Double nominative constructions in Korean^{*}

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1 Introduction

This paper considers the notorious Double Nominative Constructions (DNCs) found in Korean, and argues that these constructions are derived from a locative construction. Based on Freeze (1992) and Perlmutter (1978), I will show that the derivation in Korean DNCs is the same as that found in English possessive, existential and locative sentences (see Fillmore (1968), Kuno (1971) and Lyons (1967) for details).

The DNCs seem to have a relationship with the following three kinds of structures: first, possessive constructions, second, locative existential constructions, and third, ergative constructions, as exemplified below:

(1)	a.	Mary-uy/ka GEN/NOM ¹ 'Mary's hand is p	son-i hand-NOM retty'	yeppu-ta pretty-DEC
	b.	John-uy/i GEN/NOM 'John's brother is	hyeng-i brother-NOM rich'	pwuca-ta rich-DEC
(2)	a.	Seoul-ey/i LOC/ NOM 'A fire broke out	pul-i fire-NOM in Seoul'	na-ss-ta break.out-PST-DEC
	b.	Hankwuk-ey/i	san-i	man-ta

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¹NOM indicates Nominative, GEN Genitive, LOC Locative, DAT Dative, DEC Declarative, PST Past Tense, PRES Present Tense, COP Copular, SG singular, MASC Masculine, PSV Passive, OBL Oblique, PL Plural, HON Honorification. The dative *eke* for animate NPs and locative *ey* for inanimite NPs expressing locative PP are in the relation of complementary distribution.

		LOC/NOM 'In Korea there are	mountain-NOM e a lot of mountains'	many-DEC
(3)	a.	Mary-eke/-ka DAT/NOM 'Mary misses her l	kohyang-i hometown-NOM nometown'	kurip-ta miss(ergative verb)-DEC
	b.	Tom-i NOM 'Tom likes Mary'	Mary-ka NOM	joh-ta. like(ergative) DEC

With respect to Case-assignment, I propose that the first NP marked nominative in DNCs should derive from a locative position and move into SPEC IP (or SPEC AGR_sP) to receive Nominative Case, and that the second NP marked nominative should remain within VP and receive default Case (or inherent Case).

The paper is organised as follows. In Section 2, I briefly outline the framework of the minimalist program assumed in Chomsky (1992). Section 3 shows that Double Nominative Constructions are possible only with unaccusative verbs, following Suh (1993). Section 4 is concerned with Case-assignment for DNCs in Korean.

2 An outline of the minimalist program

The minimalist program (Chomsky, 1992) recognises the only two interface levels, LF and PF, through which input from the lexicon is linked by the computational system directly to grammar-external systems, Conceptual-Intentional (C-I) and Articulatory-Perceptual (A-P), respectively. In other words, the computational system projects lexical items from the lexicon onto X-bar trees in compliance with X-bar theory², and carries out the syntactic Move- α operation until a point termed SPELL-OUT, from which the derivations of the PF and LF- representations diverge. SPELL-

²In the minimalist program, an X-bar structure is composed of projections of heads selected from the lexicon. The idea is that a head has one complement, YP, and one Specifier, ZP; a head and a complement form an X-bar projection, and this X-bar projection and a specifier ZP constitute a maximal projection (X-double bar) of X. The basic relationship is 'local'. In this structure, we have two local relationships: the Spec-head relationship of ZP to X, and the head-complement relationship of X to YP. The head-complement relation is associated with θ -relationships. The Spec-head relation is that of feature agreement and checking. This idea assumes that a head can have only a single Spec and a single complement. In contrast, Brody (1994) does not exclude structures in which a head has more than one Specifier or complement.

OUT is not a syntactic level of representation, and Move- α may continue after SPELL-OUT, as illustrated in (4):

(4)

$$\begin{array}{c} \text{MOVE-}\alpha \\ & & \\ \text{Lexicon} & \text{SPELL-OUT} & \text{LF} \cdots \text{ (C-1)} \\ & & \\$$

Directly relevant to this paper is that the minimalist program replaces the notion of head-government for Case-assignment of objects with that of a local relation between Specifier and head: In Chomsky (1981), the Spec-head relation enters into structural Case for subjects while the government relation between verb and object enters into lexical Case for objects. In Chomsky (1992) the Spec-head relationship is responsible for structural Case for objects as well, exactly as in the case of subjects. This leads us to the assumption that there is a symmetry between subject and object with respect to the Case-assignment system. Under the government theory for Case-assignment, an NP receives a Case feature from a head bearing this Case feature under government during the course of the derivation. Under the minimalist program, however, an NP already bearing a Case feature in the lexicon must be checked during the course of derivation against a corresponding feature borne by another element within a prescribed local 'checking' configuration. Chomsky (1992) says:

...AGR_s and AGR_o are informal mnemonics to distinguish the two functional roles of AGR. AGR is a collection of \emptyset -features (Person, Number, Gender); these are common to the systems of subject and object agreement, though AGR_s and AGR_o may of course be different selections. Then both agreement and structural Case are regarded as manifestations of Spec-head relation (NP, AGR). But Case properties depend on characteristics of Tense (for Nominative Case) and Verb (for Accusative Case). Therefore T raises to AGR_s and V raises to AGR_o.

