays the same role to code the focused NP as 'pitch' does in English.

In Korean, syntactic modification and morphological marking are employed for

denoting the information status of the NP. "Scrambling"[10] (word-order change), is a

syntactic way to code the information status of the NP in a clause. The occurrence

of the CM, as the morphological designator of information status, seems to be

robustly correlated with information packaging (Ko 1998; Lee 1998). At the

beginning of this chapter, I will examine the interrelationship between the information

status of the NP and case marking in Korean.

Aissen does not mention deletion of the NP (henceforth: zero-pronoun) in relation to

case marking. If case marking is interfaced with the information status of the NP,

zero-pronoun should be included in the scope of our examination in Korean. The

deletion form of the NP is another way to reveal the information status of the

discourse, because those NPs which are old information are able to be deleted. As a

result, the resolution of NP forms such as the NP with CM (overt case marking), the

NP without CM (covert case marking) and zero-pronoun are all the reflection of the

differences in the information status of the NP in a clause. In the parallel, three

different forms of the possessor in the PRC are correlated to information packaging.

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[10] According to Choi (1995), if the NP marked with the so-called topic marker (henceforth: TOP) is categorized as the topic or the contrastive focus in terms of information structure, then only these NPs are likely to be scrambled in a clause. When the NP is marked with a TOP –nun/-un in Korean, it gains [+prominent] features. These [+prominent] features can act as a motivation for scrambling.

In the second section, I attempt to scrutinize the resolution of the NP forms in the

discourse context based on previous studies.

The terminologies used in information structure are knotty, because definitions such

as topic, oldness and newness etc. are diverse, and the usages for them are various in

linguistic literatures.   In order to avoid the ambiguity caused by existing terminology,

it is necessary to define what I will use them for in this thesis.   In the last section of

this chapter, I will discuss and define this terminology.

3-1. Information Structure and CM occurrence

According to Jun (2003), case (abstract case: function and meaning) can determine

CM form.   Even though Jun considers both semantic and syntactic case together

under the notion of abstract case, case generally refers to the theta-role, or semantic

role, of the NP.   In this view, case is an absolute factor in determining not only the

grammatical role of the NP but also its CM.   Therefore, the mapping between case,

grammatical role, and CM will be as follows: for agent and subject, NOM; for patient

and object, ACC, etc.

Even though the CM seems to be crucial for designating case in Korean NPs, the CM is often deleted, without any semantic alteration. According to Shon (1999), there are two important issues connected to CM deletion: 1) CM deletion mostly takes place for pragmatic reasons; 2) The grammatical relation of the NP cannot be changed when the CM is omitted from the NP.

"... Cases are marked by case particles, which may often be omitted in various discourse contexts. Nominative, accusative, dative, static locative, goal, and genitive particles are frequently omitted in sentences, especially in colloquial speech, because these cases are most easily predictable from the syntactic structure, word order, and the nature of the predicate used ..."   (Shon,1999: 327)

On the whole, his attention does not go beyond the one-to-one (grammatical role of the NP-to-CM) mapping because, as he explains, CM deletion is acceptable when the grammatical role of the NP is predictable by the hearer/reader. Based on Shon's insight, case marking seems to be mandatory, and then CM deletion is optional.

However, Lee (1998) indicates that CM deletion does not seem to be elective at all, because it can give a more natural reading than if the NP were marked with the CM, in some cases. In the following example, the direct object without ACC demonstrates Lee's assertion:

(3.1)   A. tambay   piwuseyo?
          Cigarette   smoke
          'Do you smoke?'   (natural)

          B. tambay-lul   piwuseyo?
          Cigarette-ACC   smoke
          'Do you really smoke?'   (emphasize)

                                                        (Lee N-S, 1988: 341)

The direct object in the examples (3.1A and 3.1B) is *tambay* 'cigarette', and the

thematic role of this NP is the patient.   According to Shon's assumption, ACC

should primarily mark the direct object in a clause, and then the CM, as in Example

(3.1A), is deleted for pragmatic reasons.   As a result, the CM occurrence in Example

(3.1B) would seem to be the default construction.   In general, the default

construction should be interpreted as more natural-sounding than the marked

construction, where the CM is deleted.   However, between (3.1A) and (3.1B),

Example (3.1A) is more natural-sounding for Korean speakers.   It is (3.1B), where

the ACC is present, that is marked.   In particular, it indicates the speaker's surprise

at the unexpectedness of the statement; if the addressee is a known non-smoker, and

the speaker wishes to emphasize the unusualness of them smoking, they will

deliberately include the ACC.   Therefore, Shon's generalization is not always

appropriate to explain CM occurrence on the NP.   CM deletion does not always

imply a pragmatic interpretation in Korean.   Lee indicates that the deletion or the

occurrence of the CM is not always based on the interpretation given by Shon.

As a result, CM occurrence, similarly to CM deletion, is not only affected by the grammatical role of the NP, but also by pragmatics. In other words, the CM mapping is not processed one-to-one (grammatical role of the NP-to-CM), but the mapping is the outcome of a many-to-one (grammatical role of the NP and information status of NP-to-CM) interaction.

The possibility of many-to-one is examined by Ko (1998). In Ko's study, the information status of the NP plays the key-role in the selection of one of the direct object forms, such as CM occurrence, CM deletion and zero-pronoun[11] in Korean. For instance, if the NP is presupposed by the hearer but it is old information in the discourse, CM deletion more frequently materializes than not, according to her corpus research.

Therefore, I assert that CM occurrence is not only affected by the one-to-one pattern of the case assigning process, but also the mapping between the CM and the two qualifying factors, namely the grammatical role and the information status of the NP. The relationship between them can be expressed as a diagram:

---

[11] 'Zero pronoun' means that the NP occurs as Ellipsis in Ko's study.

(3.2)   case-marking

Grammatical roles of NP---------------Information Status of NP

theta-role
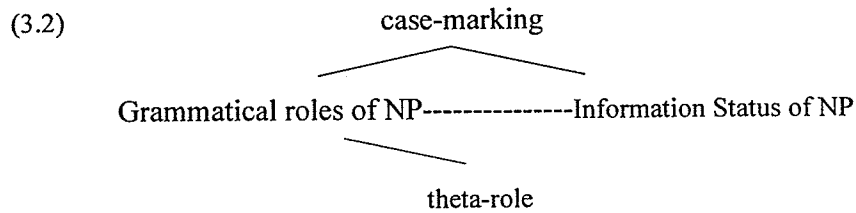
In diagram (3.2), the possibility of optional case marking is implied because case marking is a result of interaction between the grammatical role of the NP and the information status of the NP.   As a result, I claim that instances where the possessor is marked with the ACC in the PRC is not a result of free variation or accidental mistake, but is instead the by-product of this interaction.

3-2. NP Forms in Korean

When examining information structure and case marking in Korean, it is necessary that zero-pronoun be included along with occurrence of the CM and absence of the CM, as possible NP forms.   These three NP forms are distributed depending on the information status of the NP in Korean.

These NP forms are not in free variation, but instead their occurrence will display the interaction between the grammatical role and the information status of the NP in a clause.   Korean speakers do not randomly select one of these three forms in discourse.

According to Ko (1998), the Korean object NP is realized by three different forms, depending on the information status of the direct object NP in a clause. She examines the distribution and the frequency of these three forms based on actual data:

Data Source (a) Informal telephone conversation between two people, (b) Informal narratives by four people freely expressing what they think about a certain topic in a newsgroup for housewives, and (c) Four Formal TV news broadcast scripts. The following table illustrates her research result:

(3.3) Distribution of object NP forms in three different speech styles

	Telephone Conversation		Newsgroup		News Broadcast	
Object-lul(ACC)	59	29%	44	64%	67	74%
Object (Bare NP)	56	28%	10	14%	21	23%
Zero-pronoun	68	33%	8	12%	3	3%
Object-delimiter	20	10%	7	10%	0	0%
Total	203	100%	69	100%	91	100%

(Ko,1998: 3)

(3.4)

A. The frequency of the occurrence of the accusative case marker in Korean
News Broadcast (74 %) > Newsgroup (64 %) > Telephone Conversation (29 %)

B. The frequency of the elision of the object NP
Telephone Conversation(33 %) > Newsgroup (12%) > News Broadcast (3%)

In table (3.3), ACC marking more frequently occurs in news broadcasts and newsgroups than in telephone conversations. Ko suggests that the speech style, in her words the "formality" of the speakers, can determine whether ACC marking is

present or not. Formality seems to reflect on the high proportion of occurrences of

ACC marking and the low proportion of occurrences of the zero-pronoun in

newsgroups and in news broadcasts.

"...the informal newsgroup narrative stands in the middle of the telephone conversation and the news broadcast in the frequency of both the occurrence of the ACC marker and the elision of the NP. This confirms the common observation that what determines the frequency of the realization and elision of these two factors is the degree of formality"

(Ko, 1998: 4)

Ko claims that ACC marking occurs less in informal conversation than in formal

speech. The speech style (degree of formality) primarily determines the NP forms

(NP with CM, NP without CM, and zero-pronoun) in the discourse. However, in

telephone conversation, the frequencies of occurrence of these three forms are not

statistically different from those of news broadcasts and newsgroups. The

percentage of occurrence of these three forms is as follows:

(3.5) Distribution of object NP forms in Telephone Conversation:
    Overt case marked (29 %), Bare NP (28 %), Elided NP (33 %)

In order to examine this corpus result, Ko assumes three relevant concepts in her

study. First, ACC is considered to be a delimiter[12] in Korean. Similar to other

delimiters, ACC can be an operator to assign some pragmatic meaning to the NP.

---

[12] Yang (1972), Cho and Sells (1995. p310) refer to one of the groups of nominal suffixes in Korean as delimiters. Based on the place where they occur, they categorize two groups. The first group (X-Lim) includes: man 'only'; kkaci 'even'; mace 'even'; etc. The second group (Z-Lim) includes: the topic marker 'nun/un'; to 'also'; NOM 'i/ka'; ACC 'ul/lul'; GEN 'uy'. The occurrence order is NP-(X-Lim)-(Z-Lim). However, in Cha and Lee (1999), the X-Lim suffixes and the topic marker group as semantic and pragmatic particles, and NOM, ACC, and GEN group as case markers in traditional Korean grammar.

Secondly, the bare NP (NP without the ACC) is considered to be the canonical form

amongst the three forms of NP realizations. Finally, zero-pronoun is regarded as an

equivalent representation along with the other two forms. She explains the

distribution of NP forms in Telephone Conversation based on information packaging:

(3.6) Application of three types of forms in the Ko's assumption

	Hearer-old	Hearer-new
Discourse-old	Zero-pronoun	N/A
Discourse-new	NP-without ACC	NP-ACC (lul)

In table (3.6), when the NP is discourse-new and hearer-new, ACC (as a delimiter)

marks this NP in order to indicate "Identificational Kontrast"[13]. However, when the

NP is hearer-old, this NP can be either discourse-old or discourse-new. If the NP

occurs previously in the discourse context, the realization of the NP must be the zero-

pronoun. On the other hand, if the NP is a new item in the discourse, a bare NP form

would be present.

Ko's research about Telephone Conversation implies that the resolution of NP forms

is strongly bound with the information status of the NP. This information status of

---

[13] According to E.Vallduvi (1998), the notion "contrastiveness" can be divided into four separate concepts. "Identificational Kontrast" is one of them:

Definition of Identificational Kontrast : if M= {a,b,c} and P (x $\in$ M), then P (a)

(e.g.) John introduced [BILL] to Sue.

In this example, the effect of Kontrast is merely 'identificational'; if a proposition of the form 'John introduced X to Sue' is true, then 'John introduced Bill to Sue' is true. Related to Korean CM marking, "Identificational Kontrast" is mainly applied to overt ACC marking on the direct object by Ko (1998). Ko points out that the ACC marker works as the indicator of "Identificational Kontrast" in Korean.

the NP acts as a factor to control the resolution of the NP forms in Korean.

3-3. Definitions

Before reporting the research data, terms such as 'topic', 'newness' and 'oldness' should be defined. According to Ko's research (1998), the notions of oldness and newness are relevant in being able to recognize the information status of the NP because the distinction can be a motivation in determining the NP forms. However, the definitions of these terms vary in linguistic literature. Therefore, in order for these terms to be applied properly in this thesis, a unified definition of these terms seems indispensable.

According to Korean linguistic traditions (Se, ed 1996; Sohn 1980; Sung 1985c), the notion of 'topic' has been defined in four different ways:

1) When the speaker is talking about something, the 'something' [14] is the topic in the discourse.

2) The topic seems to be related to the old information in the discourse.[15]

---

[14] According to Lambrecht (1994), this notion is related to "aboutness". Mostly the subject in a clause is realized as the topic, but not always.

[15] This notion of topic is used with the opposite meaning from the notion of focus, which indicates the new information.

3) The topic is the primary focused phrase in the discourse.

4) The topic is decided by syntactic position or morphological marking.

When the notion of 'topic' is used in Korean, these four definitions have been combined and used together under the name of 'topic'. Therefore, the term 'topic' often causes ambiguity in Korean linguistics. This ambiguity of the term 'topic' comes from the insight that topic marker *–nun/-un* (henceforth: TOP) normally indicates the NP as the topic in a clause.

(3.7)   Topic and Non-Topic in Korean

A.   Chelsu-ka   pap-ul   mek-ess-ta
     C-NOM   rice-ACC   eat-PAST-DEC
     'Chelsu ate rice'

B.   Chelsu-nun   pap-ul   mek-ess-ta
     C-TOP   rice-ACC   eat-PAST-DEC
     'About Chelsu, he ate rice'

In the above Example (3.7B), the NP *Chelsu-nun* is regarded as the topic in a clause because it is marked with TOP. In a question-answer pair, (3.7B) is the answer to the question 'What does Chelsu eat?' rather than the question 'Who ate rice?'. In Example (3.7A), the NP *Chelsu* marked with NOM is the non-topic, such as the answer to the question 'Who ate the rice?'. Based on the four definitions of topic, the NP *Chelsu-nun* in (3.7B) can satisfy all of the definitions. As a result, TOP in

Korean seems closely related to topic and usually indicates the topic in a clause.

However, the NP marked with the TOP does not always indicate the topic in Korean.

The following conversation shows an example of this:

(3.8)   <conversation>

A1: Jina-ka   way   honna-ko   issni?

J-NOM   why   be-scold-CP   be

'Why is Jina scolded?'

B1: ung,   nwukwu-lul   ttayli-ess-na   boa

Um,   someone-ACC   hit-PAST-CP   seem

'(Jina) seems to hit somebody.'

A2: Jina-ka   nwukwu-lul   ttayli-ess-ni?

J-NOM   Whom-ACC   hit-PAST-Q

'Whom did Jina hit?'

B2: ung,   Jina-ka   Sue-nun   ttayli-ess-na   boa

um,   J-NOM   S-TOP   hit-PAST-CP   seem

'Jina seems to hit Sue.'

In the Example (3.8-B2), the direct object *Sue* is marked with TOP.   If TOP always

denotes the topic NP in Korean, then *Sue-nun* would be the topic in that clause.

