

A Constraint-Based Approach to Some Multiple Nominative Constructions in Korean

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Abstract

The so-called multiple nominative constructions (MNC) have been one of the puzzling phenomena in topic-prominent languages like Korean, Japanese, and Chinese. This paper first investigates the basic syntactic properties of three MNCs and then provides a constraint-based analysis within the theory of HPSG (Head-driven Phrase Structure Grammar). The analysis presented here is 'head-driven' and 'constraint-based' in the sense that properties of lexical heads and tight interactions among declarative constraints play crucial role in the formation of puzzling MNCs. Some appealing consequence of this analysis is a straightforward account of long standing problems, such as getting the semantics right and generating multiple nominative constructions without resorting to a mechanism that allows unlimited valence increase.

1 Introduction

Much attention has been paid to the generation and structure of the so-called multiple nominative constructions (MNC). Some of the constructions I will discuss in this paper are given in (1).

- (1) a. Mary-ka son-i yepputa. (Whole-Part Pattern: WPP)
Mary-NOM hands-NOM pretty
'Mary's hands are pretty.'
- b. Mary-ka emeni-ka yepputa. (Focus Pattern: FP)
Mary-NOM mother-NOM pretty
'It is Mary whose mother is pretty.'
- c. Mary-ka John-i twulyepta (Psych-Pattern: PP)
Mary-NOM John-NOM fearsome
'Mary fears John.'

These three patterns seem to be identical types. However, a careful examination of these apparently similar constructions reveals that each of these patterns has its own syntactic, semantic, and even pragmatic properties. These differences have not been recognized by much literature. This paper will first examine their properties and then suggest the syntactic structures of each type.

2 Basic Properties

2.1 Properties of the First Nominative NP

Let us begin with some basic properties of the first nominative NP in these three patterns. As shown by O'Grady (1991) and others, the three types behave differently with respect to honorification, binding, and equi-phenomena.

For example, in the whole-part pattern (or often called inalienable pattern) and psych pattern, it is the first NP that triggers honorific agreement, whereas in the focus pattern it is the second NP that determines the agreement. This is illustrated in the examples (2).

- (2) a. WPP: *sensayng-nim-i elkwul-i yeypu-si-ta.*
 teacher-HON-NOM face-NOM pretty-HON-DECL
 'The teacher's face is pretty.'
- b. FP: **Sensayng-nim-i sonca-ka yeypu-si-ta.*
 teacher-HON-NOM grandchild-NOM pretty-HON-DECL
 'It is the teacher whose grandchild is pretty.'
- c. PP: *sensayng-nim-i John-i twulyep-usi-ta.*
 teacher-HON-NOM John-NOM fearsome-HON-DECL
 'The teacher fears John.'

Another difference comes from binding. In the whole-part pattern and in the psych, the first NP can serve as the antecedent of the anaphor *caki*. In the focus pattern, the antecedent is not the first but the second NP in a normal context as shown in (3)b.

- (3) a. WPP: *Mary_i-ka nwun-i caki_i pan-eyse ceuil yeypu-ta.*
 Mary-NOM eyes-NOM self class-LOC most pretty
 'Mary's eyes are the prettiest in her class.'
- b. FP: *Sensayngnim_j-i sonca_i-ka caki_i/_{*j} pan-eyse ceuil yeypu-ta.*
 teacher-NOM grandchild-NOM self class-LOC most pretty
 'It is the teacher whose grandchild is the prettiest in her/his class.'
- c. PP: *Tom_i-i Mary-ka caki_i pan-eyse ceuil mwusepta.*
 Tom-NOM Mary-NOM self class-LOC most fearsome
 'Tom fears Mary the most in his classroom.'

Equi constructions illustrate another difference: In the whole-part pattern (4)a and the psych pattern (4)c, the first NP can serve as the controller of the unexpressed subject (PRO) of the embedded clause. The relation is different in the focus pattern. In example (4)b, it is not the first NP but the second NP that serves as the controller (cf. Yoon 1986).

- (4) a. WPP: *Mary-ka_i [PRO_i elkwul-i yeypu-e cilye-ko] nolyekhayessta.*
 Mary-NOM PRO face-NOM pretty-MRK become-COMP tried
 'Mary tried to become pretty in the face.'
- b. FP: *Mary-ka tongsayng_i-i [PRO_i yeypu-e cilye-ko] nolyekhayessta.*
 Mary-NOM sister PRO pretty-MRK become-COMP tried
 'It is Mary whose sister tried to be pretty in the face.'
- c. PP: *Mary_i-ka emeni-ka [PRO_i mwusep-ci anh-tolok] nolyekhayessta.*
 Mary-NOM mother-NOM PRO fearsome-MRK NEG-COMP tried
 'Mary tried not to fear her mother.'

