THE SYNTACTIC NATURE OF THE MULTIPLE SUBJECT CONSTRUCTION

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In this paper, I will attempt to put forward a syntactically justifiable theory of Case assignment to the multiple subjects by analyzing the multiple subject constructions in syntactic terms. I suggest X-BAR TRANSPARENCY as a general bar notation principle: X-BAR TRANSPARENCY: A syntactic relation with an external element holds through any number of branching nodes of the same category type with immediate dominance between them or with the same head. The principle leads us to conclude that any projection of INFL functions as a predicate and is able to assign the nominative Case to an NP which is immediately dominated by another projection of the same INFL if those projections of INFL have the same head. Put another way, it is the X-bar transparency principle that accounts for the syntactic nature of the multiple subject construction which enables a single VP to have multiple subjects or enables multiple subject NPs to be assigned the nominative Case.

Many studies have attempted to deal with the problematic multiple subject constructions exemplified as in (1).

(1) John-i [$_S$chaek-i [$_{VP}$manh-ta]]
Nom book Nom many
'John has many books.'

The above construction is characterized by the fact that it has two NPs (*John* and *chaek*) put in the nominative Case but not in co-ordination, when it has a single VP (*manh-ta*). Such a construction poses the following question: What accounts for the syntactic nature of the construction which enables one VP to have two subjects not in co-ordination? Put another way, how are the subject NPs assigned Case, given the one-one restriction on Case assignment, which says that a Case assigner can assign Case to a Case assignee only once? This is a crucial question any theory of multiple subject construction must tackle.

Unfortunately, no study has ever attempted to tackle the problems inherent in the multiple subject construction in syntactic terms. Some studies approach the multiple subject construction in terms of the subject-predicate relation, while some others argue that subject NPs except for the rightmost one are transformationally introduced. The latter approach is argued for by Kuno (1973). He says that the first NP is derived from a possessive NP by subjectivization transformation. We will not discuss this approach in this paper because it is generally rejected. On the other hand, the former approach is advocated by Park (1973, 1982) and Saito (1982). Park says that in (1), the first NP *John* is the subject of the whole sentence and the sub-sentence *chaek-i manh-ta* is the predicate of the whole sentence. He continues to say that the sequence NP-V can only function as a sentential predicate if it expresses a property of the preceding NP. Saito (1982) puts forward exactly the

same line of argument for Japanese as Park. He claims that some kind of "aboutness" relation is required between the first NP and the sub-sentence. However, the "property reading" or "aboutness" relation requirement for being a predicate is in essence semantics-oriented. No study approaching the multiple subject constructions solely in terms of the subject-predicate relation can successfully deal with the intractable multiple subject constructions, as we will see in the following discussion.

Suppose the above-mentioned semantic requirement is a sufficient condition on being a predicate, then we can not account for the anomaly of the following examples:

(2) a. *ki sonyo-ka [$_{AP}$yeppin]
the girl Nom beautiful

b. *ki sonyo-ka [$_{NP}$pabo]
fool

In both examples, the bracketed expression may function as a predicate in that it expresses a property of the preceding NP. In other words, both *yeppin* (beautiful) and *pabo* (fool) satisfy the "aboutness" requirement for being a predicate, just as the sentential predicate in (1) does. Therefore, if the "aboutness" requirement is the sufficient condition on being a predicate, not only (1) but also (2) should be grammatical because the bracketed expressions (AP and NP) in (2) as well as the sub-sentence in (1) are equally qualified for being a predicate. However, as it is, (1) is grammatical whereas sentences in (2) are unacceptable. Let us consider the following example to make our point more clear:

(3) *John- i [$_{S}$chaek- i [$_{AP}$manhin]
Nom book Nom many

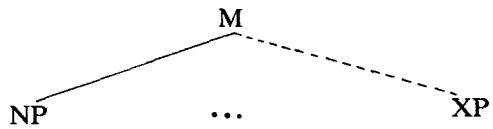
In Chomsky's theory, any subject-predicate relation in a containing structure is clausal, and therefore both the embedded subject-predicate relation in (3) and the sub-sentence in (1) should be equally qualified as a predicate in that both of them are clausal and express a property of the preceding NP. However, (3) is unacceptable, while (1) is grammatical. In short, the subject-predicate relation theory can not successfully account for the contrast in acceptability between (1) and (2) or (3).