However, it is difficult to assert that *Sue-nun* (3.8 -B2) is the topic because in this

discourse context, the speaker is talking about the subject *Jina* rather than the direct

object *Sue*. This fact does not satisfy definition (1) of topic.   Moreover, *Sue-nun* in

(3.8-B2) is not old information in the discourse.   This is a counterexample of

definition (2) of the topic; *Sue-nun* does not agree with the first two definitions of

topic.   Since *Sue-nun* seems to be more emphasized (focused) than the subject *Jina-

ka* in (3.8-B2), definition (3) of topic seems to be satisfied.   According to definition

(4) of the topic, this phrase looks like the topic because it is morphologically marked.

Choi (1995) distinguishes this phrase from the topic, and calls it 'a contrastive focus'.

TOP in Korean seems to not always indicate the NP which is the topic in a clause (the

topic definition 1 and 2) , and sometimes is marked on NPs which are not in fact the

topic.

Lambrecht (1994) discusses topic as being essentially what the speaker is talking

about in a clause, so the clause can increase the hearer's knowledge about that topic.

This notion of topic by Lambrecht follows in the traditional notion of topic, what I

will refer to as the "Aboutness Topic".   In this thesis, I will use the same concept as

Lambrecht whenever referring to Aboutness Topic, regardless of whether the NP is

marked with TOP or not.

Regarding the notions of oldness and newness, the distinction between them mainly

relies on two perspectives: 1) whether or not the phrase occurs previously in the

discourse; 2) whether or not the phrase is presupposable by the hearer.   According to

Ko (1998), she distinguishes oldness and newness, considering these from two

aspects: speaker/hearer oldness and newness, and discourse oldness and newness.   In

this thesis, I mainly attempt to broadly distinguish the notions of oldness and newness

from the viewpoint of discourse, because in corpus studies it is difficult to recognize the status of a phrase in terms of oldness and newness.

In order to conduct my study of the corpus, some guidelines were needed for the determination of old and new information. The concept of oldness that I used is divided into two categories: "activated" information, and "presupposable" information. "Activated" information is that which is mentioned in the immediate discourse context. As immediate discourse context is a vague notion, I arbitrarily counted only the previous three or fewer sentences and the immediate phrase within which a possessor was found for this purpose. If the possessor had a referent within the immediate discourse context, then it was counted as "activated", and therefore "old". "Presupposable" information is that information which is assumed to be known to the speaker and hearer, regardless of its presence in the discourse. Both activated and presupposable information were counted as old information, everything else was counted as new.

4. Research Based on Corpus

In this chapter, the actual corpus research will be reported. This research was conducted focusing on the syntactic, semantic, prosodic and informational statuses of the possessor and the possessee based on spoken and written texts. The goals of this corpus research are summarized as follows: 1) to verify whether the PRC really exists in actual language performance 2) to discern which conditions cause each type of the possessor forms in the PRC.

All corpus data in this research comes from the "Sejong-Project Corpus" (21st century SeJong Corpus Project), which was recoded by the National Korean Language Research Institute. This data was tagged by sentence and by paragraph in XML format. In this corpus study, I selected 20 scripts of broadcasting of talk shows and reality TV shows, and 10 published essays (written text) (See Appendix A).

In the raw corpus data, none of the specific pieces of information according to the possessor in the PRC were tagged, so I tagged 36 different piece of information, such as cases, information states, and pauses. The tokens in the corpus data research are body parts (*meli* 'head or hair', *son* 'hand', *tali* 'leg' etc See more details: Appendix

A), because body parts of the possessee largely satisfy the condition of the inalienable relationship mentioned in Chapter 2. The categorical tagging follows notions mentioned in previous studies, which include entailment, inalienable relation, discourse-old and discourse-new, aboutness-topic etc. These 36 different categories are listed in appendix A. A real tagging example is presented here:

(4.1) Actual Corpus Data

<Full Discourse>

Line1: <p>애초에 청진까지 가는 동안 밥은 얻어 먹으면서 가기로 했기 때문에 그 47전은 말하자면 우리의 비상금이었다.</p>

Line2: <p>지도를 펴놓고 청진을 찾았다.</p>

Line3: <p>주소를 들고 친구가 취직해 있는 시계포 찾기는 별로 어렵지 않았다. 그러나 우리를 본

Line4:친구는 반갑기는 한 것 같은데 덮어놓고 **팔**[16]부터 내저으면서 우리를 쫓듯이 했다.</p>

Line5: <p>당시 송전부터 협곡까지는 기차가 있었지만 아버님은 기차삯을 절약하느라 꼬박 3백 리를 이틀 동안

<Gloss of Relevant Lines in Discourse>

"1.친구는 반갑기는 한 것 같은데 덮어놓고 2. **팔**부터 내저으면서 우리를 쫓듯이 했다 "

1. Chinkwu-nun	pankap-ki-nun	ha-n	kes	kathuntey	tephenohko
friend-TOP	glad-NM-TOP	do-RL	Comp	seem	without.asking
2. phal-pwuthe	nayceu-myense		wuli-lul	ccochtusi-ha-ass-ta	
arm-from	wave-PPRE		we-ACC	expel-do-PAST-DEC	

"Even though (our) friend seemed to be glad to see us, (he) waved us away without saying a word."

<Samples of Tagging for Example 4.1 (Numbers refer to list of 36 items in Appendix A)>

<About Tokens : body part-possessee>

1. The citation form of the body part : phal (arm)

2. The grammatical role of the possessee : oblique

---

[16] This indicates an instance of a token

3. The thematic role of the possessee : ablative

<About possessor>
11. Person of the possessor : 3rd person
12. The type of phrase of the possessor : zero-pronoun
13. The case marker of the possessor: zero
19A. What is the Aboutness topic in a clause? Subject
19B. Is the possessor new or old? old

The details of corpus research in this chapter consist of the following. In the first section, I focused on the total number of tokens (194 in the spoken texts and 353 in the written texts), without any specific conditions. The main focus in Section 1 is to review the application of previous studies (Ko and Aissen) in my corpus research. The examination is conducted to answer the question of whether the degree of frequency of occurrence of NP forms is statistically important or not, under the conditions of formality, distinctions of person, and distinctions of new versus old. In the second section, 49 additional examples of body part possessees from the same corpus were added, with the condition that there be an explicit possessor. In Section 2, I first attempt to find instances of the PRC (or pseudo-PRC) which satisfy the three conditions of inalienable relation, object-possessee, and entailment, and then to scrutinize which of these conditions can satisfy this construction in Korean.

4-1. Corpus Studies Based on Conditions of the Previous Studies

4-1-1. NP Forms of Possessor and Formality

According to Ko (1998), the speech style 'formality' is one of the crucial factors in determining the NP form (NP with CM, NP without CM, and zero pronoun) in Korean. Ko suggests that formality seems to be reflected by the high proportion of occurrences of CM marking and the low proportion of occurrences of the zero-pronoun in formal speech. On the other hand, CM marking occurs less in informal conversation. Formality is a crucial factor in determining the NP form, including possessors[17].

In my corpus, all spoken texts (20 broadcast transcripts) are from talk-shows, informal interviews with ordinary citizens, and reality television program. All written texts are essays. Even though the essays are less formal than academic writing, they are more formal than colloquial conversation, and the broadcast transcripts used in the spoken text portion of the corpus. The following table is the distribution of the occurrence of the three possessor forms in the corpus study. The frequency results are illustrated based on the distinction between spoken and written text:

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[17] The possessor forms used in this thesis as follows :
        possessor with CM : Possessor-with CM
        possessor without CM: Bare-Possessor
        Covert-possessor : Zero-Pronoun

(4.2) The Distribution of Three Different Possessor forms with the Body Part Possessee

	Spoken Text		Written Text	
Zero-Pronoun	145	75 %	277	79 %
Bare Possessor	23	12 %	33	9%
Possessor-with CM	26	13 %	43	12 %
Total	194	100 %	353	100 %

The frequency of Zero-Pronoun is much higher than any other possessor form in this table, without distinguishing between spoken and written text. The distribution of proportion of the three types does not seem to be much different between the spoken and written text; Zero-pronoun is most frequent, followed by Possessor-with Cm, and Bare Possessor being least frequent. One reason for the high proportion of Zero-Pronoun occurrences is that the hearer/reader can usually predict what the possessor is within the context.

In Ko's research (1998: 3 ; see Table 1. on p. 45), the frequency of occurrence of four possible forms for the object in a clause are presented. The frequency in these cases is very different from the data for possessors. In general, the Zero-pronoun is not much more frequent than other possibilities, and in more formal speech it is much less frequent, with Accusative case-marking being generally frequent in all speech styles. One explanation for this difference may be that the possessor is never a core argument in a clause, while the object always is. More research into the frequency of occurrence of forms for the subject would be needed to confirm this hypothesis.

The form of the possessor occuring with a body part possessee is summarized in the following scale:

(4.3) The form of the possessor with a body part possessee:
          Zero-Pronoun > Bare Possessor/Possessor with CM

If 'formality' plays a crucial role in determining the choice of possessor form, the distribution of proportion of the three forms would be different between the spoken and written texts. According to Ko (1998), in formal speech, the NP with CM occurs much more frequently than the NP without CM. If formality is relevant, Bare Possessor should occur more often in spoken text, while Possessor- with CM should occur more frequently in written text.

In fact, the frequency of occurrence of Possessor-with CM is 13 % (26 cases out of 194) in spoken texts and 12 % (43 cases out of 353) in written texts. Bare Possessors occur in 12 % of spoken texts, and 9 % of written texts. The proportions of occurrence of these forms are not different enough for 'formality' to be a crucial condition for determining the possessor form. Therefore, I do not take for granted 'formality' as a condition on Korean possessor forms in this thesis.

4-1-2. NP Forms of Possessor and Person Distinction

In this sub-section, the frequency of occurrence of possessor forms will be examined

based on person distinction.   Aissen (2003) points out that overt/covert case marking

is cross linguistically forced by the nature of the NP itself, such as its definiteness,

animacy, specificity etc, based on functional/typological literature.   If Aissen's study

can be applied to the PRC in Korean, the frequencies of overt case marking (possessor

with CM) and covert case marking (possessor without CM) will be different

depending on the features of the possessor.

Among those features, person distinction seems obvious in Korean, because the other

features are not marked.   In the corpus studies, each possessor was tagged for person

distinction.

When Zero-Pronoun is the possessor in a possessive clause, the person of the

possessor is largely predictable.   Sometimes, though, it is difficult to determine the

person, because Zero-Pronoun can imply a generic meaning in Korean:

(4.4)
A. Zero-Pronoun in Non-Generic possessor
"크리스마스가 지나자 윤수는 맥빠진 듯 **손**만 빨고 있다가"

Christmas-ka	cinaca	Ywunsu-nun	maykppacin	tus	son-man	ppal-ko	issta-ka
Christmas-NOM	after	Y-TOP	no-desire	like	hand-only	suck	be

'After Christmas, Ywunsu looked apathetic, and only sucked (his) hand'

'...* sucked (my/your/someone else's) hand'

B. Zero-Pronoun in Generic Possessor

"미술 과목이라는 것도 그렇지. 꽃 그려라, 사람 그려라,**손** 그려라 일러놓고 졸면 되지."

miswul kwamok-ilanun kes-to kulehci kkoch klyela son klye-la illenohko colmye toyci

art course-REL CP-contrs like flower draw hand draw command doze do

   'About the art course, (You) can doze after (you) instruct the (student) to "Draw flowers, and Draw (anyone's) hands"

Zero-Pronoun in (4.4A) is the possessor, but it is clear who the possessor is because it must co-refer with *Ywunsu*, in the previous clause.   However, when Zero-Pronoun is a Generic possessor (4.4 B), it is unimportant who the possessor is.   In addition, it is difficult for this Generic possessor to be distinguished for person.   Therefore, this type of generic possessor must be distinguished from Zero-Pronoun.

The following table shows the frequency of occurrence of the possessor forms:

(4.5) The Distribution of Possessor Forms Based on Person Dimension

	Zero-Pronoun		Bare-Possessor		Possessor-CM		Total
1st person	161	81%	30	15%	7	4%	198
2nd person	29	94%	2	6%	0		31
3rd person	170	66%	25	9%	63	25%	258
Generic	60						

The results are summarized as follows:

1) Zero-Pronoun occurs much more frequently than bare possessor and possessor with CM, in all persons.

2) The proportion of occurrences of Possessor-with CM in 3rd person is higher than in 1st or 2nd persons.

3) Bare Possessors occur slightly more frequently when the possessor is 1st person.

The relationship between person and possessor NP form does not seem straightforward, except in the case of the possessor with CM for the 3rd person. In relation to the optional occurrence of the CM (ACC or GEN) in the PRC, the person distinction will be examined further.

4-1-3. NP Forms of Possessor Related to "Old" and "New"

According to Ko (1998), the distinction between oldness and newness has an effect on the selection of NP form. Ko divides oldness and newness into four types based on the discourse context and on the state of knowledge of the hearer; discourse-old, hearer-old, discourse-new, and hearer-new.

In Ko's research, she gathers data from actual conversations conducted through the telephone, so it was possible for her to recognize or to presume the state of knowledge

of the hearer.   As this study was conducted based on second-hand data, the state of

the hearer's/reader's knowledge is simply unknown, and can only be guessed at.   For

this very reason, I use the categories of discourse-old and discourse-new, as opposed

to simply old and new information; I cannot know what is truly old or new knowledge,

but I can know what is old or new in the immediate discourse.

The results of my examination of the corpus are presented in Table (4.6).   The tables

present, respectively, the results for spoken and written texts, and indicate the

frequency of CM forms for the categories of "old", "new" and generic possessors:

(4.6) Possessor Types Based on "Old" versus "New" in the Corpus

<Spoken Text>

	Zero-pronoun		Bare-Possessor		Possessor-CM		Total
"Old"	116	78 %	15	10 %	17	12%	148
"New"	7	30 %	8	33 %	9	37 %	24
Generic	22						Total:194

<Written Text>

	Zero-pronoun		Bare-Possessor		Possessor-CM		Total
"Old"	219	86 %	23	9 %	14	5 %	256
"New"	18	30 %	11	18 %	30	52 %	59
Generic	38						Total:353

According to table (4.6), Zero-Pronoun commonly occurs when the possessor is "old",

without distinguishing between written and spoken text (the frequency is around 80 %

in both).   When the possessor is "new", the frequencies of each possessor form are

not statistically different in spoken text (around 30 % ~ 37%). However, in written text, Possessor-with CM more frequently occurs when it is "new". If the distinction between "new" and "old" played a crucial role in selecting the NP form in my corpus research, the proportion among them should be more statistically obvious. For instance, Possessor-with CM occurs more frequently when the possessor is "new" (in the spoken text: "new" 37 %, "old" 12%, in the written text: "new" 52 %, "old" 5 %). However, the difference between 37 % and 52 % does not seem to be enough to be considered as an absolute factor in selecting the form of the possessor with CM.

In the above tables, interesting cases are found, where Zero-Pronoun form is present and the possessor is "new" (7 cases in spoken text, and 18 cases in written text). The speaker and addressee are almost always available as "old" information, even if they haven't been mentioned in recent discourse. There is only one exceptional case: where the Zero-Pronoun possessor is 3rd person, and its discourse status is "new". This example is presented here:

(4.7) Example Data (zero-pronoun/"new"/3rd person)

"...1.철없는 우리들은 선생의 말에 따라 그 후론 정선배를 슬금슬금 피하였다. 2.그러던 어느 날 선생의 그 같은 언동이 일제를 옹호하고 애국자를 비난하는 반역적인 행위란 사실을 아이들로 하여금 자각하게 해 우리들이 그 선생 곁을 떠나게 만든 사건이 벌어졌다. 3.땅에 솥뚜껑 같은 손바닥이 마구 날아왔다. 4.지사이야쓰가를 연발하던 왜놈 형사는 눈을 치뜨고 노려보는 내가 기가 찼던지 도로 유치장에 가두었다. 5.그때 속으로 '내가 이겼다' 하고는 얼마나 통쾌해 했는지..."