Given the above hypothesis, the structure of clause for English is as follows:



This analysis leads us to argue that triggers for movement in UG are morphosyntactic correspondence requirements, i.e. movement depends on morphological properties of lexical items. Chomsky (1992) proposes that wellformedness principles applying to interface representations (LF- and PFrepresentations), fully reduce to a single condition, the principle of Full Interpretation³. According to the principle, the interface representations may contain no symbol that is not interpretable for the C-I and A-P systems. Morphosyntactic (mfeatures) features such as 'Case' (NOM, ACC,...), ' \emptyset -features' (Person, Number, Gender), and 'wh-' etc., are not externally interpretable symbols, hence must not appear in well-formed interface representations, to satisfy the FI principle. An AGRhead which is made up of \emptyset -features, will match those borne by a verb and by the NP with which the verb agrees. AGR, mediating this agreement relation, must include two sets of \emptyset -features: N-features for the Noun and V-features for the Verb. With respect to subject Case marking (Nominative) in English, for example, the subject NP

³Chomsky (1992) proposes the Full Interpretation principle:

Interface representations must be fully interpretable for the relevant performance systems. In particular:

i). A PF-representation may contain no symbol that is not interpretable for the Articulatoryperceptual systems (A-P).

ii). An LF-representation may contain no symbol that is not interpretable for the conceptualintentional systems (C-I).

raises to the SPEC position of AGR_sP prior to SPELL-OUT, AGR_s then matches the Case feature borne by Tense and that borne by the NP in the Specifier position. In the case of objects, the object NP moves into the position of SPEC AGR_oP after SPELL-OUT, and then AGR_o matches the Case feature borne by the Verb and that borne by the NP.

In relation to this feature-checking theory, Chomsky introduces the notion of *weak* and *strong* features. Weak features can be present in PF since these features are invisible at the level of PF (PF-invisible), while strong features must be eliminated prior to PF, enforcing the application of overt syntactic movement, since strong features are visible at PF (PF-visible). Pollock (1989) argues that in French, unlike English, the finite verbs raise overtly into a functional head position overtly in syntax. Chomsky (1992) accounts for the contrast between English and French with the notion of weak and strong features:

- (6) a. John often $[_{VP} kissed Mary]$
 - b. Jean *embrasse* [_{VP} souvent Marie]

The English verb in (a) appears within VP in the SPELL-OUT representation, while the French verb in (b) raises up into AGR_s . The V-features in AGR in English are *weak* and the verb does not have to raise prior to SPELL-OUT (see the Economy Principle ii in Note 4); in French the V-features in AGR are *strong* and therefore the verb must raise and check these features prior to SPELL-OUT. Thus the overt syntactic movement of finite verbs in English or French is decided by whether there are strong V-features in functional heads.

In general, the task of grammatical theories developed since Chomsky (1981) is to reduce variant language- or construction - particular rule systems to invariant principles of UG with different choices of values for parameters. The language-particular rule systems might be said to be specifications of particular values of parameters, and all kinds of variations (including word order variations) among languages may be considered to arise as a result of interplay between parametrized morphological properties of lexical items and invariant Principles of Economy⁴ governing syntactic derivations and representations. Now the construction-specific rules such as 'passives' or 'raising' disappear, and general principles and parameters remain.

Based on these ideas, I next turn to the Korean Double Nominative construction.

⁴Chomsky (1992) introduces the notion of Principles of Economy:

i. Economy of Representation (=FI): see footnote 3 above.

ii. Economy of Derivation (=LAST RESORT): there should be no superfluous steps in a derivation.

3 The analysis of the verb allowing double nominative

3.0 Relying on the Unaccusative Hypothesis of Perlmutter (1978) and the Uniformity of Theta Assignment Hypothesis of Baker (1988), Suh (1993) provides an explanation for why DNCs in the Alienable Possession Constructions (APCs) are only possible with a certain type of predicate. Suh claims that double nominative constructions (or multiple nominatives) can only be found with unaccusative verbs (or ergative verbs) which have one theme object as an argument at D-structure.

3.1 The notion of intransitive verbs

Intransitive verbs may be divided into two groups according to the position of the argument: *unergatives* and *unaccusatives*. An unergative verb has one argument (NP) in SPEC VP (or subject position) and no object at D-structure. An unaccusative verb has its only argument in the object (complement) position of VP and no subject. Unergatives and unaccusatives are the same in the sense that they both have only one argument. The difference is the position in which the argument appears at D-structure. If it appears in subject position, the verb is called *unergative*. If it occurs in object position, the verb is called *unergative* in the sense of Burzio 1986).

As for two argument verbs, in accusative languages (or accusative sentences) the grammatical subject is associated with a semantic role, Agent, and the object with the role of Patient. In an accusative language such as English, the Agent subject is assigned nominative Case and the Patient object accusative Case.

3.2 Korean

Let us now consider the following Korean data (from Suh (1993), and Maling and Kim (1992)):

(7)	a.	John -uy/i GEN/NOM 'John's brother died'	hyeng -i brother-NOM	cwuke-ss-ta die-PST-DEC
	b.	John -uy/*i GEN/*NOM 'John's brother ran'	hyeng -i brother-NOM	talyeka-ss-ta run-PST-DEC

(8)	a.	Mikwuk-ey/i	cicin-i	na-ss-ta
		America-LOC/NOM	earthquake-NOM	occur-PST-DEC
		'An earthquake occurred		

b.	Mikwuk-ey/*i	Tom -i	san-ta
	America-LOC/NOM	NOM	live-DEC
	'Tom lives in America'		

The difference between (7a) and (7b) (or (8a) and (8b)) is the DS representations, as illustrated below:

(9)	a.	(for 7a) [_{VP} [_{V'}	hyeng-i brother-NOM	cwukessta]] died
	b.	(for 7b) [_{VP} hyeng broth	g-i [_{v'} er-NOM	talyekassta]] ran
(10)	a.	(for 8a) [_{VP} [_V ,	cicin-i earthquake-NOM	nassta]] occurred
	b.	(for 8b) [_{VP} Tom- NOM	i [_{v[,]} santa I live]]

hyeng in (7a) and *cicin* in (8a) occur in the object position at DS since they are 'themes'. On the other hand, *hyeng* in (7b) and *Tom* in (8b) occupy the subject position at DS since they are 'agents'. Since, as shown in (9a) and (10a), the second NPs appear in the object position within VP and there is no subject in Spec VP, the verbs in these constructions are unaccusative verbs. Then we can refer to (7a) and (8a) as unaccusative constructions in which only one theme argument occurs in the object position at DS.

Next let us consider the DS representations for the examples in (1), (2) and (3), as in (11)-(13):

(11)	a.	$\begin{bmatrix} VP \end{bmatrix} V$	son-i	yeputa]]
	b.	$\begin{bmatrix} VP \end{bmatrix} V$	hyeng	-i pwucata]]

(12)	a. b.	$\begin{bmatrix} VP & V^{,} & Pul-i & nassta \end{bmatrix} \\ \begin{bmatrix} VP & V^{,} & san-i & manta \end{bmatrix}$
(13)	a. b.	$\begin{bmatrix} VP & V^{,} & V^{,}$

The above three structures can be said to be like the unaccusative constructions (7a) and (8a). Gerdts and Youn (1989) show that the variety of Case patterns for locative existential verbs contrasts sharply with the very restricted pattern found on true locatives. Locative Case does not alternate with Nominative:

(14)	a.	Kongcang-ey/*i	cangko-ey/* ka	John-i
		factory-LOC/*NOM	storeroom-LOC/*NOM	NOM
		myech sikan-ul	anca-iss-ta.	
		a few hours-ACC	sitting-be-DEC	
		'John is sitting in the facto	bry storeroom for a few how	urs'

b. Mikwuk-ey/*i sepu-ey/*i John-i salko-iss-ta. America-LOC/*NOM west-LOC/*NOM NOM living-be-DEC 'John is living in the western part of America'

If we assume that locative existential verbs are unaccusatives and true locative verbs are unergatives, the contrast between the locative existential ((2), and (8a)) and the true locative ((8b) and (14b)) can be accounted for. This analysis leads us to argue that the DNCs in Korean occur only in the unaccusative structure. The structure for (14) would then be as follows:

(15)	a. [_{VP} kongchaney	[_{VP} changko-ey [_{VP} J	ohn-i	[_{v'} myech sikan-ul anca-iss-ta]]]]
	factory-LOC	storeroom-LOC NO	∕I	a few hour-ACC sitting
	b. [_{VP} Mikwuk-ey	[_{VP} sepuey [_{VP} John-i	[_{v'} sal	ko-iss-ta]]]]
	America-LOC	west-LOC NOM	livinş	g

4 Case-assignment

4.1 Direct Case-assignment or indirect Case-assignment?

Regarding so-called double nominative constructions in Korean, one of the most interesting questions is: how is nominative Case assigned to more than one NP in a DNC? Most proposals may be classified into one of two positions. The first position is that nominative Case is assigned to the second NP and the first NP is then Case-marked under Case-agreement (or alternatively Case is assigned to the outer NP and percolates from the outer NP to the inner NP under Case-percolation). Call this the Case-agreement Hypothesis or the Indirect Case-assignment Hypothesis (see Yoon (1990) for details). The second is that each nominative NP gets Case independently and variably from two different heads, namely the verb and Infl (or somewhere else) (see Maling and Kim (1992)). Call this the Direct Case-assignment Hypothesis.

4.2 A problem for the Indirect Case-Assignment Hypothesis

To account for Case-marking in Japanese DNCs, Tateishi(1988) argues that in certain instances nominative Case percolates down to NP-Specifiers. He claims that a sentential adverb can appear between the innermost ga-phrases but not between the first two ga-phrases:

(16)	(totuzen)	John-ga	(*totuzen)	computer-	-ga (totuzten)
	(suddenly)	NOM	(suddenly)	NOM	(suddenly)
	disk drive-g	a k	owareta.		
	NOM	b	roke		
	'The disk dr	ive of Joh	n's computer has	broken dov	wn'

In other words, the first two NPs can form an NP constituent, and the constituent receives Nominative Case from Infl, the Case can then percolate down to the inner NP from the outer NP. The third NP receives Case from the Verb.

According to Heycock (1993), this prediction is not borne out. In the following grammatical sentences, sentential adjuncts (bold faced) may intervene between each contiguous pair of *ga*-phrases, indicating clearly that Case-marking in DNCs is not done through percolation or agreement, since Case cannot percolate from an NP to another NP (or cannot agree between two NPs) when something intervenes between them and, therefore, they are presumably not constituents:

- (17) a. bunmeikoku-ga saikin dansei-ga zyosei-yori civilised-countries-NOM recently male-NOM female-than heikinzyumyoo-ga mizikai average-life-span-NOM is-short 'In civilised countries recently the average life-spans of men is shorter than that of women'
 - b. Sweden-ga America-yori kokumin-ga NOM than people-NOM
 ippan- ni- wa me-ga warui general in TOP eye-NOM is bad
 'In Sweden, more than America, people generally have bad eyes'

