

Tense and The Time Argument of A Predicate*

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The main purpose of the paper is to investigate Case alternation for the embedded subjects of the *mit-* 'believe' type verb and the periphrastic causative verb *ha-* 'do' constructions which hinges on whether their embedded clause contains a stative or nonstative predicate. We argue that the Case alternation at issue follows from interaction between the two types of matrix verbs selecting thematically different clausal arguments and the distinct (syntactic) licensing requirements for stative and nonstative predicates. More specifically, the PC verb *ha-* selects as its clausal complement an Action argument, whereas *mit-* type verbs a Propositional argument. We suggest that the two distinct theta-role taking clausal complements are distinguished in terms of theta-binding of the time arguments of the predicates within them. In the M-verb construction (and Nominative and Dative causatives), the time argument of the embedded predicate is theta-bound by the embedded tense features. In Accusative causatives, on the other hand, the time argument of the embedded predicate is theta-bound by the matrix tense features after theta-identification with that of the matrix causative verb. The possibility of a stative predicate but the impossibility of a nonstative verb within the ECM context of the M-verb construction is interpreted as implying that only the time argument of the latter, but not that of the former, requires [+tense] features for theta-binding of its time argument. We propose that the time argument of a stative verb is theta-bound by a temporally-universal non-delimiter operator. Our analysis of the stative vs. nonstative distinction in the two constructions has as a consequence that [+tense] features are present when the embedded subjects are Nominative Case marked, whereas they are entirely absent within the ECM context of Korean.

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0. Introduction

In English, the verb which appears within an embedded clause can be finite or nonfinite as in (1):¹

- (1) a. John believes [that she is smart].
 b. John believes [her / *she to be smart].

As Chomsky (1981) claims, in English the finiteness or nonfiniteness of the embedded clause determines the Case of its subject NP. When the embedded clause is finite, its subject is Nom(inative) Case-marked by the finite inflectional element as in (1a). When, however, it is nonfinite, its subject cannot be Nominative as in (1b). In that case, the higher verb *believe* assigns Acc(usative) Case to the embedded subject.

In contrast to English, Korean does not display the corresponding finite vs. nonfinite distinction apparently. Let us examine the properties of inflection within embedded sentences of Korean.²

- (2) a. salamtul-un [Mary-ka sengsilha-(yess)-ta
 people -Top -Nom sincere -Perf -Decl(arative)
 -ko] mit -ess -ta
 -Comp believe-Perf-Dekl
 'People believed that Mary was (had been) sincere.'
 b. John-un [Mary-ka ttena-key] ha-yess -ta
 -Top -Nom leave-Comp do-Perf-Dekl
 'John caused Mary to leave.'

In (2), the bracketed embedded clause is the complement of the matrix verb and its subject is Nominative. If, as in English, the embedded subject in Korean is assigned Nominative Case by a finite inflectional element, the embedded clause containing it is considered to be finite. It is not obvious, however, whether this is the case, since, when the embedded subject is Ac-

¹ A verb is finite or inflected in form when it is limited in time by a tense and shows agreement with person, gender, or number. Otherwise, it is nonfinite or uninflected.

² In (2) and below, the morpheme *-(y)ess-*, which has generally been considered as the past tense marker, is annotated as the Per(fective) aspect marker. In section 4.1 we motivate our departure from the general convention.

three questions to identify properties of inflectional elements in Korean on the basis of Case alternations for embedded subjects as in (2-3).

The set of examples which are particularly important to address the questions raised above are those which exhibit the stative vs. nonstative (or eventive) distinction in the *mit*- 'believe'-type verb (in short, M-verb) construction, as reported by K-S. Nam (1973); Kuno (1976); K-H. Lee (1988); K-S. Kim (1990); J-S. Lee (1992). The embedded subject within the M-verb construction of (5a-b) is either Nominative or Accusative Case -marked when the embedded clause contains a stative predicate:

- (5) a. John-un Mary-ka /-lul yeppu -tako mit -ess -ta
 -Top -Nom/-Acc pretty-Comp believe-Perf-Decl
 'John believed Mary was pretty.'
- b. John-un Mary-ka /-lul kyosil -ey iss-tako sayngkakha
 -Top -Nom/-Acc classroom-in be -Comp think
 -yess-ta
 -Perf-Decl
 'John thought that Mary was in the classroom.'

Unlike (5a-b), however, when the embedded clause of (6a-b) contains a nonstative predicate which is construed as nongeneric or nonhabitual, its subject can be Nominative but not Accusative:

- (6) a. John-un Mary-ka /*-lul kongwon-eyse nol -ntakko mit
 -Top -Nom/*-Acc park -in play-Decl believe
 -ess -ta (nongeneric or nonhabitual *nol*-)
 -Perf-Decl
 'John believed Mary was playing in the park.'
- b. John-un Mary-ka /*-lul Bill-ul manna-ntako sayngkakha
 -Top -Nom/*-Acc -Acc meet-Comp think
 -yess-ta (nongeneric or nonhabitual *manna*-)
 -Perf-Decl
 'John thought Mary was meeting Bill.'

The impossibility of the embedded subject in (6a-b) being Accusative Case -marked implies that the embedded subject cannot be Accusative Case -marked freely.

In contrast to the M-verb construction, the periphrastic causative (PC)

construction displays a different pattern of Case-marking for the embedded subject, as reported by E-D. Cook (1968); K-H. Lee (1988); and J-S. Lee (1992). In (7a-b), where the embedded clause of the PC verbs contains a nonstative predicate, its subject can be Nominative or Accusative:

- (7) a. John-un Mary-ka /-lul ttena-key ha-yess-ta
 -Top -Nom/-Acc -Acc leave-Comp do-Perf-Decl
 'John made Mary leave.'
 b. John-un Mary-ka /-lul Bill-ul manna-key ha-yess-ta
 -Top -Nom/-Acc -Acc meet -Comp do-Perf-Decl
 'John made Mary meet Bill.'

If, however, it contains a stative predicate, its subject can be Accusative but not Nominative as in (8a):

- (8) a. *John-i [Mary-ka kippu /yeppu-key] ha -yess-ta
 -Nom -Nom glad /pretty-Comp make-Perf-Decl
 'John made Mary glad/pretty.'
 b. John-i [Mary-lul kippu/yeppu-key] ha-yess-ta
 -Acc

The ungrammaticality of the example (8a) indicates that the embedded subject cannot be Nominative Case-marked freely.