In addition to these differences, we can also observe a difference in plural copying. The plural copying allows the plural marker to be attached to elements other than the plural subject within a clause. As shown in (5)a, the first plural nominative NP in the whole-part pattern can trigger the plural copying on the adverbial element *acwu*. But when the first NP is singular as in (5)c, no plural copying is possible on the adverbial. The focus pattern contrasts with the whole-part pattern; even though the first NP in (5)b is plural, we cannot have the plural marker on the adverbial *acwu*.

- (5) a. WPP: *haksayng-tul-i maum-tul-i acwu-tul kop-ta.*
 student-PL-NOM heart-PL-NOM very-PL pretty
 'Students are really good-hearted.'
- b. *haksayng-tul-i maum-i acwu-tul kop-ta.*
- (6) a. FP: *John-i chinku-tul-i acwu-tul chakha-ta.*
 John-NOM friends-PL-NOM very-PL honest-DECL
 'It is John whose friends are honest.'

b. *haksayng-tul-i chinkwu-ka acwu-tul chakhata.

(7) a. PP: sensayngnim-tul-i haksayng-i acwu-tul mwusepta.
teacher-PL-NOM student-NOM very-PL fearsome
'Teachers fear students.'

b. *John-i haksayng-tul-i acwu-tul mwusepta.

We also observe a difference in the possibility of having an indefinite NP. As shown in (8), the first NP in the focus pattern cannot be an indefinite NP, unlike the one in the whole-part or psych-pattern.¹

(8) a. WPP: nwukwunka-ka elkwul-i yepputa
someone-NOM face-NOM pretty
'Someone's face is pretty.'

b. FP: ??Nwukwunka-ka emeni-ka yeppusita
someone-NOM mother-NOM pretty
'It is somebody whose mother is pretty.'

c. PP: nwukwunka-ka John-i mwusepta.
someone-NOM John-NOM fearsome
'Someone fears John.'

In sum, we can observe that the first nominative NP in the focus pattern is basically different from the first NP in the whole-part and in the psych pattern. It is only the latter two patterns whose first nominative NP bears the canonical properties of subject.

2.2 Properties of the Second Nominative NP

When we check the properties of the second NP in these constructions, we observe no systematic differences.

One clear difference we can observe is *pro*-drop cases: only the whole-part pattern appear to allow the second NP to be *pro* dropped. The *pro* drop of the second NP in the focus pattern or in the psych pattern results in a completely different sentence meaning. The examples in (9) illustrate this point.

(9) a. WPP: Mary-ka *pro* chakhata.
Mary-NOM honest
'Mary's (heart) is honest.'

b. FP: *Mary-ka *pro* yepputa.
Mary-NOM pretty
'(intended) It is Mary whose mother is pretty.'

c. PP: *Mary-ka *pro* mwusepta.
Mary-NOM fearsome
'(intended) Mary fears someone.'

Another observation we can make is that the second NP in the whole-part pattern and in the focus pattern cannot be a fully saturated NP unlike the NP in the psych pattern, as shown in the examples (10).

(10) a. WPP: ??/*John-i ku son-i khu-ta
John-NOM the hand-NOM big

b. FP: ??/*John-i ku yeca chinkwu-ka yepputa
John-NOM that girl friend-NOM pretty
'It is John whose girl friend is pretty.'

¹(8)b is acceptable with the interpretation such that there is someone whose mother is pretty.

- c. PP: John-i Mary-ka mwusepta
 John-NOM Mary-NOM fearsome
 'John fears Mary.'

The different grammatical status of the second NP further comes from modification. No modification is possible to the second NP in the whole-part pattern as shown in (11)a. However, the examples in (11)b and (11)c shows that modification is possible in the focus pattern and the psych pattern.

- (11) a. *John-i yeppu-n son-i khu-ta
 John-NOM pretty-PN hand-NOM big
 'John's pretty hands are big.'
- b. John-i salangha-nun ayin-i yepputa
 John-NOM love-PN sweetheart-NOM pretty
 'It is John whose sweetheart he loves is pretty.'
- c. John-i yein-i-n Mary-ka mwusepta
 John-NOM sweetheart-COP-PN Mary-NOM fearsome
 'John fears his sweetheart, Mary.'

Replacement by a wh-word also shows a difference. The examples in (12)a and (12)b demonstrate that we cannot replace the second NP with a wh-word. But the psych pattern contrasts with these two examples in this respect, as observed in (12)c.²

- (12) a. WPP: ??/*John-i mwus-i chakha-ni?
 John-NOM what-NOM honest-QU
- b. FP: ??/*John-i nwu-ka yeppusini?
 John-NOM who-NOM pretty
- c. PP: John-i nwu-ka mwusepni?
 John-NOM who-NOM fearsome
 'Who does John fear?'