Indeed no sentential adjuncts can intervene between two NPs in genitive marking environments, where we can see overt evidence of constituency:

(18)	a.	* [bunmeikoku-no	saikin	dansei -ga]
		civilised-countries-GEN	recently	male-NOM
		zyosei-yori heikinzyumy	/00-ga	mizikai
	female-than average-life-span-NOM		is-short	
		'Men of civilised countries	recently hav	e shorter average life-spans than
		women'		

 b. *bunmeikoku-ga saikin [dansei -no civilised-countries-NOM recently male-GEN
 zyosei-yori heikinzyumyoo-ga] mizikai female-than average-life-span-NOM is-short
 'In civilised countries recently the average life-spans of men is shorter than that of women'

The corresponding Korean examples support Heycock's analysis:

(19) a. mwunmyengkwukka-ka choikuney namseng-i civilised countries-NOM recently male-NOM yeseng-boda pyenggyunswumyeng-i ccapta female-than average- life span-NOM is short
 'In civilised countries recently the average life-spans of men is shorter than that of women'

	b.	Sweden-i NOM	America-boda than	kwukmin-i people-NOM	М
		ilbancekuro	o nun-i	naputa	
		generally	eye-NOM	is bad	
		'In Sweden,	more than America,	people gener	rally have bad eyes'
(20)	a.	*[mwunmye civilised-coi	engkwukka-uy untries-GEN	choikuney recently	namseng-i] male-NOM
		veseng-bod	a nvenggviins	wumveng-i	ccanta
		female_than	average_life	-span-NOM	is-short
		'Mon of oivi	ilised countries rece	-spail-intoini	orter average life spans
		than women	l'	intry nave sn	ioner average me-spans
	b.	*mwunmyer	ngkwukka-ka choik	uney [nam	seng-uy
		civilised-cou	untries-NOM recen	tly male-	-GEN
		yeseng-bod	a pyenggyuns	wumyeng-i]	ccapta
		female-than	average-life	-span-NOM	is-short

'In civilised countries recently the average life-spans of men is shorter than that of women'

The data in (17)-(20) support the conclusion that the Nominative NPs in DNCs receive their Case from the verb or from Infl independently of one another, not through Case-Agreement or Case-Percolation.

4.3 Evidence for the Direct Case-Assignment Hypothesis

Maling and Kim (1992) give us evidence in support of the Direct Case Hypothesis. They argue that the verb assigns Case independently to both the first NP and the second NP under the Direct Case Hypothesis. If Case-agreement is responsible for the shared Case marking, then when such verbs are used in the Whole-Part⁵ construction, we expect to find two possible Case patterns: the whole- and part-NPs should both either be locative or nominative. On the other hand, if these verbs can assign either locative or nominative to their locative subject argument, and Case is assigned independently to both whole- and part-NPs, then there are, in principle, four possible

⁵In the Inalienable Possession Construction in Korean or Japanese, the possessor NP may be called the whole NP, and the possessed NP the part NP.

combinations of locative and nominative. It turns out that indeed, all four possible structures are surprisingly acceptable:

(21)	a.	Kongcang-ey factory-LOC 'A fire broke out in	changko-ey storeroom-L the factory in	OC n the st	pul-i fire-NOM coreroom'	na-ss- ta. break.out.PST.DEC
	b.	Kongcang-i factory-NOM	changko-ka storeroom-N	IOM	pul-i fire-NOM	na-ss- ta. break.out.PST.DEC
	C.	Kongcang-i factory-NOM	changko-ey storeroom-L	OC	pul-i fire-NOM	na-ss- ta. break.out.PST.DEC
	d. (?)	Kongcang-ey factory-LOC	changko-ka storeroom-N	IOM	pul-i fire-NOM	na-ss- ta. break.out.PST.DEC
(22)	a.	Mikwuk-ey America-LOC 'An earthquake occ	sepu-ey West-LOC surred in the v	cicin- eartho vestern	i quake-NOM part of Amer	na-ss-ta. occur-PST-DEC rica'
	b.	Mikwuk-i America-NOM	sepu-ka West-NOM	cicin- eartho	i quake-NOM	na-ss-ta. occur-PST-DEC
	C.	Mikwuk-i America-NOM	sepu-ey West-LOC	cicin- eartho	i quake-NOM	na-ss-ta. occur-PST-DEC
	d. (?)	Mikwuk-ey America-LOC	sepu-ka West-NOM	cicin- eartho	i quake-NOM	na-ss-ta. occur-PST-DEC

As Maling and Kim observe, the patterns in examples (c,d), where the Case marking differs, are unexpected under the Case-Agreement Hypothesis, but are consistent with the Direct Case Hypothesis. According to Maling and Kim, further evidence that the Case on the part-NP (even in the Inalienable Possessive Constructions) is determined by the verb comes from the apparent alternation between nominative and accusative in the lexical passive, as illustrated below:

(23)	a.	John-i	ai-lul	son-lul	cap-ass-ta.
		NOM	child-ACC	hand-lul	hold-PST-DEC
		'John held	l the child by the	e hand'	

	b.	Ai-ka	son-i/ul	cap-hi-ess-	-ta.
		child-NOM	hand-NOM/ACC	hold-PSV-	PST-DEC
		'The child w	as held by the hand'	>	lexical passive
)	я	Iohn-i	son-i/*ul	mul-lie-ci-	ess-ta