3. ppya-ey   sothttwukkeng   kathun   sonpatak-i   maku   nalao-ass-ta
   cheek-LOC   big-lid   like   palm-NOM   repeatedly   fell into
' (The Japanese policeman's) palm-like big lid [hand] fell repeatedly onto (my) cheek'

Translation of Discourse
"1. After that, we, as naïve students, followed the teacher's instruction and avoided the senior, Jung.   2. One day, we started to mistrust the teacher because we recognized the fact that the teacher had acted and taught on the side of the pro-Japanese. 3. (The Japanese policeman's) palm-like big lid [hand] fell repeatedly onto (my) cheek.   4. The Japanese policeman looked surprise at me looking (at him) intensively, then (he) put (me) into the prison.   5.At that moment, I exclaimed "I won" in my mind."

In Example (4.7), the possessor in sentence (3) is Zero-Pronoun/3rd person, and "new".

It does not refer to the teacher, who is previously mentioned in the immediate

discourse context, but instead to the Japanese policeman.   This policeman, however,

does not get explicitly mentioned until the following sentence (4).   Zero-Pronoun in

(4.7) does not co-refer with the previous referent at all, so it should not be possible,

and we would expect an explicit referent.   Zero-Pronoun possessor and the co-

referred NP are in a cataphoric relationship.   In Korean, cataphoric binding seems

grammatically acceptable.[18]

In these three sub-sections, I have examined the frequency of occurrence of possessor

forms focusing on formality, person distinction, and "old" / "new".   To some extent,

the frequencies of the corpus results seem slightly meaningful, but most cases do not

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[18]   The possessor in (4.7) may in fact be generic (similar to English "I felt a hand") and the fact that the owner of the hand later comes to play a role in the story may be accidental.

seem to be relevant.

4-2. Corpus Studies Based on the PRC and its Conditions

4-2-1. Possessor Forms under Inalienable Relationship, Object-Possessee, and Entailment Condition

In the last section, corpus research was conducted to determine whether the conditions suggested by previous studies were meaningful. In this section, I attempt to locate the possible PRC forms in the data, and then examine the conditions which determine these forms. Specifically, the conditions will be examined according to which CM (GEN, Zero-CM/∅, ACC) marks the possessor in the PRC.

I will begin by explaining what structures can be included within the PRC. Not every possessor can be marked with ACC in Korean, so I only regard the examples that share the same conditions. The following conditions should be shared in the target examples regardless of whether the possessor is marked with ACC or not:

1) All tokens are body parts, in order to satisfy the condition of inalienability.

2) The grammatical role of the possessee should be direct object in order to satisfy the conditions on double ACC marking. In Korean, the CM is often deleted in speech and writing. There is a construction, which I will

call the Pseudo-PRC, which lacks ACC marking on the possessee NP.

Even here, there is a similarity to the PRC in that the grammatical role of

the possessee is the direct object. Therefore, I include as possible

examples of the PRC those where the grammatical role of the possessee is

the direct object in a clause, whether or not the possessee is marked with

ACC. Therefore, I include examples of the Pseduo-PRC as examples of

the actual PRC.

3) The relation between the possessor and the possessee can satisfy the

entailment condition (Cho, 2003). This entailment relation seems close

to being the necessary condition for the possessor to be marked with ACC.

I consider these three conditions as constant variables while examining the corpus in

this section. The frequencies of each possessor form are as follows:

(4.8) CM types of the possessor (inalienable relation, possessee-object, and entailment)

Possessor-types	Possessee-types	1st person	3rd person
Bare-Possessor	Possessee-ACC	10	1
	Bare-Possessee	1	1
Possessor-GEN	Possessee-ACC	1	12
	Bare-Possessee		1
Possessor-ACC	Possessor-ACC	1	
	Bare-Possessee		1

There is only one authentic PRC construction in the corpus research, which occurs

under the following conditions: the possessor is the 1st person in the spoken text.

(4.9) Possessor Raising Construction

"1. 그 때 피아노가 없었어요, 그 시절에. 2.그래서 굉장히 먼 거리를 3. 어머니가 저를 손을 잡고 4. 인제 그 떨어진 곳에, 그 무슨 교감, 일본사람이 놓고 간 피아노였대요."

<Gloss>
1. ku   ttay   piano-ka   eps-ess-eyo,   ku   sicel-ey
   that time   piano-NOM   nothing   tat   time-LOC
   'There was no piano at that time.'

2. kulayse   koyngcanghi   men   keli-lul
   therefore   very   remote   distance-ACC
   'Therefore, (I went to) a very far distance'

3. emeni-ka   **ce-lul**   **son-ul**   cap-ko
   mother-NOM   **I-ACC**   **hand-ACC**   grasp-CP
   'while (my) mother grasped my hand.'

4. incey   ku   tteleci-n   kos-ey,
   so   this   remote-REL   NM-LOC
'Over there,'

5. ku   mwusun   kyokam, ilponsalam-i   nohko   kan   piano-i-ess-tay-yo
   such   that   teacher Japanese-NOM   left   go   piano-PRED
   'maybe a teacher, a Japanese, left the piano and went'

<Translation>
There was no piano at that time. Therefore, (I went to) a very far distance while my mother grasped my hand.   Over there, maybe a teacher, a Japanese, left the piano and went.'

<Tagged Information>
<About Tokens : body part-possessee>
1. The citation form of the body part : son (hand)
2. The grammatical role of the possessee: object
3. The thematic role of the possessee : patient
4. The case marker of the possessee : ACC
5. Is the possessee activated in the discourse text? NO
6. Is the possessee presupposable by the hearer?   NO
<About possessor>

11. Person of the possessor (1st person, 2nd person: local person, 3rd person) : 1sg

12. The type of phrase of the possessor (zero-pronoun, pronoun ,common noun ,and proper noun) : pronoun

13. The case marker of the possessor : ACC

14. Is the possessor a co-argument? YES

15. Is the possessor activated? NO

16. Is the possessor presupposable? YES

19A. What is the Aboutness topic in a clause? : possessor

19B. Is the possessor new or old?: old

20. Is the possessor co-referred with another NP in a clause? NO

21. Is the possessor co-referred with another NP in the previous sentence or the previous clause? NO

In the Pseduo-PRC, mentioned above, the possessor is marked with ACC, but the possessee is marked with ∅ instead of ACC. In comparison to the PRC, this is the only real difference: whether the possessee is marked with ACC or not.

(4.10) Example of the Pseudo-PRC

"...1.그러면 그 때 참새 라구 파는 게 병아리 죽은 거 있죠. 2.부화 돼가지구 바로 죽은 거. 3. 그걸 **목** 잘르구 **발** 잘라가지구 참새라구 구워서 줘요..."

<Gloss>
1. kulemyen ku ttay   chamsay lakwu pha-nun key   pyengali   cwukun ke isscyo
    so   that time   sparrow like sell-RL NM   chick   died   NM   PRED
      'At that time, so-called sparrows were chicks that were dead'
2. pwuhwa   twaykacikwu   palo   cwukun   ke
    hatching   become   soon   died   NM
      'that were dead as soon as hatching
3. kuke-ul mok callu-ku pal   callakacikwu chamsay lakwu kwuwese cweyo
    that-ACC neck cut-C/J   foot   cut-C/J   sparrow   like   fried   give
      '(someone) cut that's neck and foot, and he/she fried it and sold it as sparrow(-meat)..'

<Translation>
at that time, so-called sparrows were chicks that were dead as soon as hatching. After

(someone) cut it's neck and foot, he/she fried it and sold it as sparrow(-meat).

<Tagged Information>

<About Tokens : body part-possessee>

1. The citation form of the body part : mok(neck)/pal(foot)

2. The grammatical role of the possessee: object

3. The thematic role of the possessee : patient

4. The case marker of the possessee : ACC

5. Is the possessee activated? NO

6. Is the possessee presupposable?   NO

<About possessor>

11. Person of the possessor (1st person, 2nd person: local person, 3rd person) : 3sg

12. The type of phrase of the possessor (zero-pronoun, pronoun ,common noun ,and proper noun) : pronoun

13. The case marker of the possessor : ACC

14. Is the possessor a co-argument? YES

15. Is the possessor activated? YES

16. Is the possessor presupposable? NO

19A. What is the Aboutness topic in a clause? : possessor

19B. Is the possessor new or old?: old

20. Is the possessor co-referred with another NP in a clause? NO

21. Is the possessor co-referred with another NP in the previous sentence or the previous clause? YES

Even though the possessee in (4.10) is not marked with any apparent CM, the

grammatical role is obvious to a Korean speaker as the direct object of the verb *callu-*

'cut'.   Compared with the actual PRC example (4.9), the possessor here is the 3rd

person pronoun.   Between the PRC and Pseudo-PRC (4.9 and 4.10), the conditions

of person are different, and both are "old" in the discourse.

In the next sub-section, I attempt to examine the actual PRC examples under the

notion of the 'Aboutness-Topic'. In addition, the number of examples seems not to be enough to generalize on. More examples that can satisfy the three conditions of inalienable relationship, possessee-object, and entailment will be added to the previous examples.

4-2-2. More Data and "Aboutness Topic"

In order to make a more appropriate analysis, I searched again to find more examples in the same corpus. The 49 examples[19] were added which satisfied, in addition to the conditions for the previous examples, the following conditions: the possessor exists (non zero-pronoun), and the possessee is a body part. Zero-Pronoun as the possessor is excluded because it cannot demonstrate CM occurrence at all. After that, the three conditions of inalienable relationship, possessee-object, and entailment are applied to the 49 examples in order to find instances of the PRC.

In the corpus examples, the Aboutness Topic was determined by the following two criteria: 1) an NP which is mainly mentioned in two or three sentences, including the token word; 2) an NP which is more emphasized than another NP in a sentence

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[19] The tokens are as follows: *heli* 'waist', *ekkay* 'shoulder', *mwulup* 'knee' and *kasum* 'chest' etc.

including the token word. For instance, the emphasized NP may be modified by another NP or a relative clause.

In this sub-section, the main goal is to examine the relation between the possessor in the PRC and the Aboutness Topic. The definition of Aboutness Topic is repeated here: what the speaker is talking about in a clause, so the clause can increase the hearer's knowledge about that topic. Aissen says that topicality also plays a crucial role in deciding on "optional CM" occurrence (2003; 436). According to the definition of Aboutness Topic, the subject is the default Aboutness Topic in general. In my corpus study, I mainly focused on whether or not the subject is the Aboutness Topic[20], and if not, whether the possessor is the Aboutness Topic in a clause.

When the possessor is the Aboutness Topic in a clause, the possessor is more emphasized than the subject. For instance, the subject may not be present in the clause or the possessor may be modified by another NP or a relative clause. Additionally, the possessor may be explicitly mentioned even though it, being old information, does not need to be mentioned in the discourse. The following corpus examples illustrate where the subject is Aboutness Topic, and where the possessor is

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[20] The Aboutness Topic of the current sentence (and future sentences) is not necessarily old information, as previously defined.

the Aboutness Topic:

(4.11) Subject is the Aboutness Topic

A. 외삼촌은 **어깨**를 두들기며

<Gloss>

oysamchon-un   ekkay-lul   twutulki-mye

uncle-TOP   shoulder-ACC   pat-CONT

<Translation>

"(My) uncle patted (my) shoulder."

B. 시어머니가 다짜고짜 뛰어나오며 시아버지의 **멱살**을 잡고

<Gloss>

siemeni-ka   taccakocca   ttwienaomye   siapeci-uy   myeksal-ul   cap-ko

m-in-law-NOM   without reason   rush-to   f-in-law-GEN lapel-ACC grasp-CONT

<Translation>

"the mother-in-law rushed to the father-in-law, and grasped his lapel"

(4.12) Possessor is the Aboutness Topic

A. 외삼촌은 내 **어깨**를 두들기며

<Gloss>

oysamchon-un   nay   ekkay-lul   twutulki-mye

uncle-TOP   I   shoulder-ACC   pat-CONT

<Translation>

"(My) uncle patted my shoulder."

B. 3세 이하의 아이들을 **귀**를 가볍게 뒤로 당겨서[21]

  <Gloss>

(1) 3se   iha-uy   aitul-ul   kwy-lul   kapeypkey   ewuylo tangkyese

   3-yr-old   under-GEN   kid-ACC   ear-ACC   slightly   back   pull

<Translation>

"Slightly pull the ears of a kid under 3-year's old "

In Example (4.11A), the subject is the Aboutness Topic, as indicated by TOP, and the

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[21] Data Source: http://www.bebehouse.com/hotbebe/journal/default.asp?jno=53&jpageno=2

possessor is Zero-Pronoun, indicating that it is not the Aboutness Topic. Example (4.11B) demonstrates the possessor with GEN, which indicates a non-Aboutness Topic possessor; the subject is the Aboutness Topic in this clause, in this case indicated by NOM. In Example (4.12A), where the possessor is Aboutness Topic, the possessor is not optional, but it is emphasized in contrast with (4.11A) where it is not. In Example (4.12B), the possessor is modified by another NP and marked with ACC, and the subject is not present, all indicating that the possessor is the Aboutness Topic. As explained previously in section 3-3, the fact that the subject carries TOP in both (4.11A) and (4.12A) does not indicate that it is the Aboutness Topic in both. The following table illustrates the frequency of the form of the possessor and the possessee depending on the Aboutness Topic in a clause:

(4.13) Possessor Forms & Aboutness topic

A. Possessor : 1st person

Aboutness Topic	Possessor/Possessee	Frequency
Possessor	Bare-Possessor Possessee-ACC	13
	Possessor-ACC Possessee-ACC	1
Subject	Possessor-GEN Possessee-ACC	3
Total		17

B. Possessor: 3rd person

Aboutness Topic	Possessor/Possessee	Frequency
Possessor	Possessor-GEN Possessee-ACC	1
	Possessor-ACC Bare-Possessee	2
Subject	Possessor-GEN Possessee-ACC	17
	Bare-Possessor Possessee-ACC	1
Total		21

From the perspective of the notion of Aboutness Topic, the distribution of CM forms (GEN vs non-GEN) seems significantly distinct. When the Aboutness Topic is the subject (the default case) in a clause, the possessor is almost always marked with GEN without distinction of person (20 cases out of 21). If the possessor is the Aboutness Topic in a clause, the bare possessor usually occurs (13 cases out of 17).

In the PRC, the possessor marked with the ACC is found when the possessor is the Aboutness Topic in a clause. Accordingly, ACC marking of the possessor occurs under the same conditions (possessor = Aboutness Topic) as Bare Possessor. Under these same conditions, Bare Possessor occurs much more commonly than does ACC marking of the possessor (13 instances of Bare Possessor, 3 instances of ACC marking of the possessor out of 17 cases). Based on the results of the corpus research, when the possessor is Aboutness Topic in a clause, the expected form is Bare Possessor, and second most frequent form is ACC marking on the possessor.