Summarizing the behavior of the second nominative in these three patterns, we can see that unlike the first nominative NP, no consistent behavior can be observed among the second nominative elements in the three patterns.

2.3 Constructional Properties

One well-known property of Korean relatives is that they allow relativization from another relative clause. As noted in Kim (1999), this relativization is closely related to double nominative constructions. We, however, can notice that this so-called double relative is not allowed in the whole-part pattern unlike the focus or psych pattern, as shown in (13)a.

- (13) a. ??/*[[[$_i$ $_j$ yeppu-n] son_j-i] khu-n John_i]
 pretty-PN hand-NOM big-PN John
 '(intended) John whose pretty hand is big'
- b. [[[$_i$ $_j$ cinan tal-ey manna-n] ayin-i] yeppu-n John]
 last month-LOC meet-PN sweetheart-NOM pretty-PN John
 'John whose sweetheart he met last month is pretty'
- c. [[[$_i$ $_j$ ecye manna-n] John-i] tuwlepwu-n Mary]
 yesterday meet-PN John-NOM fearsome-PN Mary
 'Mary who fears John, who she met yesterday'

One final property to be noted here is the possibility of having more than two nominative NPs. The data in (14) illustrate that the psych pattern does not allow multiple nominative NPs.

²This contrast might be due to the grammatical status of the second NP: it is an unsaturated NP mismatched by the saturated wh-phrase.

- (14) a. WPP: John-i nwun-i ownccok-i coh-ta
 John-NOM eyes-NOM left-NOM good
 'It is Seoul whose summer weather is hot.'
- b. FP: Seoul-i yelum-i nalssi-ka tepta
 Seoul-NOM summer-NOM weather-NOM hot
 'It is Seoul whose summer weather is hot.'
- c. PP: *John-i tongsayng-i son-i twulyepta
 John-NOM brother-NOM hands-NOM fearsome

3 Syntactic and Semantic Structures: A Constraint-Based Approach

It appears that any research concerning the structure of double or multiple nominative constructions should aim to capture such basic properties we have observed so far. My discussion will focus on how the verb *coh-ta* 'like' is used in each pattern, as given in (15).

- (15) a. WPP: John-i nwun-i coh-ta.
 John-NOM eyes-NOM good-DECL
 'John's eyes are good'
- b. FP: JOHN-I emeni-ka coh-ta.
 John-NOM mother-NOM good-DECL
 'It is the teacher whose mother is good.'
- c. PP: John-i Mary-ka coh-ta.
 John-NOM Mary-NOM like-DECL
 'John likes Mary.'

3.1 Whole-Part Constructions

As for the syntactic structure of whole-part pattern constructions, we cannot simply claim that a semantically one-place-predicate verb such as *coh-ta* 'good', *yepputa* 'pretty' *chakha-ta* 'honest' takes two nominative NPs as their syntactic arguments (cf. Lee and Kim 1988) unless we want to allow the two theta role bearing NPs to be mapped into one argument position. Instead of allowing such a mismatch between theta-grid to argument structure, I take a different track; I claim that the verb in the whole-part pattern constructions syntactically selects just the first NP, and that the second NP serves as a modifier (cf. O'Grady 1991).

We have observed that various phenomena such as honorification, binding, and equi phenomena indicate the first NP in the whole-part pattern has a cluster of properties typical to the subject. This is reflected in its lexical entry (16), represented in the feature structure system of HPSG.

- (16)
$$\left[\begin{array}{l} \text{PHON} \quad \text{coh-ta} \\ \text{SYN} \quad \left[\begin{array}{l} \text{HEAD} \quad \textit{verb} \\ \text{SUBJ} \quad \langle \text{NP} \rangle \\ \text{COMPS} \quad \langle \quad \rangle \end{array} \right] \\ \text{SEM} \quad \left[\text{RESTR} \left\langle \left[\begin{array}{l} \text{RELN} \quad \textit{good} \\ \text{ARG} \quad \textit{i} \end{array} \right] \right\rangle \right] \end{array} \right]$$