(24)	a.	John-i	son-i/*ul	mul-lie-ci-	ess-ta
		NOM	hand-NOM/*ACC	bite-PSV-I	PSV-PST-DEC
		'John was bi	tten on the hand'	>	ci-passive

b. John-i son-i/ul mul-li-ess-ta NOM hand/NOM/ACC bite-PSV-PST-DEC 'John was bitten on the hand' -----> *lexical passive*

The part-NP bears accusative or nominative Case in the so-called lexical passive; in the syntactic *ci*-passive the part-NP can only be nominative. If passive morphology (*ci*) always absorbs the accusative Case of the object, then only nominative Case can be visible on the part-NP. As an explanation for the source of accusative in the lexical passive, Maling(1989) argues that the lexical passive verb may act both as a syntactic direct passive which absorbs accusative Case and as an indirect 'adversity' passive which adds a benefactive subject argument and assigns accusative Case to its complements. Eitherway, we can account for the Case alternation of the lexical passive under the Direct Case Hypothesis, but not under the Case-agreement Hypothesis.

4.4 Locative existentials and ergative constructions

Based on the ideas of Freeze (1992), Maling and Kim (1992), and Suh (1993), I argue that the first NP in locative or ergative constructions be derived from a locative (or dative) position and assigned nominative Case by Infl while the second NP remains within VP and receives default Case from the verb. According to Freeze, the normal form of the locative existential has a locative phrase in subject position; the following existential expressions correspond to a single D-structure:

(25)	a.	$[_{IP} There_i$ Locative	[_r [_I is]	[_{PP} []	_{NP} a b	$pook] [P on the table]_i]]]$
	b.	$\left[_{IP}\left[_{P'}na \ stole \right] \right]$ on table	<i>i</i> [1'[1	byla] [_P was	PP[NP	<i>kniga</i>] t _{<i>i</i>}]]] (Russian data from Freeze) book.NOM.FEM (Theme)

c. $[_{IP}[_{P'}kamree-mee]_i [_{\Gamma}[_{PP}t_i \ [_{NP}aadmii]] [_{I}hai]]]$ (Hindi data from Freeze) room-in be (COP).3SG.MASC.PRES.

Then likewise, the DS representations for (2a) and (3a) in Korean may be the following:

(26)	a.	$\begin{bmatrix} VP \\ VP \end{bmatrix} Seoul-ey \begin{bmatrix} VP \\ VP \end{bmatrix} p$ LOC fire-	oul-i -NOM	nassta]] broke out	
	b.	[_{VP} Mary-eke DAT(LOC)	[_{v'} ko home	hyang-i etown-NOM	kuripta]] miss(ergative)

In relation to the D-structure for locative existentials and ergative constructions, an alternative approach makes use of small clauses. Hoekstra and Mulder (1990) propose the analysis in (27) and (28) for an ergative (or unaccusative) sentence such as in (29) where the sentence takes a locative PP:

(27) D-structure: $[_{VP} Verb [_{SC} NP PP]]$

↓ Movement

(28) S-structure: NP_i INFL [$_{VP}$ Verb [$_{SC}$ t_i PP]]

(29) [_{NP} Jan] is [_{PP} in de sloot] [_{Verb}gesprongen] John is in the ditch jumped

NP is assumed to be inside SC, as indicated by the structures in (27) and (28), and to raise into SPEC IP to get Nominative Case. This analysis suggests that the verb does not have an external argument. Then we can account for the movement of NP in accordance with Burzio's generalisation which requires that if a verb does not have external argument or cannot assign a θ -role to its subject in the Spec VP position, the object cannot be assigned Case by its verb.

With this analysis in mind, consider the constructions exemplified in (30):

- (30) a. Into the room $[_{VP}$ entered a man]
 - b. Down the street $[_{VP}$ rolled the baby carriage]
 - c. Round and round $[_{VP}$ spins the fateful wheel]
 - d. There $[_{VP} \text{ arrived a man}]$

Hoekstra and Mulder raise one crucial question: if we apply the analysis assumed in (27) and (28) to (30), why does (30) not violate the Case Filter or the Extended Projection Principle (this principle requires that the Spec IP position must be filled with an NP)? Note that, in (30), there is no NP, in Spec, IP position and Nominative Case should be assigned to the Spec, IP position. Rizzi (1982) and Burzio (1986) assume that in Italian the Spec, position of IP is filled with *pro*, and that the postverbal NP is adjoined to VP forming an expletive chain with *pro*. In (30) the *pro* then appears to be licensed by the locative PP which could be either adjoined to IP, or occupy the [SPEC, CP] position, as illustrated in (31):

(31)
$$PP_i [_{IP} pro_i [_{VP} ..V..] NP_i]$$

Rizzi explains that the PP is capable of licensing the pro-subject by virtue of a shared index. This kind of analysis has also been proposed by Coopmans (1988). It is generally held that locative preposing of this type is subject to an ergativity requirement (cf. Levin 1985), but the analysis in (31) does not explain this requirement. Hoekstra and Mulder (1990), arguing that there is no special reason why an ergative verb can only allow NP to be adjoined to VP, assume that the NPs in (30) are in fact inside VP, as shown in (32), which explains the ergativity requirement naturally. Note that according to the ergativity requirement, the object can be moved out of VP only when the object cannot receive Case from its verb within VP. They suggest that nominative Case is assigned to the PP in the SPEC IP position, as in (32a). The PP originates in the predicative part of a SC-complement. The NP is provided nominative Case by PP under Spec-head agreement from its base position, as in (32b). Then the structure is like (32):