These two different forms occurring in the same conditions imply that both ACC marking and Bare Possessor occur optionally in the PRC. Optionality of CM occurrence on the possessor seems acceptable in the PRC. In the next chapter, the computation of the occurrence of the CM with the possessor in the PRC will be examined.

4-2-3. Internet Examples

When an internet search was conducted with *Google,* only 20 examples were discovered where the possessor is marked with ACC in the PRC. All the actual examples satisfy the conditions mentioned in Chapter 2. A brief summary of the relevant information from these 20 examples follows: (detail See Appendix B)

(4.14) Real Examples Information
      A. Person Distinction
            1st person : 5
            3rd person : 15
      B. "Old" and "New" Distinction
            Old: 10
            New: 10
      C: Aboutness Topic
            Subject- Aboutness Topic : 0
            Possessor-Aboutness Topic: 20

In these examples, person distinction, and especially the distinction between "old"

and "new" do not seem to be decisive factors at all. However, the notion of Aboutness Topic is crucial, since in all 20 cases the possessor is simultaneously the Aboutness Topic and carries the ACC suffix.

5. OT Analysis for the PRC

In this chapter, the optional CM occurrence of the possessor in PRC (ACC, GEN, and zero-CM) will be chosen by OT models. Among OT applications, in this thesis two concrete applications allow us to compute the optional occurrence of CM; Aissen's study of Differential Object Marking (2003), and the stochastic OT model (Boersma, 2004; Boersma and Hayse, 2001). First, Aissen's study provides the theoretical ground for the interaction between the information status of the NP and covert/overt case marking (specifically, zero-CM and the occurrence of GEN and ACC). From the notion of information structure, Aboutness Topic is the motivation which directly causes the selection of zero-CM, ACC or GEN in the PRC. Secondly, the stochastic OT model accounts for optional grammatical outputs, by means of re-ranked constraints. Even though the possessor may be Aboutness Topic in a clause, three forms of CM (zero-CM, ACC, and GEN) may each possibly occur as optimal outputs. In the stochastic OT model, the constraints can be re-ranked based on the relative distance of the violated constraints of the candidates; these re-ranked constraints will provide the optional outputs. In Section 1, I examine how these two OT models can apply to the PRC.

In order to compute the interaction between the CM occurrence and both the grammatical role and information status of the NP, there are two alternative methods. In the first method, mapping occurs step by step. The order of steps seems to be relevant, because one of the factors first determines the CM form, and then the remaining factor modifies the CM form. According to Han (1999), CM occurrence is primarily determined by the grammatical role of the NP, and then the information status of the NP alters the CM form to give the final result. In the second method, these two factors (the grammatical role and information status of the NP) are merged together, and they establish the CM form in a single step. In terms of OT computation, this second method of mapping is on the right track. In general, there is no intermediate step in the relation between input and output under OT computation. Technically, one series of violable constraints can evaluate all candidates and provide the optimal output. In Section 2, I attempt to examine the constraints in the PRC based on *Harmonic Alignment* and then compute the optional CM occurrence on the possessor in the PRC.

5-1. OT Models

The possessor in the PRC is optionally marked with zero-CM, ACC or GEN under the

same conditions of Aboutness Topic-possessor, the inalienable possessee, the affected

theme-possessor, and the entailed possessor in a clause.   If just one factor selected

the proper output, this optional occurrence of CM in the possessor could not be

appropriately explained.   Aissen's approaches provide for multiple factors to

influence the selection of the proper form of the possessor in the PRC.   In her study,

many-to-one mapping seems straightforward because the selection of covert/overt

case marking is conditioned by the nature and grammatical role of the NP.

Therefore, case marking of the possessor is also affected by various conditions such

as the grammatical role and the information status of the NP.   The diagram below

demonstrates the difference between one-to-one mapping and many-to-one mapping

in CM occurrence on the possessor:

(5.1)   (A)   <one to one mapping: GR-CM>
                            case-marking

                                 |

                        Grammatical Role of the NP

                                 |

                              theta-role

          (B)   <many to one mapping>
                              case-marking

Grammatical Roles --------------------Information Status of NP

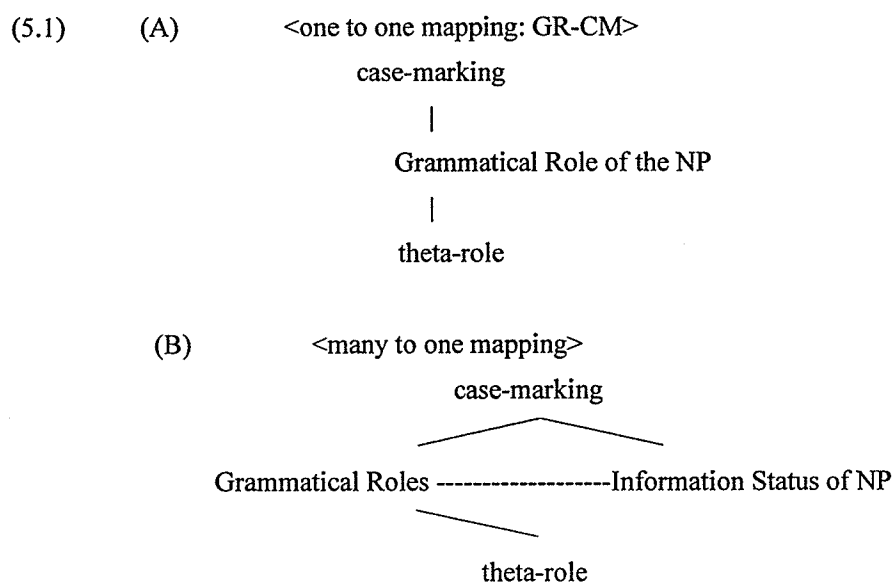   theta-role

Diagram (5.1A) shows one-to-one (grammatical role of the NP-to-CM) mapping

approach, while diagram (5.1B) illustrates many-to-one (grammatical role of the NP and information status of the NP-to-CM) mapping. If one-to-one mapping were the appropriate method for case marking in the PRC, CM occurrence would be affected by only the grammatical role of the possessor. There is no room for the various CM forms to occur as the possessor in the PRC under this method. However, the information status of the possessor is another factor in the selection of the CM forms of the possessor, and so the optional occurrence of these CM forms may be possible because of the result of the interaction between the grammatical role and information status of the NP with CM under the second method.

Even though Aissen's insight opens up the possibility for optional CM occurrence of the possessor, the computation does not completely explain the occurrence of each CM form. In order to account for the grammatical judgment of this corpus result and the optional outputs, the stochastic OT model (Boersma 2004;Boersma & Hayes 2001) allows for a possible solution. If an ideally well-formed grammatical form X occurs frequently in the corpus, it is not difficult to judge the grammaticality of X, because the well-formed grammatical case occurs more often than the ungrammatical case, in general. However, when form Y seems ideally grammatical, but it has a low frequency of occurrence, then it is questionable if form Y is actually grammatical or

not. According to Boersma, in this problematic case, grammatical judgment can be decided by both the comparison of the ranking of the violable constraints of these forms, as well as the frequency of occurrence of the forms. If the violable constraints are low-ranked, and close to each other, then the constraints may be re-ranked, and optional candidates may be accepted based on the re-ranked set of constraints. Therefore, grammatical judgment seems to be a continuum, where different outputs may be judged to be more or less grammatical, rather than simply grammatical or not. This allows for the occurrence of multiple optional outputs, and not just a single optimal output, and provides a way to account for the three possible forms of CM on the possessor in the PRC.

5-2. Semantic Possessor and Grammatical Possessor

It is sometimes problematic to determine what the grammatical role of the possessor is. The following example shows evidence for concluding that the possessor can become the direct object in a clause.

(5.2)   A. kyengchal-i   totwuk-ul[22]   son-ul   cap-ass-ta

             police-NOM   thief-ACC   hand-ACC   grasp-PAST-DEC

             'The policeman grasped the thief's hand.'

       B. totwuk-i   kyengchal-eykey   son-ul   cap-hi-ess-ta

             thief-NOM   police-DAT   hand-ACC   grasp-PASS-PAST-DEC

             'The thief was grasped on his hand by the policeman.'

In example (5.2A), the possessor is *totwuk* 'thief' and its possessee is *son* 'hand'.

The possessor *totwuk* 'thief' becomes the subject in the passive construction (5.2B),

indicating that it was the direct object in the active construction; otherwise, it could

not be raised to subjecthood. This allows us to conclude that *totwuk* 'thief' must

have been the direct object when marked with ACC in the PRC. This demonstrates

the fact that the grammatical role of the possessor is sometimes the possessor, and

sometimes the object. Here I distinguish the possessor in two ways: semantic

possessor and grammatical possessor. If the NP is semantically the possessor in a

possessive construction, but is not realized as the grammatical possessor by virtue of

its CM not being GEN, I categorize it as 'semantic possessor'. The possessor

marked with ACC in the PRC fits this description.

However, even though the semantic possessor can be the grammatical object, the

transitive construction shown in (5.2A) seems structurally odd because there are two

direct objects. Cross-linguistically, the constraint [ONE OBJECT] seems to be highly

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[22] GEN and ø (Zero-CM) are also possible as CM here, but only ACC marking indicates the possessor's status as a direct object.

ranked in transitive constructions. However, [ONE OBJECT] may be low-ranked in

the Korean language, because the PRC is grammatically acceptable.

In many languages, when a main verb is transitive, a single direct object occurs in a

clause. If another direct object occurs, the construction is ungrammatical[23]. The

following English example demonstrates this ungrammaticality:

(5.3)   A. I kicked John's leg
         B. *I kicked John leg.

(5.3B) is ungrammatical because two NPs cannot both be the direct object in a single

clause. However, in Korean PRC, the equivalent of (5.3B) is acceptable. The PRC

is a highly marked case from the viewpoint stated above. The PRC may violate the

constraint [ONE OBJECT] in transitive constructions, because the relevant constraints

may be re-ranked in Korean, unlike in English. Example (5.3), it's Korean

equivalent, and the relevant constraints are presented here in terms of OT:

(5.4)   [ONE OBJECT] constraint
         ONE OBJECT : There must be a single object in a single transitive

---

[23] Two direct objects may appear in a conjunction, indicating that there are two conjoined clauses, and hence two underlying verbs which each licence one direct object.

(5.5) [ONE OBJECT] in English

Tableau

INPUT : HIT {JOHN, LEG}	[ONE OBJECT]	C
☞I hit John'sPOSS legOBJ		*
I hit JohnOBJ legOBJ	*!	

In the tableau, "C" indicates a constraint, unspecified at this time.   Violations of this

constraint are occurred by clauses containing only a single object.   See example

(5.16) on page 89 of chapter 5, and the subsequent discussion for more detail.

(5.6) [ONE OBJECT] in PRC in Korean

Chelsu-ka	Minsu-uy/lul	phal-ul	ttayli-ess-ta
C-NOM	M-GEN/ACC	arm-ACC	hit-PAST-DEC

'Chelsu hit Minsu's arm'

Tableau A

INPUT : TTAYLI-(hit) {MINSU, PHAL (arm)}	[ONE OBJECT]	C
☞Chelsu-ka Minsu-uyPOSS phal-ulOBJ ttayli-ess-ta		*
Chelsu-ka Minsu-lulOBJ phal-ulOBJ ttayli-ess-ta	*!	

Tableau B

INPUT : TTAYLI-(hit) {MINSU, PHAL (arm)}	C	[ONE OBJECT]
Chelsu-ka Minsu-uyPOSS phal-ulOBJ ttayli-ess-ta	*!	
☞ Chelsu-ka Minsu-lulOBJ phal-ulOBJ ttayli-ess-ta		*

In the above tableaux (5.5 and 5.6B), we can see that two objects in a single clause are

not acceptable in an English transitive construction, while two objects in a single

clause are acceptable in Korean, specifically in the PRC.   The two tableaux for

Korean show the two possible orders of ranking for these constraints, and the

resulting optimal candidates.   The PRC is demonstrated by tableau (5.6A), while

(5.6B) demonstrates the other possibility.   English only has one possible ranking, as

shown in tableau (5.5).   Therefore, the constraint 'C' is higher ranked than

[ONE OBJECT] in Korean, when the possessor is marked with ACC in the PRC.

5-3. Constraints and Analysis

5-3-1. Constraints (Grammatical Relations & Case marker, CM Deletion, and Aboutness Topic)

In this section, the constraints related to the PRC are explored. Until now, the fact

has been confirmed that the CM is determined by the interaction between the

grammatical role and the information state of the NP. A set of constraints in each of

the two factors is needed for this. The sets of constraints for each factor then interact

with each other, and establish a set of interacted constraints, based on Harmonic

Alignment. In Harmonic Alignment, there are two pairs of scales which interact with

each other:

(5.7)
A binary dimension D1 with a scale $X > Y$ on its elements $\{X, Y\}$
Another dimension D2 with a scale $a > b \dots > z$ on its elements

(Prince and Smolensky, 1993: 136)

This interaction provides a set of constraints that shows the degree of markedness.

One scale is binary, and the other can have any number of degrees. The high-ranked

end of the binary scale aligns with the other scale in order from high-ranked items to

low ranked. The low-ranked end of the binary scale aligns in the opposite direction

with the other scale:

(5.8) The harmonic alignment of D1 and D2 is the pair of Harmony scales:

H x : X/a > X/ b> ...> X/z

H y: Y/z>...>Y/b> Y/a

<div align="right">(Prince and Smolensky, 1993: 136)</div>

Constraints are stated in terms of the opposite direction, with violations indicating

disharmonic alignments:

(5.9) The constraint alignment is the pair of constraints hierarchs:

C x : *X/z >> ... *X/b >> *X/a

C y :*Y/a>> *Y/b>>...>>*Y/z

<div align="right">(Prince and Smolensky, 1993: 136)</div>

5-3-1.1 Constraints : Grammatical Relations and Case Markers

I attempt to examine the constraints which relate the grammatical role of NP to CM

occurrence.   The grammatical role of the NP is the key factor to select CM forms in

Korean, according to linguistic tradition.   For instance, a subject is marked with

NOM, rather than ACC or GEN.   If the NP marked with ACC plays a subject role in

a clause, then this would be a highly marked construction in Korean.   Therefore, if

the subject is marked with non-NOM; [SUBJECT/NOM-NOM][24], this construction is a

---

[24] In Korean, not all subjects are marked with nominative case; the dative and oblique subjects are possible in Korean; however, they are more highly marked.   In this thesis, I do not discuss this in detail, referring to non-nominative subject case-marking case as "NON-NOM".   Objects and possessors are treated in a similar way, hence "NON-ACC" and "NON-GEN".

worse violation than when the subject is marked with NOM; [SUBJECT/NOM]. In

comparison, [OBJECT/NON-ACC] is more violable than [OBJECT/ACC]. As a result, if

an object is marked with a case marker other than ACC, it is highly marked.

Regarding the possessor in general, the constraint [POSS/NON-GEN] is straightforward

because CMs other than GEN cannot occur with the possessor in the Korean

possessive construction. Therefore, [POSS/NON-GEN] is generally more violable than

[POSS/GEN].