This paper provides a principled account for these contrasting Case phenomena manifested in the PC and M-verb constructions of (5-8) under the theory of temporal argument binding for predicates (Enç (1985; 91); Campbell (1989); Stowell (1992); and Zagona (1994)). Maintaining that the PC verb *ha-* 'do' s(ematic)-selects as its clausal complement Action and *mit*-type verbs Proposition, we suggest that the two thematically different complement clauses call for distinct licensing requirements. That is, the embedded predicate's time ([T])-argument within the Propositional complement of M-verbs is theta-bound by the embedded tense features, whereas that within the Action complement of PC verbs does not have to be. These syntactic requirements result in contrasting Case phenomena instantiated in the constructions at issue. As a consequence of our analysis, it is claimed that Korean does not have any overt tense marker. Rather, the language has only a nonovert tense marker (\emptyset), which is responsible for Nominative Case-marking as well as theta-binding of a predicate's [T]-position.

This entails that in Korean, the finite vs. nonfinite distinction is determined by the presence or absence of the nonovert present tense marker. It will be shown that, when the embedded subject is Accusative Case-marked, the nonovert present tense marker does not appear within the complement clause of the PC and M-verb constructions. When, on the other hand, the embedded subject is Nominative Case-marked, it indeed does.

This paper is organized as follows. In section 1, we critically assess the previous account of J-S Lee's (1992) Case Minimality analysis of the stative vs. nonstative distinction for Case alternations in the constructions at issue. In section 2 we suggest that the complements of the PC and the M-verb construction select distinct thematic roles, i.e. Action and Proposition, respectively. We then propose that the Action and the Propositional argument must be differentiated by their syntactic requirements. To this end we adopt Enç's (1985) theory of temporal argument binding. Section 2 and 3 are devoted to providing a temporal argument binding account for the PC and the M-verb construction, respectively.

I. Problems with the Previous Analysis

We now critically review J-S. Lee (1992), who is, to our knowledge, the only person to attempt to offer a principled analysis for the stative/nonstative distinction in the PC and the M-verb construction, illustrative examples of which are repeated below. Consider first the M-verb construction.

- (9) a. John-un Mary-ka /-lul yeppu -tako sayngkakha-yess-ta
 -To -Nom/-Acc pretty-Comp think -Perf-Decl
 'John believed Mary was pretty.'
- b. John-un Mary-ka /*-lul Bill-ul manna-ntako mit -ess -ta
 -Top -Nom/*-Acc -Acc meet-Comp believe-Perf-Decl
 'John believed Mary was meeting Bill.' (nongeneric or nonhabitual
 manna-)

In (9a), where the complement clause of an M-verb contains a stative predicate, its subject can be either Nominative or Accusative. In (9b), however, where it contains a nonstative verb, its subject can be Nominative but not Accusative.

The PC construction of (10), on the other hand, exhibits different behavior from the M-verb construction:

- (10) a. John-un Mary-ka /-lul Bill-ul manna-key ha-yess-ta
 -Top -Nom/-Acc -Acc meet-Comp do-Perf-Decl
 ‘John made Mary meet Bill.’
- b. John-i Mary-lul /*-ka kippu-key ha -yess-ta
 -Nom -Acc/*-Nom glad -Comp make-Perf-Decl
 ‘John made Mary glad.’

In (10a), where the complement clause of the PC verb contains a nonstative verb, its subject can be either Nominative or Accusative. In (10b), however, where it contains a stative verb, its subject can be Accusative but not Nominative.

To account for the contrast between the two constructions, J-S. Lee first attributes the impossibility of the embedded subject in (9b) being Accusative, to the fact that the complement clause contains a nonstative verb which assigns Accusative Case. In that case, the projection of the embedded Case-assigning nonstative verb creates a barrier, which blocks Case-marking of the embedded subject by the outside Case assigner, i.e. the matrix verb. J-S. Lee formalizes this ‘Case Minimality effect’ into the following condition:³

- (11) a. (i) When Infl is lexical, IP is a barrier.
 (ii) When Infl is functional, I' is a barrier.
- b. (i) When a verb within the complement of Infl,
 i.e. VP, is not a Case assigner, I' is a barrier.
 (ii) When a verb within the complement of Infl,
 i.e. VP, is a Case assigner, IP is a barrier.

Under this condition, assuming that the embedded subject is Accusative Case-marked after raising to the Spec of CP at S-Structure, J-S. Lee accounts for the ungrammaticality of (9b) in the following way. First, the embedded IP of (9b) constitutes a barrier due to (11bii); that is, because the embedded nonstative verb is a Case assigner. The embedded subject

³ To facilitate our understanding, we adopt J-S. Lee’s formulation to the informal condition (11).

thus cannot raise from the embedded Spec of IP to the embedded Spec of CP because IP is a barrier. The grammaticality of (9a), on the other hand, is accounted for by (11bi). Because the embedded predicate is not a Case assigner, I' is a barrier. Raising of the embedded subject to the Spec of CP thus does not raise a problem.

What about the PC construction of (10), where Accusative Case marking of the embedded subject is possible when the complement clause contains a nonstative verb? To address this question, J-S. Lee relies on the subcondition (11a). Claiming that in Korean, Comp is lowered down to an Infl position at SS, J-S. Lee maintains that in the case of the M-verb construction, the bi-morphemic complementizer *ta-ko* 'the declarative marker + the subordinator' lexicalizes Infl, so that IP is a barrier due to (11ai). In the case of the PC construction, however, the mono-morphemic complementizer *key* is functional, so that I' is a barrier due to (11aii). The embedded subject in the PC construction of (10) thus can raise from the Spec of IP to the Spec of CP. This is so irrespective of whether the embedded predicate is a Case assigner or not.

J-S. Lee, on the other hand, accounts for the ungrammaticality of (10b) when the embedded subject is Nominative Case-marked, by maintaining that 'for some reason,' the complement clause does not contain Agreement when the complement clause of the PC construction contains a stative verb. In that case, the outside Case governor steps in to assign Accusative Case to NPs inside the complement clause of the PC verb.