(32) a.
$$\begin{bmatrix} IP & PP_i & I & [VP & V & [SC & NP & t_i]] \end{bmatrix}$$

$$\uparrow NOM_{i}$$
b.
$$\begin{bmatrix} IP & [VP & V & [SC & NP & PP] \end{bmatrix}$$

$$\uparrow NOM_{i}$$

If we adopt this kind of analysis for Korean DNCs which have the unaccusative (ergative) verb structure, the structure for (26a) is as follows:

(33) a.
$$\begin{bmatrix} VP & [SC & [NP & pul-i] \end{bmatrix} \begin{bmatrix} PP & Seoul-ey \end{bmatrix}$$
 nassta]
b. $\begin{bmatrix} IP & [Seoul-i]_i \end{bmatrix} \begin{bmatrix} VP & [SC & [NP & pul-i] \end{bmatrix} \begin{bmatrix} PP & [NP & t_i] \end{bmatrix} \begin{bmatrix} P & e \end{bmatrix} \end{bmatrix}$ nassta]]

In the case of Korean, bare locative NPs can move (have to move) out of VP in order to receive Case. However, when P is realised, the movement does not occur under the Case Filter. If we assume the analysis in (33) for DNCs in Korean, we need to explain how the NP inside the SC can receive Case under Spec-head agreement. If we suppose that a null headed PP can assign Case to its subject within the structure of SC, the Case assigned to NP in the Spec-position of SC may be said to be Structural Case. This analysis of Structural Case-assignment contradicts the indefinite characteristic of the second NP in Korean DNCs. We cannot account for why the second NPs, as illustrated in (35) below, cannot be definite. It is assumed generally that structural Case marked NPs may be definite. Notice that the second NP in DNCs, however, is obligatorily indefinite or non-specific (see Section 4.5.2).

Therefore I assume the following analysis at D-structure for Korean DNCs:

(34) $[_{VP} [_{PP} Locative] [_{V'} NP Verb]]$

This analysis solves the above problems. When a null P appears, a bare locative NP can move out of VP, as expected. We may assume that the locative NP raises into Spec IP (or Spec AGR_SP) and gets Nominative from Infl. But we have the burden of explaining how the remaining NP inside V' can receive Nominative, if we take the analysis in (34) over (33) and abandon the Structural Case-assignment.

4.5 Case theory for double nominative constructions

4.5.1 Case-assignment in the minimalist program. With respect to Case-assignment theory, the old GB theory (Chomsky (1981, 1986) assumes that the Spec-head relationship enters into structural case for the subject position, while the object position is assigned case under government by the verb.

As illustrated above, the basic idea assumed in Chomsky (1992), and which we are following here, is that there is a symmetry between the subject and the object concerning Case theory. In both positions the relationship of NP to the verb is mediated by AGR, a collection of φ -features; Case is determined by an element that adjoins to AGR (Tense for the subject and Verb for the object). If VP contains only one single NP, one of the two AGR elements (AGR_s or AGR_o) will be 'active'. If VP contains two NPs, the two AGR elements (AGR_s and AGR_o) will be active.

In the case of unergative verbs, where only one NP occurs in the Spec position of VP, that NP has no possibility for receiving inherent (default) Case from the verb since it appears outside V', and therefore it must move (probably into Spec AGR_sP) for its Case feature to be checked by a functional category.

In the case of unaccusative verbs such as (1), (2) and (3) where only one AGR is active because the unaccusative verb contains only one NP (object NP) within V', a bare locative NP (if there is any) may move into the active Spec AGRP (probably Spec AGR_sP) and receives Nominative. The remaining object within V' then receives default case (inherent case) which, in Korean, is nominative, thus resulting in a Double Nominative Construction.

In the case of transitive verbs where two AGReements (AGR_s and AGR_o) are active (because the transitive verb has two arguments), the subject NP moves into Spec, AGR_sP and the object NP raises into Spec, AGR_oP, excluding the possibility of the object's getting default case.

4.5.2 Inherent Case. According to Chomsky (1980), an inherent Case is a Case assigned by a lexical head to the NP it governs and to which it assigns a theta-role. An inherent Case is assigned at D-structure, in conjunction with theta-role assignment: it is then realised at S-structure.

Suh (1993) claims that the first NP in Korean DNCs moves into the Spec position of Infl and receives Nominative by Infl. The second NP is incorporated into the verb and this incorporated NP takes a citation form (default Case), in other words, inherent Case.

Xu (1993), adopting Belletti's proposal (1988) directly in analysing Chinese Possessor Raising, suggests that all classes of verbs can potentially assign inherent (default) Case to objects and that some conditions (such as the Case filter) filter out unwanted Cases without stipulating that only unaccusative (or ergative) verbs are capable of assigning inherent Case.

A problem in connection with the Case-assignment to the second NP is why it cannot receive structural Accusative Case from the verb. The second NP occurs in the object position of the verb. The normal object NP can receive Accusative Case from its verb. In this relation, Burzio (1986) states that all and only the verbs that can assign a theta-role to the subject can assign Accusative Case to the object. We have already pointed out that all verbs which are related to the Double Nominative Constructions in Korean are unaccusative verbs which have no subject. This fact implies that the unaccusative Case to the object. Burzio's generalisation may be extended to the Korean Double Nominative Constructions, which occur only in the unaccusative structure.

4.5.3 The nature of inherent Case marked NPs. Another piece of evidence for inherent Case assignment to the second NP comes from the nature of the second NP.