(5.10) A. Jina-uy   cip
            J-GEN   house   'Jina's house'
        B. *Jina-lul   cip
            J-ACC   house

The following illustrate the constraints related to CM and grammatical relations:

(5.11) Grammatical Relations & CM Constraints :

A. Makedness Hierarchy

Subject	SUBJ/NOM > SUBJ/NON-NOM
Object	OBJ/ACC > OBJ/NON-ACC
Possessor	POSS/GEN > POSS/NON-GEN

B. Constraints

*SUBJ/NON-NOM >> *SUBJ/NOM[25]

*OBJ/NON-ACC >> *OBJ/ACC

*POSS/NON-GEN >> *POSS/GEN

---

[25] The constraints *SUBJ/NON-NOM, *OBJ/NON-ACC and *POSS/NON-GEN are not real constraints. *SUBJ/NON-NOM. for instance, is an abbreviation for *SUBJ/INSTR >>*SUBJ/ACC>>*SUBJ/DAT. This abbreviation convention is used to avoid delving into the real phenomenon of linguistic markedness. Within the group represented by NON-CM, there still exists a markedness hierarchy; in subject NPs in Korean, for example, accusative marking is more higly marked than dative. In this thesis, the hierarchy of the markedness of NON-CM is not specified.

(5.12) Application (5.10)

Tableau

INPUT : { JOHN, HOUSE} From Example (5.10)

INPUT:{JOHN-POSS, CIP (house)}	*POSS/NON-GEN	*POSS/GEN
☞ John-uy$_{GEN}$ cip (John-GEN House)		*
John-ul$_{ACC}$ cip (John-ACC House)	*!	

In this tableau, [John, house] is the possessive constrution. The possessor/CM

constraint (*POSS/NON-GEN >>*POSS/GEN) plays a crucial role to find which candidate

is the optimal output.

5-3-1.2 Constraints : Covert/Overt Case Marking

The next relevant constraint deals with overt/covert case marking. Case marking,

under some specific nature or information status of a noun, may be left as a non-

audible exponent. If the CM occurs as a non-audible exponent, this is

ungrammatical. The opposite constraint makes overt case marking obligatory. If

the CM does not occur (covert case marking), this constraint would be violated.

Aissen (2003) devises two constraints regarding covert/overt case marking. These

constraints are as follows:

(5.13) CM Deletion Constraint:

*∅$_c$ (read: Star zero) : Penalizes the absence of a value for the feature CASE

*STRUC$_c$: Penalizes the value for the morphological category CASE

These two constraints interact with the constraints set in (5.11), because covert-case

marking is less marked than other CM marking. For instance, if the object is marked

with NOM, it is grammatically unacceptable, while the covert-case marked object is

at least somewhat acceptable (ACC marked objects are the typical, grammatical form).

The following shows a modification of the constraint set (5.11B):

(5.14) Modification Constraint (5.11B)

A. Chelsu-ka   Minsu-lul/ø/*ka   cha-ass-ta
    C-NOM   M-ACC/ø/*NOM   kick-PAST-DEC
    'Chelsu kicked Minsu'

B. Modification: Relation and Case marking Constraints
    *SUBJ/NON-NOM >>*Ø $_c$>> *SUBJ/NOM
    *OBJ/NON-ACC >>*Ø $_c$>> *OBJ/ACC
    *POSS/NON-GEN >>*Ø $_c$>> *POSS/GEN

C. Tableau

INPUT : Object {Minsu}

INPUT:{Minsu}	*OBJ/NON-ACC	*Ø $_c$	*OBJ/ACC
☞ Minsu-ACC			*
Minsu-ø		*!	
Minsu-NOM	*!		

In Tableau (5.14C), the candidate *Minsu-ø* is not the optimal output, but is less

marked than *Minsu-NOM*, which is completely ungrammatical.

5-3-1.3. Constraints : Aboutness Topic

Another important constraint deals with Aboutness Topic and grammatical role.

According to the corpus research in the previous chapter, Aboutness Topic is a significant factor in determining which CM form of the possessor (GEN/zero-CM/ACC) occurs in the PRC. If the possessor is Aboutness Topic in a clause, the occurrence of zero-CM/ACC on the possessor has a higher frequency than GEN. If the possessor is not Aboutness Topic, the reverse is true and GEN is more frequent.

In general, core arguments (i.e. the subject or the direct object) can more commonly be realized as Aboutness Topic in a clause non-core arguments (i.e. the possessor, the oblique etc). Givon (2001) also points out that the subject and the direct object play the topic roles in a clause cross-linguistically.

...the subject and the direct object of clauses may be viewed as the grammaticalized primary and secondary topics of the discourse at the time when the clause in which they take is being processed...

(T.Givon, 2001: 198)

According to Givon, the subject is more easily understood as the topic in a discourse rather than the direct object. The subject is the primary topic and the object is the secondary topic.

In Korean, non-core arguments are not often realized as Aboutness Topic. For instance, the possessor is not generally marked with TOP –*nun/-un* .

(5.15) A. Chelsu-ka   Youngsu-uy   cip-ey   pwul-ul   cillu-ess-ta
            C-NOM   Y-GEN   house-LOC   fire-ACC   set-PAST-DEC
            'Chelsu set fire to Youngsu's house'
        B. ?/*Chelsu-ka   Youngsu-nun   cip-ey   pwul-ul   cillu-ess-ta
            C-NOM   Y-TOP   house-LOC   fire-ACC   set-PAST-DEC
            '? Chelsu set fire to Youngsu's house'

In Example (5.15), the sentence is awkward when the possessor *Youngsu* is marked

with TOP.   The possessor seems to be less realized as Aboutness Topic in a clause

than core-arguments.   In Korean, the realization of Aboutness Topic in a clause will

follow the topicality hierarchy related to grammatical roles (subject > object > oblique

(including possessor)).   Therefore, the constraints regarding Aboutness Topic and

grammatical role are as follows:

(5.16) Grammatical Relation Scale and Aboutness-Topic Constraint
A.   Grammatical Relation Scale
         Subject > Object > Possessor
B.   Aboutness Topic Constraint
         *POSS/TOPIC[26]>>*OBJECT/TOPIC>>*SUBJECT/TOPIC

Based on the constraints (5.16), when the possessor is Aboutness Topic, this case is

highly marked.   However, the possessor is in fact often realized as Aboutness Topic

in the corpus research (Table.4.13).   Interestingly, GEN rarely occurs (1 case out of

19), but zero-CM/ACC marking most frequently occurs when the possessor is

Aboutness Topic in a clause.   In the constraints regarding the possessor (5.11B),

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[26] This is the constraint reffered to as 'C' on page 82 in examples (5.5) and (5.6).

zero-CM/ACC marking violates *[POSS/NON-GEN]. It seems debatable whether the possessor marked with zero-CM or ACC in the PRC still functions as the possessor or not. If the possessor does not function as the possessor, the following question arises: 'what is the grammatical role of this NP?'. The answer to this question is 'the direct object'. First, this NP cannot violate [OBJECT/ACC] when it is marked with ACC, and secondly, the object is more commonly realized as Aboutness Topic than the possessor is in Korean. Therefore, when the possessor does not function as the actual possessor any longer in the PRC, I consider this type of possessor to be the direct object.

5-3-2. Analysis

5-3-2.1 Input Types

In section 5-2, it was discussed how the semantic possessor can be the grammatical object, but the surface representation can be ambiguous between the two. In order for the possessor to be marked with ACC, therefore appearing as the grammatical object, the relationship between the possessor and the possessee must largely satisfy the conditions of 'inalienability', 'affectedness' and 'entailment'. In order to avoid ambiguity of the NP that occurs in the semantic possessor position in the PRC (whether it be grammatical possessor or direct object), if the NP occurs before a body

part (possessee) and works as an affected theme of the verb, the NP is named NP1 in

this thesis; the possessee is named NP2. As a result, the input types of the

possessive construction will be as follows:

(5.17) Input[27]

      [NP1, NP2] :   Satisfies the semantic relations of:

                            Inalienability, Affectedness, and Entailment

     NP1:   1.Semantic Role (i.e. Theme, Agent etc)

             2. Information Status : Possessor is Aboutness Topic?

             3. Semantic or grammatical possessor?

     NP2:   Semantic Role

This input will be applied in the OT computation for the PRC in the next section.

5-3-2.2 Application to PRC

In this sub-section, I attempt to illustrate how these constraints work in the PRC. In

addition, the optional outputs in the PRC will be explained based on the stochastic OT

model. The re-ranked constraints set provides the grammatical acceptability of

optional output in the PRC.

In order for the possessor to be marked with ACC, the possessor must be Aboutness

Topic. If the semantic or grammatical possessor is not Aboutness Topic, ACC

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[27] I do not attempt to formulate constraints related to the other generalizations of chapter 2
(inalienable possession, highly affected theme).

cannot be marked on the possessor at all. Therefore, the constraint *POSS/TOPIC should be highly ranked. This constraint can accept two objects in a single clause, but it cannot apply to all transitive constructions, so the constraint [ONE OBJECT] is ranked close to the constraint *POSS/TOPIC. Additionally, the semantic possessor is not the grammatical possessor in the PRC. The following is the OT computation for the PRC:

(5.18) OT-Computation : Possessor – Aboutness-Topic

   Constraint Ranking
   *POSS/TOPIC >> [ONE OBJECT] >>*OBJ/NON-ACC>> *∅ c >> *OBJ/ACC[28]

Tableau

NP1: Affected-Theme Aboutness-Topic Semantic-POSS NP2: Afffected-Theme	*POSS/TOPIC	[ONE OBJECT]	*OBJ/NON-ACC	*∅ c	*OBJ/ACC
☞NP1:GR-Object CM-ACC NP2:GR-Object		*			*!
NP1:GR-Object CM-∅ NP2:GR-Object		*		*!	
NP1:GR-Object CM-GEN NP2:GR-Object		*	*!		
NP1:GR-Possessor CM-GEN NP2:GR-Object	*!		*		

In Tableau (5.18), three candidates, where the possessor is the grammatical object,

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[28] Based upon the constraint ranking presented in (5.14B)

violate the [ONE OBJECT] constraint. The ranking of *POSS/TOPIC and [ONE OBJECT] is relevant because the candidate where the possessor is not the grammatical object is rejected by the evaluation. Based on the status of NP1 being the grammatical object, the candidate with CASE-ACC violates the constraint *OBJ/ACC, but this constraint is lower ranked than the constraints *OBJ/NON-ACC and *∅ c , which are crucial for the two other candidates in this tableau. Therefore, the winner of this computation in the PRC is NP1 marked with ACC. However, the frequency of occurrence of this type is not very high (18%) in the corpus study, and two other candidates are grammatically acceptable in Korean.

Based on the stochastic OT model (Boersma and Hayes 2001), if the distance between constraints is close enough to overlap, constraints can be re-ranked and another candidate can be grammatically acceptable. In the set of constraints (5.18), Compared with the constraint *POSS/TOPIC, the violable constraints *OBJ/NON-ACC, *∅c, *OBJ/ACC are closer to each other and also lower ranked. Therefore, I assume that the stochastic OT model may also apply in providing optional outputs in the PRC. Based on Chapter 1, the overlapped constraint is as follows:
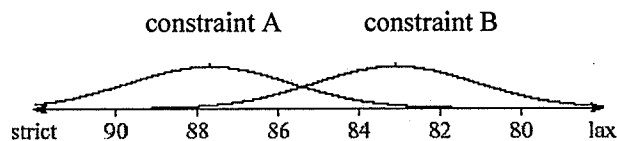
(5.19) Overlapped Constraints

(Constraint A:*OBJ/NON-ACC,*OBJ/ACC vsConstraint B:*∅c)[29]

constraint A   constraint B

| strict | 90 | 88 | 86 | 84 | 82 | 80 | lax |
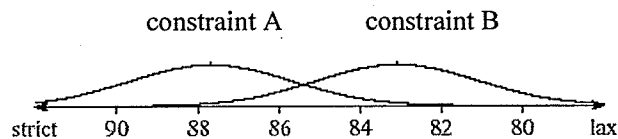
In the diagram (5.19), the overlapped constraints are allowed to be re-ranked. In most evalutations, constraint A will outrank constraint B, but in some cases, constraint B will by re-ranked to outrank constraint A. The re-ranked set of constraints, should this occur, will evaluate the candidate.

The following diagram shows another overlapping of constraints:

(5.20) Overlapped Constraints

(Constraint A:*POSS/TOPIC vs Constraint B: [ONE OBJECT])[30]

constraint A   constraint B

| strict | 90 | 88 | 86 | 84 | 82 | 80 | lax |

In diagram (5.20), two constraints overlap and is re-ranked. These re-ranked constraints are acceptable for both one and two objects in the PRC.

Zero-CM on the direct object is the most frequent form when the NP1 is simultaneously Aboutness Topic and the direct object in the PRC. The next most

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[29] The veridical numbers are not meaningful. They are arbitrary.

[30] The veridical numbers are not meaningful. They are arbitrary.

frequent form is ACC marking on the direct object. GEN marking on the possessor

has the lowest occurence. The constraints must be re-ranked when NP1 is Aboutness

Topic, as follows:

(5.21) Re-Ranked Constraints

☞ [NP1:GR-Object ,CM-∅ NP2:GR-Object] (77%)

Constraints : *POSS/TOPIC>>[ONE OBJECT] >>*OBJ/NON-ACC >> *OBJ/ACC>>*∅ c

Tableau : Example of ☞ [NP1:GR-Object ,CM-∅ NP2:GR-Object] (77%)

NP1: Affected-Theme Aboutness-Topic Semantic-POSS NP2: Affected-Theme	*POSS/TOPIC	[ONE OBJECT]	*OBJ/NON-ACC	*OBJ/ACC	*∅ c
NP1:GR-Object CM-ACC NP2:GR-Object		*		*!	
☞NP1:GR-Object CM-∅ NP2:GR-Object		*			*!
NP1:GR-Object CM-GEN NP2:GR-Object		*	*!		
NP1:GR-Possessor CM-GEN NP2:GR-Object	*!		*	:	

In Tableau (5.21), the constraints *OBJ/NON-ACC >> *OBJ/ACC>>*∅ c are re-ranked,

and then zero-CM marking becomes the optimal output. In addition, there is one

more possible winning candidate. The frequency of occurrence of GEN marking is

only 5 % in my corpus, but it is grammatically acceptable, nonetheless.

(5.22) Re-Ranked Constraints

☞ [NP1:GR-Object, CM-GEN NP2:GR-Object] (5%)

Constraints : *POSS/TOPIC>>[ONE OBJECT] >>*OBJ/NON-ACC >>{*OBJ/ACC, *Ø c}

Tableau : Example of ☞ [NP1:GR-Object ,CM-GEN NP2:GR-Object] (5%)

NP1: Affected-Theme Aboutness-Topic Semantic-POSS NP2: Affected-Theme	[ONE OBJECT]	*POSS/TOPIC	*OBJ/NON-ACC	*OBJ/ACC	*Ø c
NP1:GR-Object CM-ACC NP2:GR-Object	*!			*	
NP1:GR-Object CM-Ø NP2:GR-Object	*!				*
NP1:GR-Object CM-GEN NP2:GR-Object	*!		*		
☞NP1:GR-Possessor CM-GEN NP2:GR-Object		*!	*		

Even though the possessor and the possessee satisfy the same semantic conditions (inalienable relation, affectedness, entailment), the possessor cannot be marked with ACC if the possessor is not Aboutness Topic in a clause. The possessor is the semantic and grammatical possessor in this case. Therefore, optional outputs are also available in this process. The constraints *POSS/TOPIC and [ONE OBJECT] are close enough to overlap and be re-ranked.