The most puzzling question as regards his analysis on the basis of the condition (11), however, concerns the relation between the subconditions (11a) and (11b). To account for the M-verb construction, he relies on the subcondition (11b), ignoring (11a). To account for the PC construction, however, he relies on the subcondition (11a), ignoring (11b). In other words, he does not give any reason as to either why (11bii) does not apply when the embedded Infl of the PC construction is functional (=11aii), nor why (11ai) does not apply even when the embedded predicate of the M-verb construction is not a Case assigner (=11bi).

The second question relates to J-S. Lee's claim that the bi-morphemic complementizer *-ta-ko* of the M-verb construction lexicalizes Infl, whereas

the mono-morphemic *-key* of the PC construction does not, which is formalized into the subcondition (11a). Contrary to J-S. Lee's claim, however, H-B. Im (1978) and T-R. Suh (1988) claim that *-key* is not mono-morphemic but bi-morphemic, with *-key* analyzed as 'Nonperceptive' *-ke-* plus 'Stative Substantive' *-y*.

In addition to these problems, one empirical problem concerns the following case, which J-S. Lee left unexplained:⁴

- (12) John-un [Mary-ka \ ??lul piano -lul acwu cal chi
 -Top -Nom\ ??Acc piano -Acc very well play
 -ntako mit -nunta
 -Decl believe-Decl
 'John believes Mary plays/to play piano very well.'

In his system, the embedded subject of (12) cannot be Accusative Case-marked, since the embedded clause contains a Case assigning verb. We attribute the grammaticality of (12) to the fact that, even though the embedded verb is nonstative, it refers to a not particular but generic or habitual situation about the embedded subject with the help of the adverb *acwu cal* 'very well.' Below we will investigate why (12) with the Accusative embedded subject is not ruled out, differently from sentences like (9b) which contain a nonstative verb with nongeneric or nonhabitual interpretation.

2. Propositional and Action

2.1. Some Distinct Properties of Proposition and Action

In this subsection, we motivate the distinction between the complement clause of M-verbs and that of PC verbs on the basis of temporal restriction and logical relation between the matrix and the complement clause. We assume that M-verbs take as its clausal argument Proposition, and that the PC verb Action.

M-verbs express a human subject's judgment concerning the situation denoted by the Propositional complement clause. The causative predicate *ha-* 'make,' on the other hand, describes a human or non-human subject's caus-

⁴ The judgement of (12), when the embedded subject is Accusative, is J-S. Lee's. We differ from him in claiming that (12) with the Accusative embedded subject is almost perfect.

al relationship to the occurrence of the situation denoted by the Action complement clause. Important differences between the two types of predicates are as follows. First, in the M-verb construction of (13a), the main and the Propositional complement clause contain temporally independent situations. In the PC construction of (13b), on the other hand, the main and the Action complement are temporally associated:

- (13) a. John-un Mary-ka (ecey) mikwuk-ulo ttena-(ass)
 -Top -Nom yesterday America-for leave-Perf
 -tako mit -nunta
 -Comp believe-Decl
 ‘John believes that Mary leaves/left for America.’
- b. John-un Mary-ka (*ecey) mikwuk-ulo ttena-(*ess)
 -Top -Nom yesterday America-for leave-Perf
 -key ha-nta
 -Comp do-Decl
 ‘John causes Mary to leave/* have left for America yesterday.’

(13a) and (13b) constitute a minimal pair in the sense that the matrix verb of (13a) is *mit*-‘believe,’ whereas that of (13b) is *ha*-‘make’. It is to be noted that in the M-verb construction of (13a), the embedded situation time may precede, coincide with, or follow the matrix situation time. No temporal restriction thus applies to the occurrence of time-denoting inflectional elements within the Propositional complement. In the PC construction of (13b), on the other hand, the matrix situation time always precedes the embedded situation time. Hence a strict sequence of tenses is required, and the perfective aspect marker *-ess-*, which renders the embedded situation time prior to the matrix situation, cannot appear within the Action complement.

Second, the two constructions at issue differ substantially in the logical relationship between the matrix and the complement clause. It has long been noted that the Propositional complement of M-verbs (excluding factive verbs) has a truth value which is determined independently of that of the matrix clause. Hence the truth value of the Propositional complement can be asserted or denied independently of that of the matrix clause. In contrast, the Action complement of the causative verb has an entailment relationship to the matrix clause. The truth value of the Action complement thus cannot be determined

independently of that of the matrix clause (cf. Higginbotham (1983)). For instance, in the PC construction of English, if 'John made Mary happy,' the statement of the embedded small clause 'Mary happy' cannot be assigned a true or false value independently of that of the matrix clause.

The PC constructions in Korean, however, exhibits different properties from its counterpart construction in English, where the causee NP is only Accusative. In the former language, there are three types of PCs, depending on Case-marking of causee NPs: they can be Nominative, Accusative, or Dative. Among three causatives, Accusative causatives differ from Nominative or Dative causatives in the logical relationship between the matrix and the Action complement, as claimed by Y-S. Kang (1984). In Accusative causatives the causative verb provides an entailment relationship for its Action complement. In Nominative or Dative causatives, however, it does not. Note the contrast between (14a) and (14b):⁵

- (14) a. #John-un Mary-lul ttena-key ha-yess -ciman kunye
 -Top -Acc leave-Comp do-Perf -but she
 -nun ttena-ci anh -ass -ta
 -Top leave do not-Perf-Decl
 # 'John made Mary leave, but she didn't leave.'
- b. John-un Mary-ka /eykey ttena-key ha-yess-ciman kunye
 -Nom/Dat
 -nun ka-ci anh-ass-ta
 'John did something in order Mary to leave, but she didn't.'

In Accusative causatives of (14a), the statement of the Action complement cannot be denied independently of the matrix clause. In Nominative or Dative causatives of (14b), however, it can be.

2.2. The Temporal Argument and the Syntax of Proposition and Action

We suggest that the Propositional and the Action argument should be differentiated by their syntactic requirements. To this end, we adopt Encç's (1985; 1991) and Higginbotham's (1985) theory of [T]ime-arguments for predicates.

⁵ The notion # in (14) indicates that the sentence with it is semantically ill-formed.