Then, what is responsible for the constrast in acceptability between (1) and (2) or (3)? No theory of the multiple subject construction can hope to attain adequacy unless it gives an answer to the question, and no attempt to approach the construction solely in terms of subject-predicate relation can successfully come up with an answer to the question. In this paper, I will come up with a syntactic analysis of the multiple subject construction, and then suggest a syntactically justifiable theory of Case assignment to the multiple subjects, thus offering an answer not only to the above-mentioned question but also to the question given at the onset of the paper: What accounts for the syntactic nature of the construction which enables a single

VP to have two subjects not in co-ordination? That is, how are the multiple subject NPs assigned Case, given the one-one restricition on Case assignment?

First of all, we will assume following Williams (1983) that the subject-predicate relation has the following structure:

(4)



Any category can be XP:

(5) AP: John made [$_M$ Bill *sick*]
NP: John made [$_M$ Bill *a doctor*]
PP: John kept [$_M$ it *near him*]
VP: [$_M$ John *died*]

As we see in (5), any subject-predicate relation including S constitutes M. S may function not only as M, as we see in the last example of (5), but also as "complex predicate" as we see in the following example:

(6) John [$_{VP}$ died] [$_S$ PRO waiting for a bus]

Williams considers [$_S$ PRO waiting for a bus] to be a complex predicate whose subject as external argument is *John* in (6).

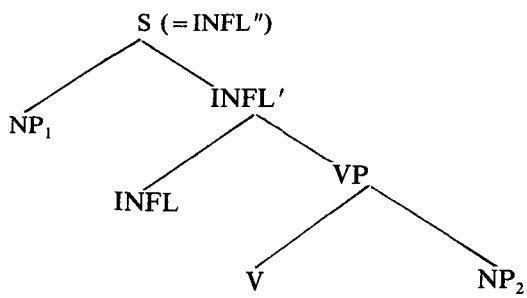
Before we go on, it is necessary to define the notion of subject. In Chomsky (1965, 1981), the notion of subject is the relation [NP, S], and any construction in which the subject-predicate relation appears is clausal. That is, the subject is the NP dominated by some category (S). On the other hand, Williams (1980, 1983) challenges Chomsky's view of subject with the predication theory. In this theory, the predication relation is defined as the relation holding between the subject and the predicate. "Subject" is defined as "external argument." In other words, subject and predicate need not always be exhaustively dominated by S. In his theory, the subject-predicate relation is basic and the notion "clause" derives from this basic notion. Subject and predicate constitute S only if the predicate contains VP. In his theory, "clauses" are a subset of the subject-predicate relation, in which the subject is an external argument.

Given Williams' view of the subject-predicate relation, it is quite natural to assume that in (1) *John* is the subject of the matrix subject-predicate relation and the sub-sentence *chaek-i manh-ta* functions as sentential predicate, which in turn constitutes an embedded subject-predicate relation in that it contains the subject (*chaek-i*) and VP (*manh-ta*). The sub-sentence satisfies the semantic requirement for being a predicate in that it expresses a property of *John*.

Up to this point, we have considered the multiple subject construction in terms

of semantics. We will now turn to the syntactic nature of the construction. We will show what enables the sub-sentence in (1) to constitute a legal predicate, when the phrasal and clausal predicates in (2) and (3) are not grammatical. First of all, we will assume with Fabb (1984) that S is a projection of INFL and has the following structure:[1]

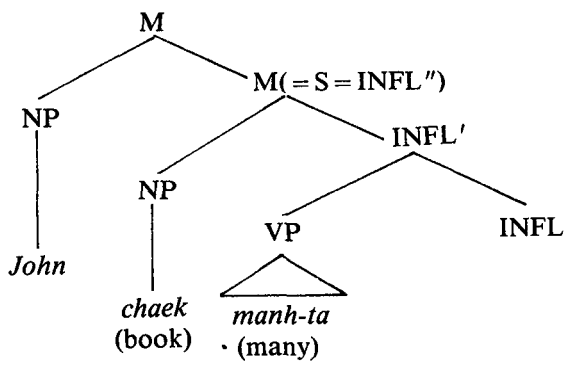
(7)



In (7), we see that NP_1 is the subject and INFL' is the predicate, and that the subject-predicate relation, in which the predicate contains INFL, constitutes S.