The following OT analysis illustrates the constraint ranking in this case, when the

possessor is not Aboutness Topic:

(5.23) OT-Computation : Possessor – NON-Aboutness-Topic

      Constraint Ranking :

         {[ONE OBJECT],*POSS/TOPIC}>>*OBJ/ACC>> *Ø c >> *OBJ/NON-ACC

Tableau

NP1: Affected-Theme NonAboutness-Topic Grammatical-POSS NP2: Affected-Theme	[ONE OBJECT]	*POSS/TOPIC	*OBJ/ ACC	*Ø c	*OBJ/NON-ACC
☞NP1:GR-POSS CM-GEN NP2:GR-Object					*!
NP1:GR-POSS CM-Ø NP2:GR-Object				*!	
NP1:GR-POSS CM-ACC NP2:GR-Object			*!		
NP1:GR-Object CM-GEN NP2:GR-Object	*!				*

Even when NP1 satisfies the three conditions of inalienability, affectedness, and

entailment, if NP1 is not Aboutness Topic it is almost always marked with GEN.   In

other words, NP1 functions as the grammatical possessor if it is not Aboutness Topic

in a clause, and GEN marking on the possessor usually occurs (95%).   However,

zero-CM on the possessor does infrequently occur (5 %).   The re-ranked constraints

for this case are as follows:

(5.24) Re-Ranked Constraints

☞ [NP1:GR-POSS CM-∅, NP2:GR-Object] (5%)

Constraints: [ONE OBJECT]>>*POSS/TOPIC >>*OBJ/NON-ACC>> *OBJ/ACC>>*∅ c

The second last row of tableau (5.23) illustrates the ungrammaticality of double

accusative marking.   If the grammatical possessor is not Aboutness Topic in a clause,

it cannot be marked with ACC when the possessee is the direct object.   This

construction does not occur, and is ungrammatical.

6. Conclusion

In this thesis, the PRC was examined based on the corpus study and OT account. Even though the PRC rarely occurs in both everyday conversation and my corpus, the PRC is grammatically acceptable. The optional occurrence of CM on the possessor in the PRC (zero-CM, ACC, GEN) is the result of the interaction between the grammatical role of the NP and the information status of the NP.

According to previous studies, the selection of the possessor CM forms in the PRC is affected by the relation between the grammatical role of the NP and CM, or the relation between the information status of the NP and CM. Therefore, from both positions, the mapping between CM and each of the factors seems to be one-to-one. However, the assumption of one-to-one mapping does not account for the optionality of CM occurrence on the possessor in the PRC. In addition, even where the conditions of inalienable relationship, affectedness, entailment, and information status are satisfied, therefore allowing the possessor to be marked with ACC in the PRC, ACC marking does not always occur.

Two OT models can together provide a possible solution for the optional occurrence

of CM on the possessor in the PRC: Aissen's study, and the stochastic OT model. In Aissen's study, this optional occurrence of CM is crucially motivated by the information status of the NP as well as the grammatical role of the NP. The optional occurrence of the CM is the result of the interaction of these two crucial factors, rather than the result of just one factor's influence. The stochastic OT model provides the technique for computing the occurrence of optional forms in real language performance. Boersma argues the possibility for the constraints to be re-ranked and that the set of re-ranked constraints should accept the optional outputs as the optimal outputs. The various optimal outputs in the PRC are also regarded as real language performance in this thesis, and I attempted to show how the various outputs can be determined by the re-ranked constraints.

Based on the corpus study, zero-CM is the most frequent way to mark the direct object in the PRC. This is the actual language performance, and is acceptable when the constraints are re-ranked based on the stochastic OT model. The violable constraints of the evaluation in PRC are relatively low-ranked and each of them is close enough to overlap. These overlapped constraints may be re-ranked, and thus allow for optional output in the PRC.

In conclusion, the following facts can be summarized:

1) When the possessor is marked with ACC, the conditions mentioned in previous studies, such as inalienability, affectedness, and entailment are close to being the necessary conditions for the PRC. These are not sufficient conditions, however, because optional CM occurrence is acceptable under these same conditions.

2) Zero-CM (covert case marking) does not indicate that CM is deleted. Zero-CM is equivalent with the overt CM forms, ACC and GEN, in the PRC. Furthermore, zero-CM is the most frequent form of CM when the possessor is "Aboutness-Topic" in a clause.

3) When the possessor is marked with zero-CM or ACC, and it is Aboutness Topic in a clause, the possessor does not act as the possessor any longer. Its grammatical role is changed from possessor to direct object. Having two direct objects in a transitive construction is unusual cross-linguistically, but it is acceptable in the PRC.

4) Even though the PRC rarely occurs in everyday conversation, it is grammatically acceptable. The selection of CM forms can be affected by not only the grammatical role of the NP, but also the information status of the NP

in Korean. ACC marking of the possessor in the PRC demonstrates that the

case marking system in Korean is affected by both of these factors.

APPENDIX A: Corpus Research Processing

1. Corpus Sources

Corpus: SeJong Project Corpus (21 century SeJong Corpus Project)

Formatting: XML

Language: Korean

Written Text: 10 books (Essays)

Title, Author, Date, Publisher

1. 그 사람 장욱진, 김형국, 1993/04, 김영사

   'That person Chang, ukjin', Kim Heyngkook, 1993/04, Kimyoungsa

2. 시련은 있어도 실패는 없다, 鄭周永, 1991/10, 第三企劃

   'Even though I had an ordeal, I've never have a failure in my life', Cheng Joo-young, 1991/10, Kumkangkihoyk

3. 내가 사랑한 사람 내가 사랑한 세상, 곽재구, 1993/08, 한양출판사

   'People who I loved, World which I loved', Kwak Jaekoo,1993/08, Hanyayng

4. 전 인민군 종군기자 수기 이인모, 이인모, 1993/02, (주)월간 말

   'Handicraft of a former correspondent for North Korea in Korean War, Lee InMo', Lee,InMo,1993/08, Mal

5. 뉴스를 말씀드리겠습니다, 딸꾹질!, 이계진, 1991, 도서출판우석

   'Begin with today's news, a hiccup!', Lee KeyJin, 1991, Woosuk

6. 광야의 끝에서, 이신범, 1991, 실천문학사

   'At the edge of the field', Lee SinPem, 1991, Silchen

7. 9시 뉴스를 기다리며, 신은경, 1992, 김영사

   'Waiting for News 9', Sin EunKyeng, 1992, Kimyoungsa

8. 아이를 잘 만드는 여자, 김영희, 1992, 디자인 하우스

   'The woman who can raise her kid to be nice', Kim YoungHee, 1992, Designhoung

9. 여보게 저승 갈때 뭘 가지고 가지, 석용산, 1994, 고려원

   'Hey, what do you bring when you go to the world of dead?', Sek YoungSan, 1994, Koyreywon

10. 강수지의 스타일기, 강수지, 1994, 한국 pc 통신 HITEL

    'The diary of Kang SuJi', Kang SuJi, 1994, Hankook pc TongSin (HITEL)

Spoken Texts : 20 broadcasting scripts (Talk Shows, Reality TV, Informal Interviews)

Title, Scripter

1. KBS2 "밤과 음악사이"(1995/1/18), 김진수

   KBS2, "Between Night and Music" (1995/1/18), Kim JinSu

2. KBS "한밤의 데이트", 김병영

    KBS, "The Date at night", Kim PeyngYoung

3. SBS "남자를 위하여", 김진수

    SBS "For Man", Kim JinSu

4. KBS2 "tv는 사랑을 싣고", 모름

    KBS2 "TV and with Love", Anonymous

5. MBC "단소리 쓴소리"(1994/1/15), 고려대 학부생

    MBC. "Praise and Critics", (1994/1/15), Undergraduate Student in Korea Univ

6. MBC "김한길과 사람들"(1994/12/4 일요일), 김병영

    MBC "KimHanKil and People" (1994/12/4), Kim PeyngYoung

7. SBS "남자를 위하여"(1994/12/12), 김진수

    SBS "For Man", (1994/12/12), Kim JinSu

8. MBC "선택, 토요일이 좋다!"(1994/12/3), 조성윤

    MBC, "Choice, I love saterday!",(1994/12/3), Cho SungYoon

9. KBS "밤과 음악사이"(1995/1/11), 김진수

    KBS "Between Night and Music", (1995/1/11), Kim JinSu

10. KBS2 "행복이 가득한 집"(1995/1/8), 권기범

    KBS2 "Home Sweet Home", (1995/1/8), Kwen KiPem

11. MBC "김한길과 사람들"(1995/1/15 일요일), 김양진

    MBC "KimHanKil and People" (1995/1/15), Kim YangJin

12. MBC "김한길과 사람들"(1995/1/22 일요일), 김양진

    MBC "KimHanKil and People" (1995/1/22), Kim YangJin

13. KBS2 "밤과 음악사이"(1995/2/8), 김진수

    KBS "Between Night and Music", (1995/2/8, Kim JinSu

14. KBS2 "밤과 음악사이"(1995/2/15), 김진수

    KBS "Between Night and Music", (1995/2/15), Kim JinSu

15. KBS2 "밤과 음악사이"(1995/2/22), 김진수

    KBS "Between Night and Music", (1995/2/22), Kim JinSu

16. MBC "선택 토요일이 좋다"(1995/2/4), 조성윤

    MBC, "Choice, I love saterday!",(1995/2/4), Cho SungYoon

17. MBC "선택 토요일이 좋다"(1995/1/7), 조성윤

    MBC, "Choice, I love saterday!",(1995/1/7), Cho SungYoon

18. MBC "아침만들기"(1995/3/7), 이명준

    MBC, "Making Good Morning ",(1995/3/7), Lee MeyngJun

19. MBC "아침만들기"(1995/3/7), 이명준

    MBC, "Making Good Morning ",(1995/3/7), Lee MeyngJun

20. MBC "아침만들기"(1995/3/14), 이명준

    MBC, "Making Good Morning",(1995/3/14), Lee MeyngJun

2. Research Processing

Tokens : Body Parts (*meli* 'head, hair', *son* 'hair', *tali* 'leg', *phal* 'arm', *pal* 'foot', *mok* 'neck', *heli* 'waist', *elkwul* 'face')

Processing

1. When running the program, the finding of the token words includes the 5 surrounding lines in the corpus text. In the 5 lines, the tokens are located in the 4th line (in order to examine the information status of the possessor and the possessee in the discourse context.)

2. The 36 different pieces of information are tagged.
   <About Tokens : body part-possessee>
   1. The citation form of the body part
   2. The grammatical role of the possessee
   3. The thematic role of the possessee
   4. The case marker of the possessee
   5. Is the possessee activated?
   6. Is the possessee presupposable?
   7. Does the possesee have a contrastive meaning?
   8. Is the possessee prominent (morphologically marked or emphasized)?
   9. Is the possessee conjoined with another the body part NP?
   10. Is the body part also the possessor?

   <About possessor>
   11. Person of the possessor (1st person, 2nd person: local person, 3rd person)
   12. The type of phrase of the possessor
   (zero-pronoun, pronoun, common noun ,and proper noun)
   13. The case marker of the possessor
   14. Is the possessor entailed with the main verb?
   15. Is the possessor activated?
   16. Is the possessor presupposable?
   17. Does the possessor have a contrastive meaning?
   18. Is the possessor prominent?
   19. Is the type of the possessor changed in this sentence?
   19A. What is Aboutness Topic in a clause?
   19B. Is the possessor new or old?

20. Is the possessor co-referred with another NP in a clause?
21. Is the possessor co-referred with another NP in the previous sentence or the previous clause?
22. Is the possessor an idiomatic expression?

<Word-Order>
23. Are the possessor and possessee separated?
24. If they are separated, which one occurs first?
25. Does the possessor have a relative clause?
26. Does the possessee have a relative clause?
27. Which other NPs occur in a clause?
28. Word order including the possessor and the possessee is briefly described.

<About Verb and Clause>
29. What is the type of clause? (main, relative, or sub-ordinate clause etc)
30. The citation form of the verb
31. What is the verb type?
32. What is the voice?(active and passive)
33. What is the sentence type?
34. Is there any prosodic feature? (Pause, before or after the possessee)

APPENDIX B : Examples of PRC On the Internet

<1> Source: http://www.ochelp.co.kr/ex2.htm

(1)8시부터 저녁 6시까지 유치원에서 아이들을 (2)가르치고 퇴근한 후 (3)그녀는 다시 집안 청소를 하고 (4) 아이들을 머리를 감기고 씻깁니다.

<Gloss>

(1)	8 si-pwute	cenyek 6 si-kkaci	yuchiwen-eyse	aitul-ul
	8 o'clock-FROM	evening 6 o'clock-TO	kindergarten-LOC	children-ACC

(2)	kaluchi-ko	thoykunha-n	hwu
	teach-CP	go-back-REL	after

(3)	kunye-nun	tasi	cipanchengso-lul	ha-ko
	she-TOP	again	cleaning-house-ACC	do-CP

(4)	**aitul-ul**	**meli-lul**	kamki-ko	ssiski-pnita
	children-ACC	hair-ACC	wash-CP	clean-DEC

<Translation>

(3) She cleans her house, and then (4) washes (her) children's hair.

<Tagged Information>

1.meli(hair) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.3PL 12.common noun 13.ACC 14.Yes 15.NO 16.YES 17.NO 18.NO 19.NO 19A.possessor 19B.discourse-new 20.NO 21.NO 22.NO 23.NO 24.NO 25.NO 26.NO 27.NO 28.(subject) possessor-ACC possessee-ACC Verb 29.main 30.kamki-ta (wash) 31.transitive 32.active 33.declarative 34.before the possessee

<2> Source: http://www.maruta.pe.kr/members/author/author_china.html

(1)기록을 살펴보면 당시 일본군은 (2)조선인 마을로 들어가 사람들을 모두 모이게 해서 (3)지켜보게 하고는 부모가 보는 앞에서 아들을 작두로 목을 잘랐다.

<Gloss>

(1) kilok-ul	salphyepo-myen	tangsi	ilponkwun-un
document-ACC	examined-CP	at that time	Japanese/soldier-TOP

(2) cosenin	maul-lo	tuleka	salamtul-ul	motwu	moikey	hay-se
Korean	town-LOC	enter	people-ACC	all	gather	do-CP

(3) cikhyepo-key	ha-ko-nun

watch-CP   do-CP-TOP

(4) pwumo-ka   po-nun   ap-eyse   **atul-ul**   caktwu-lo   **mok-ul**   cal-ass-ta

parents-NOM see-PRE front-LOC son-ACC   cutter-WITH neck-ACC cut-PST-DEC

\<Translation>

(1)According to the document examined, at that time the Japanese soldiers invaded (2) the Korean town and gathered everyone in the town (3) to watch as (4) they cut the son's neck with a harvest-cutter, in front of his parents.