It is well known that a predicate is required to be within the scope of tense. Because a predicate denotes an event or state, it cannot be interpreted without being temporally specified. The requirement that a predicate must be linked with tense has been formalized by Enç (1985) and Higginbotham (1985), who suggest that every predicate has a [T]-argument in its theta-grid. The theta-grid of *manna*-‘meet,’ for instance, is represented as: *manna*-, +V, -N: [1, 2, t], where 1 = the thematic position associated with the subject, 2 = the thematic position associated with the object, and t = the time argument position. Higginbotham suggests that the [T]-position, which is represented in the syntax as the empty temporal NP within the projection of a verb (say, the Spec of VP or AP), is discharged or theta-bound⁶ by tense features, on a par with theta positions which are discharged by argument NPs in an X'-configuration. This has as a result that all predicates require tense features.

Under the theory of [T]-arguments for predicates, let us turn to the properties of the Proposition and the Action complement. As pointed out above, the Proposition complement of M-verbs has an independent truth value. We take this to imply that the embedded predicate's [T]-position of the *mit*-type verb construction is theta-bound by the embedded tense features. Since the temporal reference of a clause is the reference of the temporal argument within it, the latter contributes to determine the truth or falsity of (what is referred to by) the complement clause independent of that of the matrix clause.

In Accusative causatives, however, the Action complement of the PC verb *ha*- has a truth value depending on that of the matrix clause, whereas in Nominative or Dative causatives it has an independent truth value.⁷ We

⁶ The notions of theta-binding here and theta-identification or -merge below are adopted from Higginbotham (1985).

⁷ H-S. Lee (1985) claims that the case markings of the causee give the most crucial clues to the hierarchy of semantic binding of the embedded resulting event by the matrix causing event. Lee proposes the Case (case, in Lee's system) hierarchy Accusative > Dative > Nominative to express the degree of cohesiveness between the two clauses from highest to lowest. More specifically, the hierarchy expresses the semantic scale that the Accusative causatives manifest the strongest degree of semantic cohesion, the Dative a lesser degree, and the Nominative the least degree. If Lee's Case hierarchy is interpreted in terms of entailment relationship as argued in (14) of the text, the following obtains. Only Accusative causatives which are the highest in Lee's hierarchy of semantic binding provides entailment relationship between the matrix and the embedded clause, whereas Dative or Nominative causatives which are lower do not.

take this to imply that for Accusative causatives, the embedded predicate's [T]-position is theta-bound by the matrix tense features after theta-identification or -merge with the matrix causative verb's [T]-position, whereas for Nominative or Dative causatives, it is theta-bound by the embedded tense features on a par with that within the Proposition complement.

3. The Periphrastic Causative Construction

3.1. The Structure of The PC Construction

Before plunging into accounting for the stative/nonstative distinction of the PC construction, in this section we first argue, following Y-S. Kang (1984), that Dative causatives differ from Nominative and Accusative causatives in that the former take three arguments, whereas the latter take two arguments. That is, Dative causatives take as their internal arguments both an Action clause and a Goal NP, with the latter realized as a causee NP.

The fact that Dative causatives have an additional argument NP as well as a clausal Action argument is attested in the extraction of the complement clause excluding the causee NP. Consider (15):

- (15) a. John-un Mary-ka chayk-ul ilk -key ha-yess-ta
 -Top -Nom book -Acc read-Comp do-Perf-Decl
 'John made Mary read a book.'

- b. [_t, chayk-ul ilk-key]_i; John-un Mary-****ka**/***lul**_i t_i ha-yess-ta

In Nominative and Accusative causatives of (15), we cannot prepose the embedded clause excluding the Nominative or Accusative causee NP as in (15b). This is because the proposed embedded clause contains an unbound trace which is created after scrambling of the Nominative or Accusative causee NP. The unbound trace is illicit due to the proper binding condition (16):

- (16) A trace must be properly bound (Fiengo (1978); Saito (1985))

In Dative causatives, however, the complement clause excluding the Dative causee NP can be preposed as follows:

- (17) a. John-un Mary-eykey chayk-ul ilk -key ha-yess-ta
 -Top -Dat book -Acc read-Comp do-Perf-Decl
 'John made mary read a book.'
 b. (?) [e chayk-ul ilk-key]; John-un Mary-eykey t, ha-yess-ta

The contrast between (15b) and (17b) strongly indicates that in the latter instance, the empty category within the embedded subject position is not a trace but a PRO. Put in another word, Dative causatives have control structure.

Further evidence which distinguishes Nominative and Accusative causatives from Dative causatives comes from a test that employs a negative polarity item (NPI). H-S. Choe (1988) claims that an NPI in Korean must be clausemate with the negative marker *an(i)*. With this in mind, note the contrast between (18a) and (18b):⁸

- (18) a. John-un aitul -i /-ul amwu-to Mary-lul ttalici ani
 -Top children-Nom/-Acc anybody -Acc hit not
 -ha-key ha-yess-ta
 -do-Comp do-Perf-Decl
 'John did not make any of the children hit Mary.'
 b. ?*John-un amwu -eykey-to Mary-lul ttalici ani-ha
 anybody -Dat
 -key ha-yess-ta
 'John did not make anybody hit mary.'

In (18a-b), NPIs are realized as causee NPs. If causee NPs in the three types of causatives in Korean were in the same position, the contrast between (18a) and (18b) would be inexplicable. Suppose, however, that in (18a), the NPI linked with the Nominative or Accusative causee NP appears within the complement clause with the negative marker, whereas, in (18b), the Dative NPI is generated as part of the matrix clause. (18b), then, is ruled out due to a violation of the clausemate requirement for NPIs. In sum, it has been shown that in Dative causatives, *ha-* selects both a clausal Action argument and a Goal argument which is realized as a Dative causee NP. In Nominative or Accusative causatives, however, *ha-* selects only a clausal Action argument which contains a causee NP.

⁸ The ungrammaticality of (18b) is originally reported by K-W. Sohn (1992).