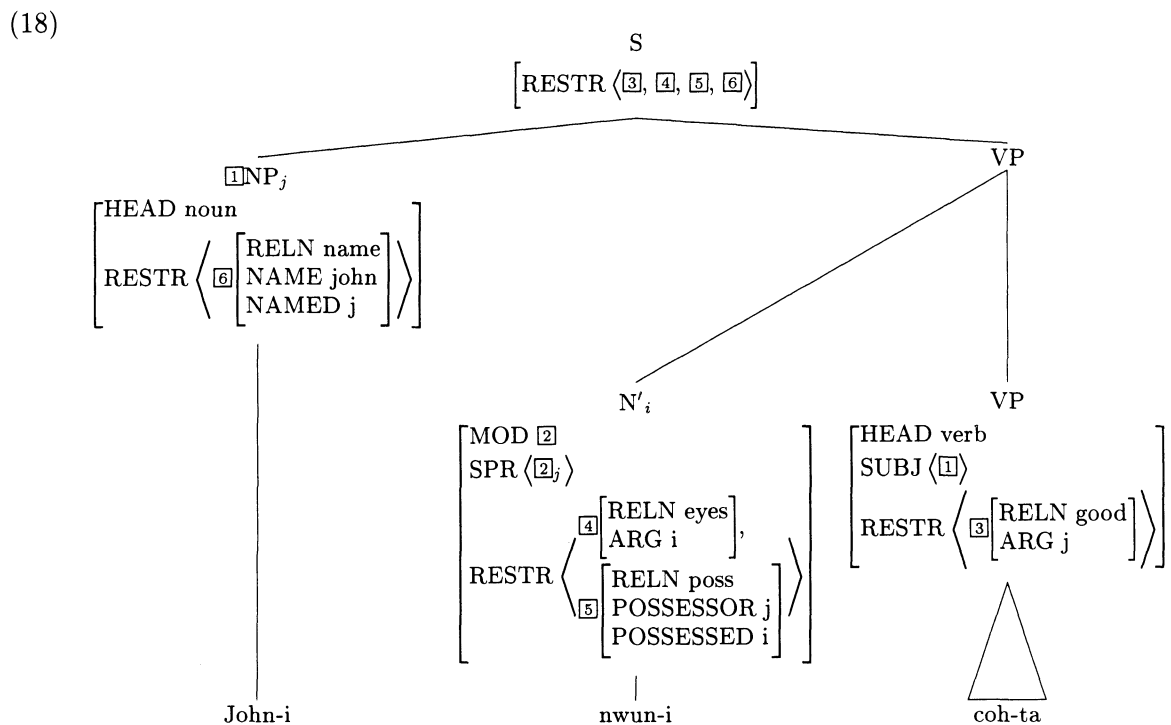
Meanwhile, the grammatical status of the second 'inalienable' NP appears to be different from ordinary NPs. It can neither be a fully saturated NP nor can it be modified. This nominal is not a selected or required element. The semantic part of this lexical element specifies that it is in the 'poss(essive)' relation with the specifier it selects. Nouns like *nwun* 'eyes', inherently refer to the whole of which it is a part, the whole being a reference point for the part (cf. Langacker 1984). I take this second element to function as a modifier of the VP. This modifier is not a fully saturated NP but an unsaturated NP still looking for its specifier. In terms of semantics one thing we need to notice is that this adverbial nominal semantically designates the 'part' in the whole-part

relation. In Langcker's (1984) sense, this second nominative modifier is an 'active zone indicator' that specifies the portion of an entity to which a particular property applies. These constraints are reflected in the lexical entry for the second NP *nwun* 'eyes' in (17).

- (17)
$$\left[\begin{array}{l} \text{PHON } nwun \\ \text{SYN } \left[\begin{array}{l} \text{HEAD } \textit{noun} \left[\text{MOD VP}[\text{SUBJ}\langle NP_i \rangle] \right] \\ \text{SPR } \langle NP_i \rangle \end{array} \right] \\ \text{SEM } \left[\text{RESTR } \left\langle \left[\begin{array}{l} \text{RELN } \textit{eyes} \\ \text{ARG } j \end{array} \right], \left[\begin{array}{l} \text{RELN } \textit{poss} \\ \text{POSSESSOR } i \\ \text{POSSESSED } j \end{array} \right] \right\rangle \right] \end{array} \right]$$

The lexical entry in (17) specifies that the inalienable noun selects a specifier but can serve as a modifier to a VP.³ One specific constraint we need to observe is a semantic link between the specifier and the VP's subject thru the identical index value. This lexical specification thus guarantees that there is a proper semantic relation between the two nominative elements in whole-part constructions.

Given these two lexical entries, we would then assign the following structure to the sentence in (15)a:



As the structure indicates, the nominal element *nwun-i* modifies the VP 'coh-ta', forming a complex verb phrase. It is this complex verb phrase with which the subject combines. The meaning of this complex sentence is governed by the constraint given in (19) (See Sag and Wasow 1999).

(19) Semantic Compositionality Principle:

In any well-formed phrase structure, the mother's RESTR(CITION) value is the sum of the RESTR values of the daughters.