\<Tagged Information>

1.mok (neck) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.3SG 12.common noun 13.ACC 14.YES 15.NO 16.YES 17.NO 18.NO 19.NO 19A.possessor 19B.discourse-new 20.NO 21.NO 22.NO 23.YES 24.possessor 25.NO 26.NO 27.NO 28.(subject) possessor-ACC NP-INST possessee-ACC verb 29. main 30. calu-ta (cut) 31.transitive 32.active 33.declarative 34. before the possessee

\<3> Source : http://www.yjchurch.or.kr/sul/030413.htm

베드로가 주님을 부인했을 때 주님은 어떤 형편에 계셨습니까? 끌려오신 예수님은 대제사장의 패거리들에게 심문을 당하셨습니다. 심문 당하는 동안 옆에 있던 사람들이 예수님의 얼굴에 침을 뱉었습니다. 침을 뱉으며 얼굴에 주먹질을 했고, (1) 또 어떤 사람들은 손바닥으로 예수님을 얼굴을 때렸습니다

\<Gloss>

(1)tto   etten   salamtul-un   sonpatak-ulo   yeyswunim-ul   elkwul-ul ttayli-ess-pnita

also   some   people-TOP   palm-WITH   Jesus-ACC   face-ACC   hit-PST-DEC

\<Translation>

In addition, someone beat Jesus's face with the palm of their hands.

\<Tagged Information>

1.elkwul (face) 2.object 3.patient 4.ACC 5.YES 6.NO 7.NO 8.NO 9.NO 10.NO 11.3sg 12.proper noun 13.ACC 14.YES 15.YES 16.YES 17.NO 18.NO 19.YES (zero-pronoun->proper noun) 19A.possessor 19B.discourse-old 20.NO 21.NO 22.NO 23.NO 24.NO 25.NO 26.NO 27.subject(non-specific) 28.subject-TOP NP-INST possessor-ACC posseessee verb 29.main 30.ttayli-ta (hit) 31.transitive 32.active 33.declarative 34.before the possessee

\<4>Source:http://www.wednesdayjournal.net/news/newsView.html?deptId=hknews&idx=50 60

(1) 자기가 낳은 아기를 칼로 가슴을 (2) 7번이나 찔러 살해하려한 10대 소녀가 2년간의 보호감호 끝에 방면됐다.

\<Gloss>

(1)caki-ka nah-un   aki-lul   khal-lo   kasum-ul

 self-NOM delivered-CP baby-ACC knife-WITH chest-ACC

(2) 7pen-ina   ccille salhayhalyeha-n 10tay   sonye-ka

  7time-CONRTS stab kill-REL teenage girl-NOM

<Translation>

(2) The teenage girl, (2)who delivered the baby by herself and stabbed (her)baby's chest seven times with a knife, …

<Tagged Information>

1.kasum (chest) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.3sg 12.common noun 13.ACC 14.YES 15.NO 16.NO 17.NO 18.NO 19.NO 19A.possessor 19B.discourse-new 20.NO 21.NO 22.NO 23.YES 24.possessor 25.YES 26.NO 27.NO 28.REL-clause possesser-ACC NP-INST possessee-ACC verb-REL subject 29.relative 30.ccilu-ta 31.transitive 32.active 33.declarative 34.before the possessee

<5> Source : http://my.dreamwiz.com/cana2391/6day.htm

(1)내가 믿음으로 소리를 지르면 주님이 들으시고 (2)손을 내밀어 물 속에 빠져가는 세상에 (3)빠져가는 나를 손을 잡아 내어 주시는 것입니다.

<Gloss>

(1) nay-ka mitum-ulo soli-lul   cilu-myen cwunim-i tulu-si-ko

  I-NOM trust-WITH sound-ACC shout-CP Jesus-NOM listen

(2) son-ul   naymil-e   mwul sok-ey ppacyeka-nun seysang-ey

  hand-ACC stretch-CP   water in-LOC falling-REL   world-to

(3) ppacyeka-nun   na-lul son-ul   cap-a   nay-e ….

  falling-REL   I-ACC hand-ACC   catch-CP   draw-CP

<Translation>

When I shout to the Lord and trust him, he listens to my voice, and then stretches out his hand to me. He draws me and pulls me out of trouble

<Tagged Information>

1.son (hand) 2.object 3.patient 4.ACC 5.NO 6.YES 7.NO 8.NO 9.NO 10.NO 11.1sg 12.pronoun 13.ACC 14.YES 15.YES 16.YES 17.NO 18.NO 19.NO 19A.possessor 19B.discourse-old 20.NO 21.NO 22.NO 23.NO 24.NO 25.YES 26.NO 27.NO 28.(subject)REL-clause possessor-ACC possessoee-ACC verb 29.main 30.cap-ta (grasp) 31.transitive 32.active 33.declarative 34.before the possessee

<6> Source: http://www.himal.pe.kr/3-mount/15jiri.htm

과거의 내가 아직까지 오늘의 나를 발목을 슬쩍 잡으니,

<Gloss>

kwake-uy	nay-ka	acik-kkaci	onul-uy	na-lul	palmok-ul	cap-uni
past-GEN	I-NOM	still-CP	present-GEN	I-ACC	ankle-ACC	catch-CP

<Translation>

Literal: My past still grasps my ankle in the present

Meaning: My past mistakes still impede my life today.

<Tagged Information>

1.palmok (ankle) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.1sg 12.pronoun 13.ACC 14.YES 15.YES 16.NO 17.NO 18.NO 19.NO 19A.possessor 19B.discourse-old 20.NO 21.YES 22.YES 23.NO 24.NO 25.YES (modifier) 26.NO 27.NO 28.modifier possessor-ACC possessee-ACC verb 29.sub-ordinate clause 30.cap-ta (catch) 31.transtive 32.active 33.declarative 34.before the possessee

<7> Source : http://www.onnuriwelfare.org/board_view.asp?idx=1023

또 무신 이런 이론이 나를 발목을 잡는단 말고.

<Gloss>

tto	musin	ilen	ilon-i	na-lul	palmok-ul	cap-nuntan	mal-ko
and	what	this	theory-NOM	I-ACC	ankle-ACC	catch-CP	do-Q

<Translation>

And, does such a theory catch my ankle?

<Tagged Information>

1.palmok (ankle) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.1sg 12.pronoun 13.ACC 14.YES 15.NO 16.YES 17.NO 18.NO 19.NO 19A.possessor 19B.discourse-new 20.NO 21.NO 22.YES 23.NO 24.NO 25.NO 26.NO 27.subject (common noun) 28.subject possessor-ACC possessee-ACC verb 29.main 30.cap-ta(catch) 31.tansitive 32.active 33.exclamatory 34.before the possessee

<8> Source: http://www.yakult.co.kr/theme/viewAzooma.asp?no=92&wYear=2003

우리반이라 생각하고 실내화를 신고 들어가면 4학년 언니, 오빠들이 '쟤봐','바보아냐', '하하호호' 걸상이 뒤집어 지도록 웃어젖히고 (1)선생님은 이런 나를 등을 떠밀며 제대로 알고 와야지 하시면서 문을 닫아버린다.

<Gloss>

(1) sensangnim-un   ilen   na-lul   tung-ul   ttemil-mye

    teacher-TOP   this   I-ACC back-ACC   push-CP

<Translation>

The teacher pushed on my back.

<Tagged Information>

1.tung (back) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.1sg 12.pronoun 13.ACC 14.YES 15.NO 16.YES 17.NO 18.NO 19.NO 19A.possessor 19B.discourse-new 20.NO 21.NO 22.NO 23.NO 24.NO 25.NO 26.NO 27.subject-TOP 28.subject-TOP possessor-ACC possessee-ACC verb 29.sub-ordinate clause 30.ttemil-ta (push) 31.transitive 32.active 33.declarative 34.before the possessee

<9> Source: http://morph.kaist.ac.kr/~morph/oldDoc/korean_grammar_theory

친구들이 나를 등을 밀어 무대에 나서게 하였다.

<Gloss>

chinkwutul-i   na-lul   dung-ul   mil-e

friends-NOM   I-ACC   back-ACC   push-CP

<Translation>

(my) Friends push on my back.

<Tagged Information>

1.tung (back) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.1sg 12.pronoun 13.ACC 14.YES 15.NO 16.YES 17.NO 18.NO 19.NO 19A.possessor 19B.discourse-new 20.NO 21.NO 22.NO 23.NO 24.NO 25.NO 26.NO 27.subject-NOM 28.subject possessor-ACC possessee-ACC verb 29.sub-ordinate 30.mil-ta (push) 31.transitive 32.active 33.34.before the possessee

<10> Source: http://www.chinatowngroup.com/15yule/yl-000801-karen.html

사실 이번 콘서트의 고조는 공연이 다 끝난 막바지에였다.
막문위가 무대에 누워있을 때 임현제가 깜짝 출연해 그녀에게 꽃다발을 건네주었는데
가볍게 손등에 키스를 한 임현제에게 (2)막문위가 먼저 그를 머리를 잡고는 열렬하게 키스를 해버렸다.

<Gloss>

 Makmwuwi-ka   mence ku-lul meli-lul   cap-ko-nun

 Mak-NOM   first   he-ACC head-ACC   catch-CP

<Translation>

Makmwuwu first caught his head

<Tagged Information>

1.meli (head) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.3sg 12.pronoun 13.ACC 14.YES 15.YES 16.NO 17.NO 18.NO 19.YES (proper name-> pronoun) 19A.possessor 19B.discourse-old 20.YES 21.NO 22.NO 23.NO 24.NO 25.NO 26.NO 27.subject-NOM 28.subject possessor-ACC possessee-ACC verb 29.sub-ordinate clause 30.cap-ta (catch) 31.transitive 32.active 33.declarative 34.before the possessee

<11>Source:http://www.google.co.kr/search?hl=ko&ie=UTF-8&oe=UTF-8&newwindow=1&q=%22%EA%B7%B8%EB%A5%BC+%EB%93%B1%EC%9D%84%22&lr=

아마도 어느 어둠침침한 교실에서 자율학습을 하며 3차방정식을 풀고 있는 게 서북의 장형의 본 모습일 지도 모른다. (1)그런 그를 등을 떠밀며 무대에 세워 자신들의 위치를 흔들리게 할 필요는 없었다.

<Gloss>

(1) kulen   ku-lul   tung-ul   ttemil-mye
    such   he-ACC   back-ACC   push-cont

<Translation>

(someone) pushed his back.

<Tagged Information>

1.tung (back) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.3sg 12.pronoun 13.ACC 14.YES 15.YES 16.NO 17.NO 18.NO 19.YES (proper name->pronoun) 19A.possessor 19B.discourse-old 20.NO 21.YES 22.NO 23.NO 24.NO 25.modifier 26.NO 27.NO 28.modifier possessor-ACC possessee-ACC verb 29.sub-ordinate clause 30.ttemil-ta 31.trasitive 32.active 33.declarative 34.before the possessee

<12> Source: http://shinsoo.kimc.net/res/pastor/ws/19990509.htm

(1)시장에 갈 때는 그 노망한 (2) 어머니를 손을 잡고 허리띠를 묶고 모시고 다녔습니다. 지금은 그 할머니가 돌아가셨지요.

<Gloss>

(1) sicang-ey   kal   ttay-nun   ku   nomangha-n
    market-LOC   go   time-TOP   the   become-senile

(2) emeni-lul   son-ul   cap-ko
    mother-ACC   hand-ACC   catch-cont

<Translation>

When (person) went to the market, he/she always grasped mother's hand.

<Tagged Information>

1.son (hand) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.3sg 12.common noun 13.ACC 14.YES 15.NO 16.NO 17.NO 18.NO 19.NO 19A.possesor 19B.discourse-new 20.NO 21.NO 22.NO 23.NO 24.NO 25.NO 26.NO 27.deteminer 28.determiner possessor-ACC possessee-ACC verb 29.sub-ordinate clause 30.cap-ta (grasp) 31.transitive 32.active 33.declarative 34.before the possessee

<13>

Scource:http://www.dongbukanews.com/board_issue/notice/notice_content.asp?idx=97&

(1)쌀쌀한 날씨 속에도 아이들을 손을 잡고 총회에 참석한 20여명의 회원은 다들 조금 들 떠보였다. 올해 4월에 시작된 이 모임은 한국에 결혼해서 사는 중국여성들의 자발적인 참 여로 이루어졌다.

<Gloss>

(1) ssalssal-han	nalssi	sok-eyto	aitul-ul	son-ul	cap-ko
chilly	weather	in-CONTS	children-ACC	hand-ACC	grasp-CP

<Translation>

Even though it was chilly, (someone) grasped the children's hands

<Tagged Information>

1.son (hand) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.3PL 12.common noun 13.ACC 14.YES 15.NO 16.NO 17.NO 18.NO 19.NO 19A.possessor 19B.discourse-new 20.NO 21.NO 22.NO 23.NO 24.NO 25.NO 26.NO 27.NO 28.(subject) possessor-ACC possessee-ACC verb 29.sub-ordinate clause 30.cap-ta (grasp) 31.transitive 32.active 33.declarative 34.before the possessee

<14> Source: http://www.gnckorea.co.kr/health_matters/eye_1.htm

(1)어린이들은 호기심이 많아서 날카로운 물건에 (2)특별한 관심을 갖습니다.
(3)화장품, 주방도구, 사무용품과 같은 물건들은 (4)아이들을 눈을 손상시킬 수도 있습니다.

<Gloss>

(1) elinitul-un	hokisim-i	man-ase	nalkhalowun	mwulken-ey
kid-TOP	curiosity-NOM	a-lot-cont	sharp	item-DAT
(2) thukpyehan	kawnsim-ul	kac-supnita		
special	interest-ACC	have-DEC		
(3)hwacangpwum	cwubangdokwu		samwuyoungpwum-kwa	kathwun
cosmetics	cooker		stationary-CONJ	like
(4)aitul-ul	nwun-ul	sonsangsikhil	su-to	iss-supnita

kid-ACC	eye-ACC	injury	R/N-conts	pred-DEC

<Translation>

Because of their curiosity, kids have special interest in sharp items. So items such as cosmetics, cookers or stationary can injure kids' eyes

<Tagged Information>

1.nwun (eye) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.3PL 12.common noun 13.ACC 14.YES 15.YES 16.NO 17.NO 18.NO 19.YES(common noun->common noun) 19A.possessor 19B.discourse-old 20.NO 21.YES 22.NO 23.NO 24.NO 25.NO 26.NO 27.subject-NOM 28.subject-NOM possessor-ACC possessee-ACC verb 29.main 30.sonsangsikhi-ta (injure) 31.transitive 32.active 33.declarative 34.before the possessee

<15> Source: http://www.bebehouse.com/hotbebe/journal/default.asp?jno=53&jpageno=2

고막의 온도를 정확히 측정하기 위해서는 바른 자세로 3회 이상 측정 후, 평균치를 계산합니다. (1) 3세 이하의 아이들을 귀를 가볍게 뒤로 당겨서 (수평이 되도록) 측정하고 3세 이상 아이들이나 성인이 사용할 경우에는 귀를 가볍게 위로 당겨 측정합니다.