Let us now turn to the distinction between Nominative and Accusative causatives. One controversy surrounding Nominative causatives is how Nominative Case is assigned to causee NPs. H-S. Choe (1988) claims that Nominative Case is assigned to them by [+Agr], while Y-S. Kang (1986) claims that it is assigned to them by default. Departing from the previous authors, we argue that [+tense] features, which are provided by the nonovert present tense marker (\emptyset), are responsible for Nominative Case-marking. Consider the following cases:

- (19) a. John-un [Mary-ka ttena- \emptyset -Key] ha-yess -ta
 -Top -Nom leave-Pres-Comp do-Perf-Decl
 ‘John made Mary leave.’
 b. John-un [Mary-lul ttena-key] ha-yess-ta
 -Acc

The difference between (19a) and (19b) in Case-marking of causee NPs, we claim, stems from the presence or absence of [+tense] features within the complement clause. If they are present, they assign Nominative Case to the causee NP. If they are absent, however, the matrix causative verb governs into and assigns Accusative Case to the causee NP.⁹ It is shown in the following that the stative/nonstative distinction in both the PC and the M-verb construction in turn renders compelling evidence that in Korean, [+tense] features are indeed a source of Nominative Case.

3.2. An Analysis of the Stative vs. Nonstative Distinction in the PC Construction

We now come back to the stative vs. nonstative distinction of embedded predicates in the PC construction, which influences Case-marking of the

⁹ Simply assuming the LGB theory of exceptionally Accusative Case marking of the embedded subject by the matrix verb, the paper does not attempt to address the following much important questions which arise regarding the Accusative Case marking of the embedded subject in Korean: (i) whether the embedded subject is Accusative Case marked within the embedded clause or after raising to the matrix clause, (ii) whether its Accusative Case-marking is made in government or Spec-head relation, and (iii) whether the topic or focus reading claimed to be associated with the Accusative Case-marked embedded subject is determined positionally or in other ways. See E-Y. Cho and M-K. Park (in progress) for discussions bearing on these questions.

causee NP. Note first that when the Action complement contains a stative predicate, the causee NP of (20) can be Accusative but neither Nominative nor Dative:

- (20) John-un Mary-?*ka /lul /*eykey yeppu-key ha-yess-ta
 -Top -?*Nom/Acc/*Dat pretty-Comp do-Perf-Decl
 'John made Mary pretty.'

Given the considerations in the previous section, we present the LF representations of the three causatives of (20) as in (21). To be more specific about them, we postulate that [+tense] features which are provided by the nonovert present tense marker (\emptyset) are present within the complement clause of Nominative causatives, whereas these features are absent within that of Accusative causatives. Dative causatives, on the other hand, have the Dative causee NP generated as part of the matrix clause. That is, the complement clause of Dative causatives has control structure. Following Martin (1992), we assume that the control structure contains [+tense] features, which are responsible for null Case of PRO (cf. Chomsky and Lasnik (1994)):

- (21) a. ?*John-un [_{CP} [_{IP} Mary-i [_{AP} [T] yeppu-] [+ tense = \emptyset]] key]
 ha-yess-ta (Nominative Causative)
 ↑
 b. *John-un Mary-eykey [_{CP} [_{IP} PRO [_{AP} [T] yeppu-] [+ tense = \emptyset]] key]
 ha-yess-ta (Dative Causative)
 ↑
 c. John-un [_{CP} [_{IP} Mary-lul [_{AP} [T] yeppu-] [- tense]] key]
 ha-yess-ta (Accusative Causative)
 ↑ *

Let us first consider the complement clause of Nominative and Dative causatives of (21a-b), where it contains the stative predicate *yeppu*-‘pretty.’ Since [+tense] features appear within the complement clause of these causatives, they theta-bind the [T]-position of the embedded stative predicate, as indicated by arrows. The complement clause of Nominative and Dative causatives in (21a-b) then comes out as a description of a stative situation rather than a description of a dynamic situation. The Action argument, however, is characterized as describing an ‘event, process, and hap-

pening' (cf. Higginbotham (1983); Vendler (1967)), which is the property of a dynamic situation. We then attribute the ill-formedness of (21a-b) to a violation of the s(ematic)-selectional requirement for the PC verb, which must take Action as its clausal argument.

What about Accusative causatives like (21c), where the embedded predicate is also stative? We argued that in Accusative causatives, the matrix causative verb provides an entailment relationship for its Action complement. We further maintained that Accusative causatives lack [+tense] features, which are responsible for Nominative Case, so that Exceptional Case Marking (ECM) obtains from the matrix causative verb. Since in the PC construction, the embedded predicate's [T]-position does not need to be discharged by tense features within the complement clause, in order to seek tense features, the stative predicate within the embedded clause of (21c) is 'restructured' with the matrix causative verb at LF to form a complex verb (cf. H-S. Choe (1988) for detailed arguments for restructuring in the PC construction). This complex verb formation and ensuing theta-identification of the [T]-position of the embedded predicate with that of the matrix causative verb makes it possible for the embedded stative predicate to change its character from being stative to being non-stative; just as a stative predicate undergoes type-changing in the complement of *become* or *make* in English. Hence the complement clause after the restructured embedded stative predicate's type-changing qualifies as an Action argument which the causative verb *ha*-*'make'* requires.

Let us turn to the PC construction of (22), which contains nonstative predicates within the Action complement:

(22) a. John-un Mary-ka /lul /eykey Bill-lul ttena-key ha-yess
 -Top -Nom/Acc/Dat -Acc leave-Comp do-Perf

-ta

-Decl

'John made Mary leave.'

b. John-un Mary-ka /lul /eykey Bill-ul manna-key ha -yess
 -Top -Nom/Acc/Dat -Acc meet -Comp do-Perf

-ta

-Decl

- b. ?*John-un amwu -eykey-to Mary-lul ttaylici anh-key ha
 anybody-Dat
 -yess-ta
 'John did not make anybody hit Mary'

It was claimed above that the ungrammaticality of (18b), where the causee NP is Dative, is due to a violation of the clausemate requirement for the NPI *amwu-eykey-to*. If there were complex verb formation in Dative causatives as in our analysis of Accusative causatives, however, this would incorrectly rule in (18b). This is because after complex verb formation of the embedded verbal compound *ttaylici aniha-key* with the matrix causative verb, the NPI and the negative marker would concur in the same clause.