The Nominative Case marker which is attached to the second NP may be deleted and is not compatible with definite or specific meaning:

(35)	a.	Seoul-i NOM 'In Seoul a	pul-i fire-N fire bro	NOM ke out'	nassta broke	a e out	
	b.	Seoul-i NOM	pul fire		nassta broke	a e out	
	c.	* Seoul-i NOM	ku the	pul-i fire-N	ЮМ	nassta broke	a e out
	d.	* Seoul-i	ku	pul		nassta	1.
(36)		kwudu-ka shoes-NOM 'A hole was	1 s made i	kwum hole-l in the s	neng-i NOM hoes'		nassta was made
(37)		ce kkot-i that flower- 'That flowe	-NOM r smelle	hyang fragra ed swee	gki-ka ince-N et'	ОМ	nanta smell
(38)		Tom-i NOM 'Tom is insa	cengs mind ane'	sin-i -NOM		nakas becor	esta ne insane
(39)		ku il-i that job-NC '(Lit.) That)M job nee	don-i mone ds som	y-NON e mone	И ey' (We	dunta need(ergative) e need some money for the job.)

In (36)-(39), as with (35), the Nominative Case marker in the second NP may be deleted, and the definite article *ku* cannot appear before the second NP. This implies that the object NP marked Nominative is different from the normal object NP marked Accusative and that there is some close and special relationship between the object and the unaccusative verb.

According to Eng (1991), NPs with overt Case morphology are specific, while NPs without Case morphology are non-specific. Belletti (1988) claims that the NPs which

are characterised as specific are assigned structural Case, while the non-specific NPs are assigned inherent Case.

Taking into account the fact that the second NP in Korean DNCs is non-specific and indefinite, the second NP may be said to have inherent Case rather than structural Case, explaining the grammaticality of (35). But if we do not assume the assignment of inherent Case to the second NP, the indefiniteness and nonspecificity of (35) cannot be accounted for.

Look at the Definiteness Effect (DE):

- (40) a. The man is in the garden
 - b. A man is in the garden
 - c. There is a man in the garden
 - d. * There is the man in the garden

Milsark (1974) notes that NPs with *a* or *some* (non-specific determiners) occur in existential sentences while definite (specific) NPs cannot occur in existential sentences. The *there*-construction can also occur with a particular set of verbs, that is, unaccusative verbs by the Unaccusative/Ergative Hypothesis. This inverted subject in *there*-construction is in fact the object of the verb, given the Unaccusative Hypothesis. Hence the DE ultimately is a phenomenon concerning the nature of the object of unaccusative verbs in-situ. It seems that inherent Case always selects an indefinite meaning for the NP that carries it. Inherent Case is the only available Case for the thematic object remaining within VP and this object must be an indefinite or non-specific NP.

If this analysis⁶ is correct, it can be extended to Korean because the Case for the second NP must be inherent Case but not structural Case, the second NP cannot carry a definite or specific meaning, and the deletion of Case on the second NP in the DNCs is possible due to the indefiniteness and nonspecificity of the second NP (or the object). This analysis strongly supports our argument of inherent Case-assignment to the second NP in DNCs.

Along these lines, I suggest that, in Korean DNCs, the first NP (locative NP) moves into Spec AGR_sP and receives Nominative whilst the second NP remains within the VP and receives default or inherent Case, which is a nominative form in Korean.

⁶Manzini has suggested to me that Definiteness Effects is concerned with Korean DNCs with respect to inherent Case-assignment (see Manzini (1993) for Definiteness Effects in relation to parasitic gaps).

4.6 Experiencer constructions

Although so far only locative existentials have been discussed, another idea for unaccusative verbs that display the DNC is to call them Experiencer verbs. Belletti and Rizzi (1988) distinguish between subject Experiencers and object Experiencers. The Experiencer, whichever it may be, is projected to a higher position than the theme.

Instead of Agent and Theme, Pesetsky (1992) presents three semantic roles: Causer, Experiencer, and Target (or Subject -Matter):

- (41) The highest argument is mapped onto the highest D-structure position in its clause: Causer> Experiencer>Target/Subject-Matter:
 - (i) Anger---> [_{VP} Causer [_{V'} anger [Experiencer]]]
 - (ii) Love ---> $[_{VP}$ Experiencer $[_{V}$ love [Target]]]

The semantic feature of the first dative NP in (3) is that it is an 'Experiencer' NP. The promotion of Experiencer NPs into Spec IP can be explained in accordance with Pesetsky's (41).

In Italian, the underlying object of an unaccusative verb may remain in the object position at S-structure without raising to a higher position. In Korean DNCs, all object NPs do not raise into a higher position but remain within VP. They all receive inherent Case from the verb. If an Experiencer NP is promoted to a higher position (note that an Experiencer NP is higher than any Theme NP), the object NP should remain within VP and receive Case from its verb. In this relation, one problem arises: in the presence of an Experiencer role, the DNCs come to have two arguments, an Experiener NP and a Theme (object) NP. This means that the DNC clause may have two AGR elements like a transitive clause. If we assume that only subject and object NPs at D-structure can project their functional categories at S-structure, the problem may be solved. I leave this discussion for future research.