<Gloss>

(1) 3-sey	iha-uy	aitul-ul	kwi-lul	kapeypkey	twilo	tangkyese
3-yr-old	under-GEN	kid-ACC	ear-ACC	slightly	back	pull

<Translation>

Slightly pull the ears of kid under 3-year's old

<Tagged Information>

1.kwi (ear) 2.object 3.patient 4.ACC 5.NO 6.YES 7.NO 8.NO 9.NO 10.NO 11.3PL 12.common noun 13.ACC 14.YES 15.NO 16.NO 17.NO 18.NO 19.NO 19A.possessor 19B.discourse-new 20.NO 21.NO 22.NO 23.NO 24.NO 25.NO 26.NO 27.modifier 28.modifier possessor-ACC possessee-ACC 29.sub-ordinate clause 30.tangki-ta 31.transitive 32.active 33.declarative 34.before the possessee

<16> Source: http://user.chollian.net/~sonbo/son2_1.htm

아이들이 초등학생되어 그리고 어느날에는 아마 가족앨범에 모아둔 자기 사진만을 하나하나 뽑아 새로운 자기 앨범에 모두 모아 둘 시기가 올 것입니다 자신만의 영역을 설정하려는 시도...... (1)되돌아 볼 아이들을 얼굴을 볼려고 하면 이 사진들이 없어 서운하게 될 시기도 저희들에게 돌아

<Gloss>

(1) toytola   pol   aitul-ul   elkwul-ul   pollye-ko

     back   look   kid-ACC   face-ACC   want-to-see-cont

<Translation>

(Someone) tried to look back wanting to see that kids' face…

<Tagged Information>

1.elkwul (face) 2.object 3.patient 4.ACC 5.NO 6.YES 7.NO 8.NO 9.NO 10.NO 11.3PL 12.common noun 13.ACC 14.YES 15.YES 16.NO 17.NO 18.NO 19.NO 19A.possessor 19B.discourse-old 20.NO 21.NO 22.NO 23.NO 24.NO 25.YES 26.NO 27.NO 28.REL-clause possessor-ACC possessee-ACC verb 29.sub-ordinate clause 30.po-ta (watch) 31.tansitive 32.active 33.declarative 34.before possessee

<17> Source : http://www.iymca.or.kr/sub/news/221/221_07.asp

(1)우리들은 4월이 되면 나무를 심기 위해 (2)산으로 몰려듭니다. … (3) 어릴적 아버지를 손을 잡고 산에 올라 잦나무 한그루 심은 기억이 납니다.

<Gloss>

(1) wulitul-un   4wel-i   toy-myen   namwu-lul simki   wihay

    we-TOP   April-NOM   become-CP tree-ACC   plant   in order to

(2) san-ulo   mollyetu-pnita

    mountain-to   crowd-DEC

(3) elilcek   apeci-lul   son-ul   cap-ko…

    when-young   father-ACC   hand-ACC   grasp-cont

<Translation>

In April, we go to the mountain in order to plant trees… when (we) were young, (we) grasped father's hand…

<Tagged Information>

1.son (hand) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.3sg 12.common noun 13.ACC 14.YES 15.NO 16.NO 17.NO 18.NO 19.NO 19A.possessor 19B.discourse-new 20.NO 21.NO 22.NO 23.NO 24.NO 25.NO 26.NO 27.NO 28.(subject) possessor-ACC possessee-ACC verb 29.sub-ordinate clause 30.cap-ta (grasp) 31.transitive 32.active 33. declarative 34.before the possessee

<18>Source:http://mirtalk.hanmir.com/Board/View.php?info_seq=000t0&boardid=00jUO

저는 맥주를 시키고 아내에게,"우리도 참가하자!"라고 말하자,아내는 "미쳤어! 애들판이잖 아!~주책스럽게~"라고 뒤로 빼더군요. (1) 그렇지만 저는 아내의 말에 아랑곳 하지 않고

(2) 키쓰 콘테스트 참여를 신청하고 (3)싫다는 아내를 손을 잡고 무대로 나갔습니다.

<Gloss>

(1) kulehciman	ce-nun	anay-uy	mal-ey	alangkot	haci	anko
but	I-TOP	wife-GEN	say-to	without	do	not

(2) kiss-contest		chamye-lul		sinchengha-ko	
k-contest		participation-ACC		apply-cont	

(3) silhta-nun		anay-lul	son-ul		cap-ko ...
dislike-REL		wife-ACC	hand-ACC		grasp-cont

<Translation>

Thought my wife dislike it, I applied to participate in the kiss-contest without the objection of my wife, and then grasped my wife's hand

<Tagged Information>

1.son (hand) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.3sg 12.common noun 13.ACC 14.YES 15.YES 16.NO 17.NO 18.NO 19.NO 19A.possessor 19B.discourse-old 20.NO 21.YES 22.NO 23.NO 24.NO 25.NO 26.NO 27.subject-TOP 28.subject possessor-ACC possessee-ACC verb 29.sub-ordinate clause 30.cap-ta (grasp) 31.transitive 32.active 33.declarative 34.before the possessee

<19> Source: http://www.tojapan.co.kr/life/profile.asp?service=person&number=100

(1)결국 "2인3각의 경기라고 생각해 달라"는 (2)아들의 말에 아버지는 아들을 손을 꼭 잡은 뒤 촬영소로 출발했다.

<Gloss>

(1) kyelkwuk	"2-in	3kak-uy	kyengki-lako	sayngkakha-a	tal-la"-nun
after all	2-people	3-leg-GEN	race-cont	think-cont	ask-im REL

(2) atul-uy	mal-ey	apeci-nun	atul-ul	son-ul	kkok	cap-un	twuy
son-GEN	saying-GEN	father-TOP	son-ACC	hand-ACC	firmly	grasp-REL	after

<Translation>

Finally, the son said, "Please, think of it as a 2 person – 3 legged race", and his father grasped the son's hand

<Tagged Information>

1.son (hand) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.3sg 12.common noun 13.ACC 14.YES 15.YES 16.NO 17.NO 18.NO 19.NO 19A.possessor 19B.discourse-old 20.NO 21.NO 22.NO 23.NO 24.NO 25.NO 26.NO 27.subject-TOP 28.subject possessor-ACC possessee-ACC verb 29.sub-ordinate clause 30.cap-ta (grasp) 31.transitive 32.active 33.declaratve 34.before the possessee

<20> Source: http://user.chollian.net/~doowal/story/story3.htm

창준이가 마루 밑에서 동앗줄을 끄집어내는 아버지 옆에 서서, 아까 저녁 때, 웅이가 안돌아 온다고, 웅이 할머니가 찾아왔던 일을 말했다. (1)동앗줄 타래를 청년에게 넘겨준 아버지는 아들을 얼굴을 똑바로 내려다 보았다

<Gloss>
(1) dongascwul thalay-lul   chengnyen-eykey   nemkyecwu-n apeci-nun
    rope   hank-ACC   young-man-to   pass-REL   father-TOP
(2) atul-ul   elkwul-ul   ttokpalo nalie po-ass-ta
    son-ACC   face-ACC   straight down   look-PAST-DEC

<Translation>
The father, who passed a coil of rope to the young-man, looked straight down into the son's face   .

<Tagged Information>
1.elkwul (face) 2.object 3.patient 4.ACC 5.NO 6.NO 7.NO 8.NO 9.NO 10.NO 11.3sg 12.common noun 13.ACC 14.YES 15.YES 16.YES 17.NO 18.NO 19.YES (proper name->common noun) 19A.possessor 19B.discourse-old 20.NO 21.YES 22.NO 23.NO 24.NO 25.NO 26.NO 27.subject-TOP 28.subject possessor-ACC possessee-ACC verb 29.main 30.po-ta (look at) 31.transitive 32.active 33.declarative 34.before the possessee

<u>References</u>

\<English-language References\>

Aissen, J (1999) 'Markedness and Subject Choice in Optimality Theory', *Natural Language & Literature Theory* 17, 673-711

Aissen, J (1999) 'Agent Focus and Inverses in Tzotzil', *Language*, V 75, N3, 451-485

Aissen, J (2003) 'Differential Object Marking: Iconicity vs. Economy', *Natural Language & Literature Theory* 21, 435-483

Anderson, G (1995) 'Ditransitives, Possessor-Raising, and Copying-to-OBJ: 'Animacy' in Morphosyntax', *CLS* 31, Main Session, 1-15

Anderson, J.M (1984) 'Objecthood' In *Objects* (Plank. F, Ed.), 29-54, Academic Press,London

Anttila, A & Vivienne, F (2002) 'Variation, Ambiguity, and Noun Classes in English', ms, New York University, New York; *Lingua*

Bevear, D and Lee H-J (2003) 'Input-Output Mismatches in OT', ms, ROA-584-0203, http://roa.rutgers.edu/view.php3?id=784

Boersma, P (1997) 'How We Learn Variation, Optionality, and Probability' ROA-221-1097, http://roa.rutgers.edu/view.php3?id=883

Boersma, P & Hayes, B (2001) 'Empirical Tests of the Gradual Learning Algorithm' *Linguistic Inquiry*, V32, N1, 45-86

Boersma, P (2004) 'A stochastic OT account of paralinguistic tasks such as grammaticality and prototypical judgments', ROA-648-0304, http://roa.rutgers.edu/view.php3?roa=648

Branico, J (2002) *Looking for the Right Words: Optimal Noun Phrases in Syntax and Discourse*. Master Thesis. Univ. of Manitoba

Büring, D (2003), 'On D-Trees, Beans, and B-Accent', *Linguistics & Philosophy* 26:5, 511-545

Carnie, A (2002) *Syntax: A Generative Introduction*, Blackwell Publishing

Carson T, S (2001) 'On Korean "Case Stacking: The Varied Functions of the Particle *ka* and *lul*', *The Linguistics Review*, 18, 193-232

Cho,S-Y (1986) 'Solving the problem of the Korean topic/subject particles *nun* and *ka*: a paradigm and a text analysis', *Linguistics* 24, 351-369

Cho,S-E (2003) 'A Conditioning Factor in Possessor Agreement Constructions', *Japanese/Korean Linguistics* 11, 343-351

Choi,H-W (1996) *Optimizing Structure in Context: Scrambling And Information Structure*. Ph.D dissertation, Stanford Univ., CLSI

Chomsky, N (1995) *The Minimalist Program*, MIT press

Culicover, W.P (1997) *Principles and Parameters: An Introduction to Syntactic Theory*, Oxford Press

Ghomeshi, J (1997) 'Topics in Persian VPs', *Lingua*, V102, 133-167

Givon, T (2001), *Syntax V.2*, John Benjamin Publishing Co

Hale, K. Jelinek, E & Willie ,M (1998) 'Topic and Focus Scope Positions in Navajo', *Word Order and Scrambling* (Ed. Karimi,S) , Blackwell, 1-21

Hammond, M (2000) 'The Logic of Optimality Theory', ms, ROA-390-0400, http://roa.rutgers.edu/view.php3?id=405

Han, J-H (1999) *Morphosyntactic Coding of Information Structure in Korean(Multiple Case Marking, Light Verb Construction, quantifier Float): A Role & Reference Grammar Account*, Ph.D dissertation, SUNY at Buffalo

Jager,G (2002) 'Gradient Constraints in finite state OT: The unidirectional and the Bidirectional case',ms, ROA-479-1101, http://roa.rutgers.edu/view.php3?id=582

Jun, J-S (2003) *Syntactic and Semantic Bases of Case Assignment: A Study of Verbal Noun, Light Verbs and Dative*. Ph.D, dissertation, Brandies Univ.

Jun,S-A (1998) 'The Accentual Phrase in the Korean prosodic hierarchy', *Phonology* 15, Cambridge Univ Press,189-226

Jurafsky, D & Martin,J.H (2000) *Speech and Language Processing*, Prince Hall

Kager, Rene (1999) *Optimality Theory*. Cambridge University Press

Ko, E-S (1998) 'A Discourse Analysis of the Realization of Object NP Forms in Korean', *Japanese/Korean Linguistics* 9, 2001,195-208

Lambrecht, K (1994) *Information structure and sentence form*. Cambridge University Press

Lee,J-M (2000) ' Topic, Contrastive Topic and Focus: What's on Our Mind', *Journal of Cognitive Science, Seoul National Univ*, V1, 21-38

Lee, J-H (1991) 'Case-Marking in Korean: Case Alternation Between Nominative and Accusative', *CUNY forums: Papers in Linguistics*, 70-83

O'Grady,W (1991) 'Possessor Ascension', In *Categories and Case: The Sentence Structure of Korean*, V 71, J. Benjamin P.C. ,67-95

Prince, A & Smolensky (1993) 'Optimality Theory : Constraint Interaction in Generative Grammar', ms, RuCCS-TR-2. ROA-537
http://roa.rutgers.edu/view.php3?roa=537

Radford, A (1997) *Syntactic theory and the structure of English*. Cambridge University Press

Radford, A (1998) *Transformational Grammar*. Cambridge University Press

Russell, K (1999) *MOT: Sketch of an Optimality Theoretic Approach to Morphology*, ms, University of Manitoba

Sells, P (1995) 'Korean and Japanese Morphology from a Lexical Perspective',

Linguistics Inquiry, V 26, N2, Spring, 277-325

Shon,H-M (1999) *The Korean Language*, Cambridge University Press

Szabolcsi, A (1983) 'The Possessor That Ran Away From Home', *The Linguistic Review* 3, 89-102

Tallerman, M (1998) *Understanding Syntax*. Arnold

Vallduvi,E (1993) 'Information Packing: A survey',
http://www.hcrc.ed.ac.uk/Site/VALLDUEN.html

Vallduvi, E & Vilkuna, M (1998) 'On Rheme and Kontrast', *Syntax and Semantic* 29, 79-108

Yehuba N.F (2001) *Lexical-Functional Grammar: An Introduction to Parallel Constraint-Base Syntax*, CLSI

Zoll, Cheryl (1996) *'2.Optimality: Theory and Practice' In Parsing Below the Segment in a Constraint Based Framework*, Ph.D dissertation, UCB, 44-94

Zwicky, A (1985) 'Clitics and Particles', *Language*, V 61, N 2, 283-305

Zwicky, A & Pullum, G (1983), 'Cliticization vs. Inflection: English *N'T* ', *Language*, V 59, N3, 502-513

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<Korean-language References>

Kang, M-Y (1999) 'A New Look at Korean Multiple Accusatives', *Hankookehak* 10, 67-91

Kim, E-S (1999) 'Syntactic Realization of Inalienable noun – Focusing on Double Accusative Construction', *Emunnoncip* 40, 503-534

Hong, K-S (1999) 'Generative Grammar and Cases of Korean', *The Scholar Society of Korean*, 'Case Marker and Case in Korean'

Lee, I-S and Chae,W (1999) *The Lecture of Korean Grammar*, Hakyensa

Lee, N-S (1998) 'Elision and non-realization of Case Marking', *kookehak* 31

Lwu, K-S (Ed) (2001) *Object in Korean*, WelIn

Se, C-S (1996) *Overview of the Modern Korean Grammar's Study*, Hankookmwuhwasa

You, D-S (1998) 'On the Multiple Case Marking Construction in Korean', *Kokehakhoy*,31

Yale Romanization System http://koreaweb.ws/img/Yale.GIF

ABBREVIATION

ACC	Accusative
C	Constraint
CM	Case marker
COMP/CP(comp)	Complementizer
CONJ/ C/J	Conjunction
CONTRS/contrs	Contrastive
DAT	Dative
DEC	Declarative
HON	Honorific
GEN	Genitive
GR	Grammatical role
NM	Nominal marker
NOM	Nominative
OBJ	Object
OT	Optimality Theory
PASS	Passive
PAST	Past Tense
POSS	Possessor
PRED/Pred	Predicate
PRES	Present Tense
PRC	Possessor Raising Construction
REL/RL	Relative
SUBJ	Subject
TOP	Topic marker
Zero-CM(ø)	Zero case marker