The principle in (19) guarantees that the semantic restrictions in each daughter are collected into the RESTR value of the mother. The effect of this semantic principle is clear, when combined with the semantic restriction on the noun *nwun* 'eyes'. Thus the sentence does not say of John that he is

³In a normal context such as *John-uy nwun*, the noun will have an empty MOD value.

good in general (the interpretation that would be required if *coh-ta* combined directly with *John*). Rather the interpretation we obtain is such that the property of being good is attributed to John's eyes.

Clear support for this structure comes from the account of the basic properties of each nominative element we observed in the previous section. In addition to providing an accurate reflection of the sentence meaning, it predicts the behavior of the first NP. By designating this NP to be the syntactically selected subject, we could predict its behavior with respect to honorification, binding, equi, plural copying, and so forth. The analysis also brings a simple account for the properties of the second nominative NP. For example, since the second NP is not an argument, it cannot be pro-dropped. Our analysis where the second nominative element is taken to be an unsaturated NP tells us why it cannot be modified by a phrase or replaced by a fully saturated *wh*-element. Further, this analysis provides a streamlined analysis of multiple nominative constructions since the second NP modifier can be iterated.

- (20) John-i [nwun-i [oynccok-i [coh-ta]]]
 John-NOM eyes-NOM left-NOM good
 'John's left eye is good.'

3.2 Focus Constructions

Though the focus pattern is similar to the whole-pattern too, there is ample evidence for the structural differences between the two. We have observed that in focus pattern cases like (21), it is not the first but the second nominative element that bears the canonical properties of subject with respect to binding, honorification, control, and so forth.

- (21) FP: JOHN-I emeni-ka coh-u-si-ta.
 John-NOM mother-NOM good-DECL
 'It is the teacher whose mother is good.'

The first nominative NP is in a specifier relation with the second NP and serves as a focus element. Even though several analyses have taken it to be 'another' subject, we could observe that the first nominative does not bear the property of subject. I claim that the sentence initial position with the nominative marker is one clear realization of information focus. This is in line with the analysis that takes the morphological marker *-i/ka* to be a focus particle (cf. Schütze 1996). There are several pieces of evidence indicating that this marking *ka/i* in the first NP is an indicator of focus.

For example, only the first nominative element can be *wh*-questioned.

- (22) a. Nwu-ka apeci-ka kyoswu-i-si-ni?
 who-NOM father-NOM professor-COP-HON-Q
 'Who is it whose father is a professor?'
 b. *John-i nwu-ka kyoswu-i-si-ni?
 John-NOM who-NOM professor-COP-HON-Q

The first nominative (unlike the genitive NP) has an exhaustive reading, a canonical property of focus. (cf. Yoon 1986.) Exclamatory sentences generally is used for description. The impossibility of having the exclamatory expression in (23)a could be attributed to the exhaustive list reading of *John-i*:

- (23) a. *ceki John-i apeci-ka o-si-nta!
 over.there John-NOM father-NOM come-HON-DECL
 b. ceki John-uy apeci-ka osinta!
 over.there John-GEN father-NOM come-HON-DECL

The interpretation of an indefinite element in the first nominative element also indicates that *-i/ka* serves as a focus particle. As an example, (24)a has no existential reading but a specific reading. This contrasts with the transitive psych verb construction (24)b in which either reading is available.

- (24) a. etten-salam-i apeci-ka kyoswu-i-si-ta
 some-person-NOM father-NOM professor-HON-DECL
 'It is someone whose father is a professor.' (specific only)
- b. etten-salam-i apeci-ka mwusepta
 some-person-NOM father-NOM fear-DECL
 'Someone fears his/her father.' (specific and existential reading)

The claim that the marker *-i/ka* can serve as a focus particle in the sentence initial position can be further supported by case stacking data like (25).

- (25) a. Seoul-lopwuthe-ka ku-somwun-i phecستا
 Seoul-LOC-NOM that rumor-NOM spread
 'The rumor came out from Seoul.'
- b. *John-i Mary-eykey-ka chayk-ul cwesستا
 John-NOM Mary-DAT-NOM book-ACC gave

Our analysis where the nominative mark on the first nonargument is taken to be a focus particle rather than as a case phrase can predict that there could be more than one focus phrases; As noted, there is no conceptual limit to the number of nonargument nominative. Further, unlike the common belief that only an intransitive verb participate in MNC's, we could predict that the type of predicates does not matter.

- (26) a. John-i tonsayng-i Mary-uy ppyam-ul ttayliesستا
 John-NOM brother-NOM Mary-GEN face-ACC hit
 'It is John whose brother hit Mary's face.'
- b. John-i tongsayng-i Mary-eykey chayk-ul cwesستا
 John-NOM brother-NOM Mary-DAT book-ACC gave
 'It is John whose brother gave a book to Mary.'