Further compelling evidence is in order which shows that complex verb formation takes place in Accusative causatives, but not in Nominative causatives. This comes from backward anaphor binding in the PC construction:

- (24) a. *caki_i-uy coy -ka John_i-i kamok -ey ka-key ha
 self -Gen crime-Nom -Nom prison-to go -Comp do
 -yess-ta
 -Perf-Decl
 'His own crime made John go to prison.'
- b. caki_i-uy coy-ka John_i-ul kamok-ey ka-key ha-yess-ta

In (24a), where the causee NP is Nominative, backward anaphora binding does not obtain. When, however, the causee NP is Accusative in (24b), the anaphor within the subject takes as its antecedent the causee NP. In M-K Park (1992), we accounted for the contrast between (24a) and (24b) by arguing that in Accusative causatives the complex verb formation of the embedded predicate with the matrix causative verb makes it possible for the two predicates to form a combined thematic domain. Therefore, the anaphor within the matrix Theme subject NP can get as its antecedent the Patient causee NP (cf. Grimshaw (1990)).¹⁰ We argued, however, that in

¹⁰ Since the Dative causee NP is generated as part of the matrix clause, it belongs to the thematic domain of the matrix causative verb without complex verb formation as in Accusative causatives. Thus, it is predicted that in (i), the anaphor within the subject NP can take as its antecedent the Goal causee NP.

- (i) ?* caki_i-uy coy -ka John_i-eykey kamok-ey ka-key ha -yess -ta
 self -Gen crime-Nom -Dat prison -to go-Comp do-Perf-Decl

complement of M-verbs, which we discussed in section 2.1. There we suggested that the Propositional complement of M-verbs has a truth value independent of the matrix clause, which requires that the embedded predicate's [T]-position be discharged by the embedded tense features.¹¹ In this regard, two questions arise: what kind of tense elements can appear within the Propositional complement of M-verbs, and whether such elements are capable of discharging or theta-binding the [T]-position of the embedded predicate.

In Korean, the Propositional complement of *mit*-type verbs ends with the declarative marker *-ta* followed by the quotation marker *-ko*, both of which we have annotated as a Comp(lementizer). It is worth noting that, whenever the declarative marker occurs, Infl like elements of (*nu*)*n* or {*e*, *a*}*ss* precede it. We first investigate the grammatical status of these two elements.

A long-standing puzzle concerning the grammatical or categorial status of *-nun-* is why it can concur with a verb as in (27a), but not with an adjective as in (27b), provided that it is a present tense marker (See H-S. Lee (1991) and references therein):

- (27) a. John-i ttena -n-ta
 -Nom leave-?-Decl
 'John leaves.'
- b. John-i phikonha-(*nun)-ta
 -Nom tired - ? -Decl
 'John is tired.'

The adjective vs. verb distinction, which is taken to be aspectual, leads H-S. Lee (1991), among others, to claim that *-nun-* is an imperfective aspect marker.

There is, however, clear evidence that *-nun-* is neither a present tense marker nor an imperfective aspect marker. Let us look at (28):

- (28) Mary-nun soselchayk-ul po -ass /(*nun)-ciman, John-un si
 -Top novel-Acc read-Perf/? -but -Top poem
 -lul ilk -ess /-ta
 -Acc read -Perf/-Decl

¹¹ At this point, it suffices to assume this stipulation. Below, we derive this stipulation from a licensing requirement of the time argument of a predicate.

'Mary read/reads a novel, but John read/reads a poem.'

In (28), the subordinate clause ending with the connective *-ciman* 'but' is temporally independent of the main clause. That is, regardless of the matrix situation time, the situation time of the *-ciman* clause is determined by a time-denoting inflectional morpheme within it. Thus, when the clause contains the morpheme *-ess-*, the *-ciman* clause may describe the past or perfective situation. Note that *-nun-* cannot occur within the *-ciman* clause in (27), which implies that it does not occupy the same morpheme slot or template where *-ess-* can appear. Notice further that even without *-nun-* within the clause, the temporally independent *-ciman* clause expresses a present tense or present imperfective situation. This indicates that *-nun-* is neither a present tense marker nor an imperfective aspect marker. Rather, a present tense or imperfective aspect marker in Korean is the nonovert category (\emptyset), as we claimed in the discussion of the PC construction.¹²

Returning to the morpheme *-ess-*, controversies about its grammatical or categorial status stem from the fact that it covers a wide range of semantic space like simple past, resultant state, and completive or perfective, etc. Look at (29a-b):

- (29) a. John-un eyce chayk-ul ilk -ess -ta
 -Top yesterday book -Acc read-Perf-Decl
 'John read a book yesterday.'
- b. kicha-ka cikum tochakha-yess-ta
 -Nom now arrive -Perf-Decl
 'The train has arrived.'

As the simple past tense use of *-ess-*, (29a) simply describes a past situation. The example (29b) shows another function of *-ess-* —resultant state. It expresses the resultant state of the situation referred to by the verb. What the speaker is concerned with in (29b) is the current state of 'The train arrived at the station.'

The minimal pair in (30), on the other hand, clearly indicates that *-ess-* expresses perfective aspect (cf. K-S. Nam (1978)):

¹² We assume, following K-S. Nam (1978), that *-nun* is part of the declarative marker *-ta*. That is, *-nunta* is an unanalyzable morpheme.

- (30) a. John-i hakkyo-ye ka-taka tolao -ass -ta
 -Nom school -to go-Trans return-Perf-Decl
 'On his way to school, he came back.'
- b. John-i hakkyo-ey ka-ess -taka tolao -ass -ta
 -Nom school -to go-Perf-Trans return-Perf-Decl
 'John got to school and then came back.'

(30b) differs from (30a) in that it contains *-ess-* in the Trans(ferentive) *-taka* clause. The interpretational difference is that in (30b) with *-ess-* within the *-taka* clause, 'John actually got to school and then came back,' whereas in (30a) without *-ess-* within the same clause, 'John came back on his way to school.' *-ess-* in the *-taka* clause expresses perfective aspect rather than past tense. Hence the meaning of completion or perfectivity obtains.

We assume, with K-S. Nam (1978), that, among the three meanings associated with *-ess-*, the perfective aspectual meanings of *-ess-* is its basic one. We maintain that the other meanings of *-ess-* like past tense or perfect derive from the marked use of its basic perfective meaning. That is, as Frawley (1992) points out, the perfective is universally likely to occur in the past; it is conjectured that this is why *-ess-* is linked to past tense. Likewise, the perfect sense of *-ess-* is taken to be derived from its basic perfective meaning (cf. Smith (1991)). One hallmark of the perfect is that it presents a prior situation as related to the reference time. In other words, a perfect situation has a span beyond a perfective situation. Thus, on a perfect reading, the resultant state of affairs due to the perfective situation is emphasized.