To put (1) in terms of (4) and (7), we get the following underlying structure for (1):

(8)



We have already redefined S to be the subject-predicate relation in which the predicate is INFL'. If any INFL' constitutes a predicate, it is quite natural and reasonable to infer from this that INFL" may function as a predicate. This syntactic phenomenon and many other syntactic relations we will not go into in this paper lead us to propose S-bar Transparency as a general bar notation principle:

[1] As Fabb (1984) points out, it should also be noted that $\bar{S}$ is standardly assumed not to be a projection of INFL.

(9) *X-bar Transparency*: A syntactic relation with an external element holds through any number of branching nodes of the same category type with immediate dominance between them or with the same head.

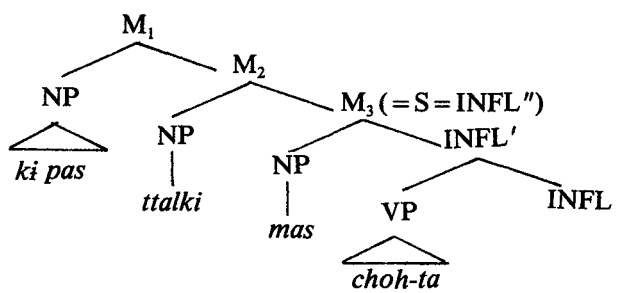
What (9) says is that two or more branching nodes of the same category type with immediate dominance between them or with the same head behave as a single node in that the same syntactic relation holds through these nodes. Given the X-bar transparency principle, which is also suggested for government effect and c-command effect within a maximal projection and some other syntactic relations,[2] INFL″ (*chaek manh-ta* in (8)) may have the same function as INFL′ and naturally behave as a predicate since INFL′ is a predicate. Thus, our assumption that the sub-sentence in (8) functions as a predicate is now syntactically justified. We are now in a position to provide an account for the contrast between the grammatical (1) and the unacceptable (2) and (3). The predicate in (1) has the INFL feature a requirement for being a clause and the projections of INFL satisfy the X-bar transparency principle. On the other hand, both the AP predicate in (2) and the clausal predicate in (3) do not contain the INFL feature.

Let us now consider a more complex construction.

(10) 'ki pas - i ttalki - ka mas - i choh-ta
the field Nom strawberry Nom taste Nom good

In (10), we see three NPs put in the nominative Case: *pas*, *ttalki* and *mas*, while we see only one VP *choh-ta*. Given Williams' view of the subject-predicate relation and the structure of S shown as in (7), (10) has the following underlying structure:

(11)



[2] For more details of X-bar transparency, see Yim (1984a: ch.4).

Our argument that S (= INFL″) can function as "complex predicate" poses no problem, as we already know from the discussion of (8). The question in (11) is: Can M_1 constitute the subject-predicate relation? Put another way, can the sequence NP -S (M_2 in (8)) be considered to function as a predicate in syntactic terms? There is no English construction in which the sequence NP-S expresses a property of an NP, thus functioning as a predicate. That is, there exists no multiple subject construction in English. However, in the case of Korean, the answer to the question is yes. The positive answer to the question follows from the X-bar transparency principle. We will now see how M_2 turns out to be a predicate, given the X-bar transparency principle. At the moment, we don't know if M_2 in (11) is a projection of INFL, although we know that M_3 is. However, we know that M_2 and M_3 are the nodes of the same category type with immediate dominance in that both of them show the subject-predicate relation, and that M_3 is a projection of INFL. It follows then that M_2 is also a projection of INFL, given the X-bar transparency principle. In other words, if M_3 functions as a predicate, then M_2 may have the same function in accordance with the principle.

Up to now, we have considered how our argument that the subject-predicate relation in containing matrix construction can function as a predicate can be syntactically justified. Our framework presented in the foregoing discussion is evidently an advantage over the mere claim that such a subject-predicate relation can only constitute "complex predicate" if it expresses a property of an external NP argument. We now know that the X-bar transparency principle provides syntactic justification for the property-reading requirement for being a predicate. Thus, our argument that the subject-predicate relation contained in a matrix construction as exemplified in (11) can constitute "complex predicate" is justified not only semantically but also syntactically. In short, the X-bar transparency principle accounts for the syntactic nature of the multiple subject construction which enables a single VP to have multiple subjects.