The observations give us enough reason to take the first nominal element as a focus phrase. For the structure of focus pattern sentences, following the idea of Yoon (1986), I suggest that Korean employs base-generated gapless topic/focus constructions. More specifically, I take (27) to be one of the constraints on the well-formed phrases in Korean (cf. O'Grady 1991).

- (27) Head-Focus Schema:
 $S[\text{INFO-STRUC} \mid \text{FOCUS} \langle \mathbb{I} \rangle] \rightarrow \mathbb{I}NP[\text{MARKER } i/ka], \quad S[\text{SPR} \langle \mathbb{I} \rangle]$

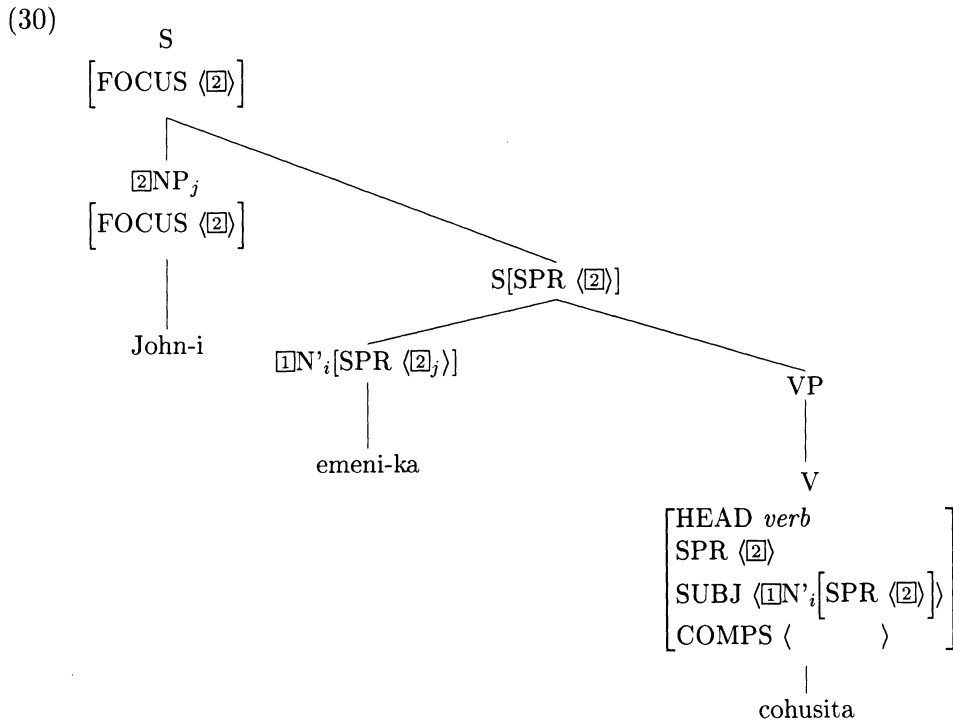
This schema basically allows a focused noun phrase with a sentence to be a well-formed phrase. One condition this structure needs to observe is that the focused NP is identical with that of the subject's specifier, the reason of which will be clear shortly. I thus suppose that unlike English but similar to Catalan, Korean informational interpretation such as focus is signaled by syntactic position as well as by accent type. To integrate this focus information into grammar within the present system, I adopt Engdahl and Vallduví's (1996) idea that the feature attribute INFO-STRUCT controls the information structure of a given sentence and its structural realization together with the assumption that verb lexemes could be realized as those in (28) (either thru a lexical rule or by a constructional constraint).

- (28) $\left[\begin{array}{l} \textit{verb} \\ \text{SPR} \langle \mathbb{I}[\text{MARKER } i/ka] \rangle \\ \text{SUBJ} \langle N'[\text{SPR} \langle \mathbb{I} \rangle] \rangle \\ \text{INFO-STRUC} \mid \text{FOCUS} \langle \mathbb{I} \rangle \end{array} \right]$

The effect of this is simple: a verb taking an unsaturated nominal subject can have a specifier which structure-shares with the subject's specifier. This lexical constraint, combined with the schema in (38) has thus a pragmatic effect: it makes the specifier (marked with the focus particle) as the informational focus. For example, the verb *coh-usi-ta* could be realized as the following lexical entry with the focus information.

- (29)
$$\left[\begin{array}{l} \text{PHON } \text{coh-usi-ta} \\ \text{SYN } \left[\begin{array}{l} \text{HEAD } \textit{verb} \\ \text{SPR } \langle \text{[1] [MARKER ka]} \rangle \\ \text{SUBJ } \langle \text{N' [SPR } \langle \text{[1]} \rangle} \rangle \end{array} \right] \\ \text{INFO-STRUC | FOCUS } \langle \text{[1]} \rangle \end{array} \right]$$

Given this, the structure of (24) would then be something like the one in (30).⁴



The verb *coh-usi-ta* is a one place predicate like the one in the whole-part pattern, but this time it does not select the first nominative NP 'John' as its subject. The argument it subcategorizes for is the second nominal element *emeni-ka*. The verb combines with this subject and forms a well-formed head-subject phrase. This lower S is still looking for a specifier and combines with the focused element *John-i*, resulting in a well-formed head-focus phrase.