Returning to (26a-b), which contains nonstative predicates, the ungrammaticality of the sentences is taken as implying that neither the declarative marker *-nunta* nor the perfective *-ess-* in the Propositional complement plays any role in discharging the embedded nonstative predicate's [T]-position. In other words, in the ECM context of the M-verb construction where tense features are absent, the embedded nonstative predicate's [T]-position ends up not being theta-bound. The ungrammaticality of (26a-b) is then due to a failure in satisfying the s-selectional requirement for the Propositional complement of *mit*-type verbs, which mandates that the embedded [T]-position be theta-bound by the embedded [+tense] features.

When, however, the subject NP within the Propositional complement is Nominative, the sentences corresponding to the ungrammatical sentences (26a-b) become grammatical as follows:

- (31) a. John-un [Mary-ka kongwon-eyse nol -{ess, nun}tako]
 -Top -Nom park -in play-Perf -Comp
 sayngkakha-yess-ta
 think -Perf-Decl
 ‘John believed Mary was playing/ had played in the park.’
- b. John-un [Mary-ka Bill-ul manna-{ess, nun}tako]
 -Top -Nom -Acc meet-Perf Comp
 sayngkakha-yess-ta
 think -Perf-Decl
 ‘John believed Mary was meeting /had met Bill.’

Hence there is a contrast in grammaticality between when the embedded subject is Nominative and when it is Accusative. This is due to the presence or absence of [+tense] features within the complement clause. That is, when its subject is Nominative, the complement clause contains the nonovert present tense marker (\emptyset) which provides [+tense] features, whereas when its subject is Accusative, the complement clause does not. In the first instance, the [+tense] features within the Propositional complement can discharge the embedded nonstative predicate's [T]-position. The complement clause then can qualify as a Propositional argument which *mit*-type verbs require. This accounts for the grammaticality of (31). In short, even though the embedded predicate of (31) apparently takes exactly the same form of inflection as that of (26), they differ crucially in that only the former is inflected with the nonovert present tense marker.

We now turn to (32a-b), which contain stative predicates within the Proposition complement.

- (32) a. John-un [Mary-ka /lul ttokttokha -(ess)-tako]
 -Top -Nom/Acc intelligent-Perf -Comp
 mit -ko iss -ta
 believe-be ing-Decl
 ‘John believes Mary is/was intelligent.’

- b. John-un [Mary-ka /lul yeppu -(ess)-tako]
 -Top -Nom/Acc pretty-Perf -Comp
 sayngkakha-yess-ta
 think -Perf-Decl
 'John believed Mary was/had been pretty.'

Unlike examples containing nonstative verbs, the embedded subjects in (32) can be Nominative or Accusative. The grammaticality of (32) when the embedded subjects are ECMed indicates that the stative predicate's [T]-position within the Propositional complement is somehow discharged, unlike that of a nonstative predicate. The stative vs. nonstative distinction for the possibility of ECM reminds us of the similar contrast for the possibility of present tense interpretation in English, which we get into directly.

Take a look at the following contrast:

- (33) a. John loves Mary.
 b. John loved Mary.
 (34) a. John kisses Mary.
 b. John kissed Mary.

In English, (33a-b) with stative predicates have present and past tense interpretation, respectively. As for (34a-b) with nonstative predicates, however, past tense interpretation obtains for (34b), but present tense interpretation does not for (34a) (cf. Jackendoff (1972)).¹³ Noting the stative/non-stative distinction for present tense interpretation, Enç (1991) claims that unlike the past tense system, in English there is no present tense morpheme but only present agreement morphemes. Maintaining that the [T]-position of a nonstative predicate must be theta-bound by [+tense] features, Enç argues that present agreement in English is not able to theta-bind the position, hence a lack of present tense interpretation for (34a). Enç claims, however, that the temporal reference indicated by the [T]-argument of the stative predicate in (34a), which occurs with no present tense, is evaluated at the time of utterance, without being theta-bound by [+tense] features.

Another aspect of contrast holding between stative and nonstative predi-

¹³ Unlike in English, in Korean as well as German (Campbell (1991)) simple present interpretation obtains with nonstative verbs. For Korean, this is possible due to the available nonovert present tense marker (\emptyset).

cates comes from their different relation to adverbs. Let us look at the following:

(35) John baked a cake yesterday.

In (35) with the nonstative predicate *bake*, the relevant event of John's baking a cake is in the past and included in yesterday, and does not extend into the present or the future. That is, the situation time referred to by the nonstative verb can be properly included in yesterday, therefore the adverbs does not always delimit the situation time of the nonstative predicate, but the past tense marker which denotes a past interval does. Enç (1985) suggests that the [T]-position of a nonstative verb supplies the situation time, and that is a temporal anaphor which is bound by a tense marker.

In contrast to nonstative predicates, stative predicates display different behavior:

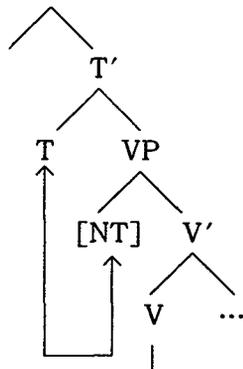
(36) John was in London yesterday.

For example, (36) can be true if John was in London for a week which includes yesterday. On such a reading, the adverb clearly does not delimit the state time. It seems that the state time is not delimited by a past tense morpheme which denotes a past interval, either. (36) can be true if John's stay in London extends through a past interval (denoted by a past tense marker) to the present and the future. Thus, neither an adverb nor a tense marker delimits the state time.

Maintaining that the state time is given by the [T]-position of a stative predicate, Enç claims that the [T]-position does not have to be bound by a tense marker and therefore cannot be anaphoric. Rather, the [T]-argument of the stative predicate itself must introduce a new interval. Enç captures this by stipulating that [T]-arguments of stative predicates are temporal indefinite R-expressions, which are bound neither by a tense marker nor by an adverb, but which denote an independent interval.