4.7 Possessive constructions

Let us begin with the following examples:

(42)	a.	Mary-uy/ka	phal-i	khut-ta
		GEN/NOM	arm-NOM	big-DEC
		'Mary's arm is b	oig'	

b.	Banana-uy/ka	kkepcil-i	kka-ci-ess-ta
	GEN/NOM	skin	peel-PSV-PST-DEC
	'The banana was	peeled'	

In general the first NP (the possessor or the whole NP) in possessive constructions agrees in Case with the second NP (the possessed or the part NP). One approach to this Case marking, as mentioned before, is to assume that the verb assigns its Case to a single NP, and the other NP(s) gets Case under Case-agreement. The other approach, which I adopt here, is the Direct Case-assignment by the verb or Infl. In contrast with previous analyses (see Maling and Kim(1992) and Suh (1993), among others) in which the first NP marked Nominative is derived from the possessive position, I argue that the first possessor NP is derived from the locative dative position.

According to Freeze (1992), a possessor is a location semantically. The 's (genitive) marking of a possessor and the P of a P-marked location subject are equivalent. His idea is that when a P-marked locative (or dative) phrase and a theme NP are in the relation of possession, the locative phrase may move into the 's (genitive) marking, or into the subject position, or also the P and the copular *be* are incorporated and reanalysed as *have*. The first transformation produces the 's genitive constructions, the second yields the existentials in subject position, and the third produces the possessive *have* constructions.

For example, in Hindi, an alienable possession is expressed by the location subject structure:

(43)	a.	larkee-kee boy OBL-GI 'The boy has	EN a dog'	paas proxim	nity	kuttaa dog	hai COP.3SG.PRES
	b.	baccee-kee child OBL-C 'The child ha	GEN.Pl is whit	L e teeth'	daat teeth	safeed white	hai COP.3PL.
	C.	meree my PL 'I have two b	doo two prothers	bhaii brothei s'	r	hai COP.3PL.	

Szabolcsi (1981) also argues that the possessor of the theme is a locative NP and the locative NP moves into the subject position. In her analysis, the possessor NP (the first NP) moves to the subject position, yielding a structure like (44) in Hungarian:

(44)	a.	[_{IP} [_r	[_I INFL] [_{NP} Peter]		[_v van] be	[_{NP} kar]]] arm
	b.	[_{IP} [_{NP}	Peter-nek _i] [$_{\Gamma}$ t _i DAT	[_I van] is] [_{NP} k arm	ar-ja-0-0]]] -GEN-3SG-NOM
		'Peter	has an arm'			

Adopting these ideas, I claim that Korean possessive constructions in Double Nominative form are derived from the locative. In Korean also, when the locative NP and the theme NP are in the relation of possession, the locative (or dative) may move into the subject position (in the case of Double Nominative Construction), or it may move into the 's genitive position (in the case of possessive construction), or the *have* construction can arise, as follows:

(45)	a.	[_{VP} [_V , John-6	eke [,	_/ , cha-ka	i-ss-ta]]]
		DAT	c	ar-NOM	BE-PRES-DEC
	b.	John-i	cha-lul	kas	yessta
		NOM	car-AC	C hav	e
		'John has a	car'		

4.8 Evidence from honorification

The following analysis supports our claim that the first NP in the Korean DNCs is generated in a locative position and then moves into the subject position to recieve Nominative Case. First, let us take a look at a DNC:

(46)	a.	John-i NOM 'John is afrai	halapeci-ka grandfather-NOM id of his grandfather	mwusep-ta/ *mwusewu-si-ta. afraid-DEC/ *afraid-HON-DEC
	b.	[[John-uy] GEN 'John is afrai	halapeci-ka] grandfather-NOM id of his grandfather	mwusewu-si-ta. afraid-HON-DEC

John in (46a), to which the honorific cannot be referred and which occupies the subject position (the Spec position of IP or AGR_sP), controls the predicate with respect to honorification. That is why the verb in (46a) cannot have the honorific

expression *si*. Instead, in (46b) *halapeci* can control the honorification. If we assume that (46a) is derived from (46b), we cannot account for why *halapeci* in (46a) cannot control the honorific *si*. But if we assume that *John* derives from a locative construction which is totally separated from the genitive structure, the honorification control problem is solved:

(47)
$$\begin{bmatrix} IP John_i & VP & PP & t_i \end{bmatrix}$$
 $\begin{bmatrix} VP & PP & t_i \end{bmatrix}$ $\begin{bmatrix} VP & PP & t_i \end{bmatrix}$

(48) is another example of an ergative sentence showing honorification:

(48)	a.	halapeci-ka	don-i	philyoha-si-ta.
		grandfather-NOM	money-NOM	need (ergative)-HON-DEC
		'Grandfather needs some money'		

- c. [_{IP} halapeci_i-ka [_{VP}[[_{PP} t_i]-uy (Genitive) [don-i]] philyoha-si-ta]]

In this case, the honorific *si* can be controlled only by *halapeci*, which suggests again that honorification is controlled by the first NP. Proper honorification control is possible only if we assume the structure (48b) as a D-structure of (48a) rather than the genitive structure in (48c). Now consider an inalienable possession construction:

(49)	a.	Halapeic-ka meri-ka grandfather-NOM head-No 'Grandfather has a headache	apwu-si-ta OM ache-HON-DEC z'
	b.	$[IP halapeci_i [_{VP} [_{PP} t_i]]$	[_{v'} meri-ka apwu-si-ta]] x o
	C.	[IP halapeci _i [_{VP} [[_{NP} t_i]	-uy(Genitive) [meri-ka]] apwu-si-ta]

The honorific expression is available under control by *halapeci*. The hypothesis that honorification is controlled by the subject strongly suggests that the first NP is

derived not from the genitive position but from the locative or dative position, and moved into the subject position (Spec of AGR_sP). Therefore, the first NP in the inalienable possessive constructions must be derived from this locative dative position, as illustrated in the analysis of (49b).

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