The meaning of this sentence is also straightforward. The property of being good is attributed to mother herself. The relation between John and mother is just a possessive relation, and this NP John is focused, as represented in the feature structure of the topmost S in (31).

- (31)
$$\left[\begin{array}{l} \text{SYN } \left[\text{HEAD } \textit{verb} \right] \\ \text{SEM } \left[\begin{array}{l} \text{MODE } \textit{propositional} \\ \text{INDEX } \textit{s} \\ \text{RESTR } \left\langle \left[\begin{array}{l} \text{RELN } \textit{naming} \\ \text{NAME } \textit{john} \\ \text{NAMED } \textit{j} \end{array} \right], \left[\begin{array}{l} \text{RELN } \textit{mother} \\ \text{ARG } \textit{i} \end{array} \right], \left[\begin{array}{l} \text{RELN } \textit{motherhood} \\ \text{ARG1 } \textit{j} \\ \text{ARG2 } \textit{i} \end{array} \right], \left[\begin{array}{l} \text{RELN } \textit{good} \\ \text{ARG } \textit{i} \end{array} \right] \right\rangle \end{array} \right] \\ \text{INFO-STRUC | FOCUS } \langle \text{[2]}_j \rangle \end{array} \right]$$

The interactions of the constraints on the focus-construction and the lexical properties of each head allow us to obtain the proper syntax and semantics.

The advantages of the analysis presented here are clear. In the analysis, the first nominative NP is not a syntactically selected argument. This status predicts its behavior with respect to honorification, binding, control, equi and so forth. The first nominative NP marks the realization

⁴If a daughter's INFO-STRUCT (such as FOCUS) is instantiated, then the mother inherits this instantiation.

of information packaging. This focused element is in a tight semantic relation with the second nominative element that is selected by the main predicate. The second nominative element is also slightly different from ordinary NPs, in particular, in that it cannot be a fully saturated NP. This incompleteness also accounts for the impossibility of replacing the second NP with a fully saturated wh-word.

A remaining issue concerns so called multiple nominative constructions with a series of focused NPs.

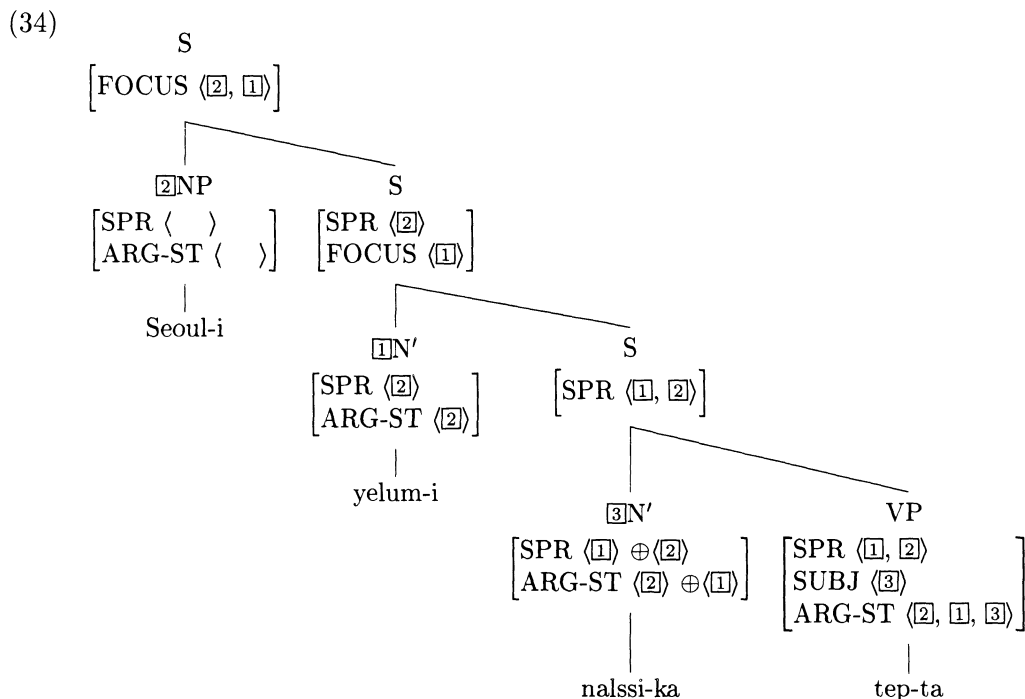
- (32) a. Seoul-i yelum-i nalssi-ka tepta
 Seoul-NOM summer-NOM weather-NOM hot
 'It is Seoul whose summer weather is hot.'
- b. John-i elkwul-i oynccok-i alay-ka aphuta
 John-NOM face-NOM left-NOM bottom-NOM sick
 'John is sick in the face on the right side in the bottom.'