Let us now turn to the question: How are the multiple subjects assigned Case?

First of all, we will assume the following Case assignment rules, which operate at the D-structure level:[3]

(12) (i) NP is nominative if governed by INFL with the [+Tense] feature.
(ii) NP is objective if governed by V with the [+Transitive] feature.
(iii) NP is oblique if governed by overt Case-markers with the exception of *ka* and *lil*.

What (iii) says is that any NP which is not assigned the nominative Case or the objective Case by (i) and (ii) is assigned the oblique Case by overt Case-markers such as *eke*, *e*, *lo* and so on, which are inserted at the D-structure level unlike *ka*

[3] For advantages of Case assignment at D-structure over Case assignment at S-structure, see Yim (1984a).

and *lil*.

What (i) and (ii) say is that the nominative Case and the objective Case is determined not by overt Case-markers *ka* and *lil* but by syntactic configurations. This in turn means that *ka* and *lil* do not appear at the level where Case is determined.[4]

At this juncture, it is necessary to consider the properties of INFL. Chomsky (1981) says that INFL is the bundle of features [[±Tense] (AGR)]. Finite clauses have the [+Tense] feature, while nonfinite clauses have the [−Tense] feature. If we follow Chomsky's feature system and assume that only the [+Tense] feature is able to assign the nominative Case, we encounter a serious problem in Korean, since in Korean we often see the subject of an infinitive in the nominative. Consider the following example:

(13) Na - ka ki il - lil ha - ki - ka olyop-ta.[5]
I Nom the work Obj do NOM Nom difficult
'It is difficult for me to do the work.'

In (13), *ha* is an infinitival form. However, its subject is put in the nominative Case. Due to this problem, linguists are not in agreement with regard to the assignment of the nominative Case in Korean. Some say that the Case-marker *ka* assigns the nominative Case, while some others say that the nominative Case is inherent. This problem makes us reconsider Chomsky's rule of nominative Case assignment.

In this paper, I assume that INFL, which is the head of a clause, is the collection of features [[+ Tense],[± Past]]. Furthermore, I assume with Stowell (1981) that not only tensed clauses but also infinitival clauses have the [+Tense] feature.[6] As for the [±Past] feature, only the finite clauses have the feature, while infinitives are left unspecified for the feature. The [±Tense] feature is crucially distinguished from the [±Past] feature. The [±Past] feature is morphologically realized only in finite clauses, while infinitives lack the feature. Stowell (1981) convincingly argues that the fact that infinitives lack the morphological feature [±Past] does not mean that they have no abstract tense. He continues to say that the status of an infinitive as being neither present nor past has the effect of specifying that the time-frame of the clause is unrealized with respect to the tense of the matrix within which the infinitive appears." (Stowell 1981: 40)

In this paper, I assume that in Korean, the [+Tense] feature, which exists not only in finite clauses but also in non-finite clauses, assigns the nominative Case. Hence, we have the rule (12). Now one of the differences between Korean and English is that in Korean the [+ Tense] feature may assign Case, whereas in English only the [± Past] feature may assign Case because the infinitive, though it contains the [+ Tense] feature, cannot assign the nominative Case.

[4] Yim (1984b) argues that *ka* and *lil* are dummy Case-markers and must be inserted at the PF level.

[5] NOM stands for 'nominalizer.'

[6] However, it should be noted that in Stowell's framework, tense is the head of $\bar{S}$, while in my framework, S takes Case but not COMP. For a review of COMP, see Yim (1984a: ch.4).

The phenomenon of the nominative Case assignment to the subject of an infinitive by the [+Tense] feature in the sense discussed here is not *ad hoc* or unnatural, because it is not unique in Korean. Jespersen (1924) says that in some languages such as Spanish and Italian the subject of an infinitive is assigned the nominative Case. Even in Middle English, we find the subject of an infinitive in the nominative Case, as we see in the following example:

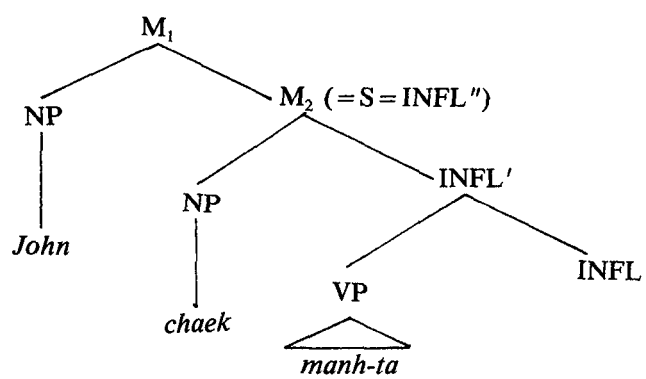
(14) Thow to lye by our moder is to muche shame for vs to suffre.[7]

In (14), *thow* the subject of infinitive *to lye* is put in the nominative Case. There is no choice but to assume that in (14), the [+Tense] feature assigns the nominative Case to *thow*. There is neither an overt Case-marker nor any element to assign the nominative Case to *thow*.[8]

Our Case assignment theory presented in the above discussion still leaves unsolved the problem of Case assignment to multiple subject. Given the one-one restriction on Case assignment, which says that a Case assigner is to be related to a Case assignee by Case assignment only once, the [+Tense] feature in INFL may assign the nominative Case only to the rightmost subject, leaving other subjects Caseless. In the following pages, I will show how those subjects are assigned Case, in syntactic terms.

We already know that any subject-predicate relation may function as a predicate at least if it immediately dominates a certain projection of INFL, and that in Korean the [+ Tense] feature in INFL can assign the nominative Case. Consider (8) repeated as (15).

(15)



In (15), *chaek* (book) is governed and assigned Case by INFL or by INFL' by virtue of the tense feature in INFL.

Let us now turn to the Case assignment to *John*. Given the analysis of the multiple subject construction given in the preceding discussion the X-bar projection prin-

[7] Quoted from Jespersen (1924: 119).

[8] For more detailed discussion of Case assignment in Korean, see Yim (1984b).

ciple enables any projection of INFL in (15) to have the Case-assigning ability by virtue of the [+Tense] feature in INFL. It is now quite natural and reasonable to assume that *John* is assigned the nominative Case by INFL″ (=M_2) by virtue of the [+Tense] feature in INFL in exactly the same way as *chaek* (book) is assigned Case by INFL′ by virtue of the same feature.

We may now conclude that the nominative Case is assigned by virtue of the [+ Tense] feature in accordance with the X-bar transparency principle. In short, any projection of INFL is able to assign the nominative Case to an NP insofar as the projection meets the X-bar transparency principle.

Thus far, we have considered how the multiple subjects are assigned the nominative Case, in syntactic terms. Again, the X-bar transparency principle enables multiple subject NPs to be assigned the nominative Case.

It should be noted that our strategy of Case assignment to the multiple subjects presented in the preceding discussion is based on Chomsky's (1981: 171) analysis of the "double NP" construction. Consider the following example:

(16) John $[_{VP}$ $[_{V}$ gave Bill] a book]

According to Chomsky, *gave* assigns Case to *Bill* and *gave Bill*, which is a V, assigns Case to *a book*.

Given the X-bar transparency principle, which says that the same syntactic relation holds through any number of branching nodes of the same category type with immediate dominance between them or with the same head, both our Case assignment to the multiple subjects and Chomsky's Case assignment to the double objects seem very natural and reasonable.

We should note here that in our framework, $\bar{V}$ (*give Bill*) does not assign Case but the Transitivity feature assigns Case in accordance with the X-bar transparency principle. In the double subject constructions, the INFL feature, but not a projection of INFL, assigns Case in accordance with the principle. Again, what X-bar transparency principle says is that two or more branching nodes of the same category type with immediate dominance between them behave as a single node.

Finally, it should be noted that Case assignment to the multiple subjects within our framework satisfies not only government requirement for Case assignment but also one-one restriction on Case assignment, which says that a Case assigner can assign Case only once.

In summary, any projection of INFL functions as a predicate and is able to assign the nominative Case to an NP which is immediately dominated by another projection of the same INFL if those projections of INFL has the same head, in accordance with the X-bar transparency principle. Put another way, it is the X-bar transparency principle that accounts for the syntactic nature of the multiple subject construction which enables a single VP to have multiple subjects or enables multiple subject NPs to be assigned the nominative Case.

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