The observation we can make here is that we can add an additional nominative element as long as there is a certain specifier head relation between the two neighboring nominative elements. The freedom of adding nominative elements is thus dependent upon the properties of the nominative element. We could attribute this intuition to the lexical properties of a nominative element with the mechanism of argument composition:⁵

$$(33) \quad noun \rightarrow \left[\begin{array}{l} \text{SPR } \langle \text{①} \rangle \\ \text{ARG-ST } \langle \text{②} \rangle \oplus \langle \text{①N}'[\text{SPR } \langle \text{②} \rangle] \rangle \end{array} \right]$$

The constraint in (33) reflects the mechanism of argument composition, a concept borrowed from categorial grammar and used to model various phenomena in different languages. As represented in the constraint (33), argument composition is relevant to the noun's SPR (specifier value) and allows a nominal head requiring a specifier (②) to inherit this specifier's valence (SPR) requirement too. This system, combined with the Head-Focus schema and the constraint on *verb* will leave the possibility of the top S to look for still another *i/ka* focused phrase.

For example, under this analysis, the sentence in (32)a would have the structure in (34):



Nothing in our system blocks generating multiple nominative constructions with a series of focused NPs. Each of the focused NPs has the property of the sister S. Of course, the series of focus NPs should be in a tight semantic relation, such as the specifier-head relation with the following NP.

⁵For MNCs with more than three nominative elements (allowing more than one specifier to occur in the verb's SPR), we need to slightly revise the Head-Focus Schema and the constraints in (30) and (33).

3.3 Pysch Constructions

The structure of a psych pattern like (35) is straightforward.

- (35) PP: John-i Mary-ka coh-ta.
 John-NOM Mary-NOM like-DECL
 'John likes Mary.'

This pattern is different from the whole-part or focus pattern, in that the first NP can bear the dative case marker and that there is no possessive relation between the two nominative NPs. Further, the first nominative NP behaves just like that of the whole-part pattern whereas the second NP has the similar status to that of the focus pattern.

I accept the view that both nominative NPs in the psych both are syntactically selected by the verb as represented by the lexical entry in (36).

- (36)
$$\left[\begin{array}{l} \text{PHON} \text{ coh-ta} \\ \text{SYN} \left[\begin{array}{l} \text{HEAD} \text{ verb} \\ \text{SUBJ} \langle \text{[1]NP}_i \text{[nom]} \rangle \\ \text{COMPS} \langle \text{[2]NP}_j \text{[nom]} \rangle \end{array} \right] \\ \text{SEM} \left[\text{RESTR} \left\langle \left[\begin{array}{l} \text{RELN} \text{ like} \\ \text{ARG1} \text{ } i \\ \text{ARG2} \text{ } j \end{array} \right] \right\rangle \right] \end{array} \right]$$

Taking the verb *coh-ta* in the psych pattern as a transitive verb would generate the structure (37).

- (37)
-

This transitive analysis predicts the property of each nominative NP we have observed. The first NP acts like the grammatical subject with respect to honorification, binding, control, and so forth. The argumenthood of the second NP is also supported by the pro-drop. Nothing allows this pattern to have another nominative NP.

4 Conclusion

In conclusion, though the three types of multiple nominative constructions we have observed in this paper induce apparent similarities with respect to case markings, there are clear differences among these. Syntactically, for example, the first nominative NP in the whole-part pattern and the one in the psych pattern behave alike in various phenomena whereas the second NP in the focus pattern and the one one in psych pattern exhibits a cluster of similar properties. Semantically, only the two nominative NPs in the whole-part pattern exhibit a 'whole-part' relationship. In the focus pattern, the first nominative is interpreted as a focal element, making the entire sentence a focus construction. Meanwhile the two nominative NPs in the psych pattern are in a regular stative transitive construction.

The analysis presented here is 'head-driven' and 'constraint-based' in the sense that the lexical head and the tight interaction among declarative constraints play crucial role in the formation of puzzling MNCs. Some appealing consequence of this analysis is a straightforward account of

long standing problems, such as getting the semantics right and generating multiple nominative constructions without resorting to a mechanism that allows unlimited valence increase. This has been achieved thru the familiar mechanism of argument composition and constraints on the lexical heads such as noun and verb.

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