Developing Enç's proposal, we sketch a licensing relation of the [T]-positions of stative and nonstative verbs under a more recent framework. First, we suggest that the close or anaphoric relation between the [T]-position of a nonstative predicate and a tense marker is a sort of polarity relation, as represented in (37):

(37) a. TP



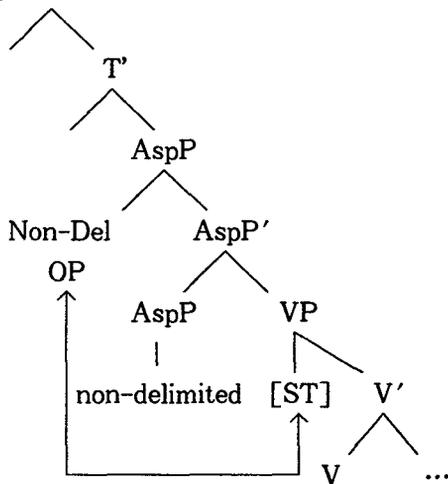
NT=the time argument of
a nonstative verb

a polarity relation (a nonstative verb)

Capitalizing on the parallelism with a negative polarity item which requires a negative element c-commanding it, we propose that the [T]-position of a nonstative predicate is a temporal polarity item which must be bound by a clausemate tense marker.

In contrast to a nonstative verb, we note that a stative predicate is not temporally delimited or bounded either by a tense element nor by an adverb. We suggest that the stative vs. nonstative distinction of predicates is aspectual. Postulating that there is a projection of Aspect (AspP) above VP, we propose that in the Spec of AspP resides a temporal non-delimiter operator (Non-Del OP), which is similar to a temporally universal quantifier as follows:

(38) TP



ST=the time argument of
a stative predicate

a polarity relation (a stative verb)

The fact that a stative predicate is not temporally delimited or bounded, in our analysis, is then not a semantic effect but a structural effect. The [T]-position of a stative predicate as a non-delimiter polarity item must be bound by a temporal Non-Del Operator.¹⁴

The stative/nonstative predicate effects within the Propositional complement when the embedded subject is Accusative Case-marked then follows from the different licensing requirement for a stative and nonstative predicate's [T]-position. In the case of nonstative verbs, their [T]-position must be bound by a clausemate tense marker. Since a tense marker, i.e. the overt present tense marker is absent within the ECMed Propositional complement, the [T]-position is not appropriately licensed, just like an NPI without a clausemate negative marker. When, however, the embedded subject is Nominative and the embedded clause contains the nonovert present tense marker, the [T]-position of a nonstative verb within the Propositional complement is licensed by the tense marker.

In contrast to nonstative verbs, stative predicates do not need a tense marker to theta-bind their [T]-position since it is theta-bound by a 'local' non-delimiter operator. Thus, whether or not a stative predicate appears in an ECM context with a tense marker, its [T]-position is licensed appropriately.

We turn now to two cases where, though Propositional complements contain nonstative predicates, their subjects are ECMed. One such instance is where the embedded predicates are interpreted as having generic or habitual interpretation as in (39), as noted by S-J. Park (1985):

- (39) a. John-un [Mary-ka/?lul kongwon-eyse nol -ess/nun-tako]
 -Top -Nom/Acc park -in play-Perf/? -Comp
 sayngkakha-yess-ta (habitual nol-)
 think -Perf-Decl
 'John believed Mary had played/was playing in the park.'
 b. John-un [Mary-ka/?lul Bill-ul manna-{ess, n}tako
 -Top -Nom/-Acc -Acc meet-Perf/ -Comp

¹⁴ See also M-K. Park (1991: 391) for a similar proposal that at LF, a stative predicate incorporates into the head of the non-delimiter phrase.

sayngkakha-yess-ta (habitual *manna-*)

think -Perf-Decl

'John believed mary had met/was meeting Bill.'

(40) a. sensayngnim-un [Mary-ka/(?)-lul cal tali -ntako] mit -
nunta

teacher -Top -Nom/Acc well run -Comp believe-
Decl

'The teacher believes Mary runs well.' (generic *tali-*)

b. Coach-nun [John-i/(?)-ul kong-ul cal tenci -ess -tako]

-Top -Nom/Acc ball -Acc well throw-Perf-Comp
sayngkakha-nta (generic *tenci-*)

think -Decl

'The coach believes John threw ball well.'

If the embedded predicates of (39) and (40) are interpreted as having a nonhabitual or nongeneric sense, ECM will not obtain. Only with a habitual or generic reading for the embedded nonstative predicates are the ECM clauses ruled in. In other words, when a nonstative verb receives habitual or generic interpretation, it behaves like a stative predicate in that it is allowed in an ECM context. This indicates that there must be another way of discharging a nonstative predicate's [T]-position.

The situation of (39) and (40) reminds us of the parallel fact that in English, when a nonstative verb appears without a present tense marker (Enç (1991)), the sentence (41) receives a 'present time' reading only with generic or habitual interpretation.

(41) Sally sings.

Futhermore, the 'present tense' interpretation obtains when temporal adverbs of quantification such as *often, seldom, never, always, etc.* appear as in (42);

(42) Mary often/seldom/never/always talks to me.

Given the parallelism between (41) and (42), it is tempting to say that the [T]-position of nonstative verb in (42) is licensed by adverbs of quantification, whereas that in (41) is licensed by the nonovert habitual (HAB) or

generic (GEN) quantifier (Enç (1991)).¹⁵ This is illustrated in (43), where the null GEN/HAB operator is adjoined to TP, and binds a variable in the temporal argument position:

(43) [_{TP} HAB/GEN_i [_{TP} Mary [_{VP} [_T]_i sings]]]



Along the same lines of the proposal that when a tense marker is absent, overt adverbs of quantification or the covert HAB or GEN operator licenses the [T]-position of a nonstative verb, we suggest that when the ECM clauses obtain for (39) and (40), the nonovert habitual or generic operator (HAB OR GEN) theta-binds the embedded nonstative predicates's [T]-position. The LF structure of, for instance, (40a), is represented in (44):

(44) sensayngnim-un [_{TP} GEN/HAB [_{TP} Mary-ka/(?)lul [_{VP} cal [_{VP} [_T]
[_v tali-n-tako]]]]] mit-nun-ta



In (44), when the embedded nonstative predicate is read as habitual or generic, its [T]-position is bound by the nonovert GEN/HAB operator. Thus, the inability of the embedded nonstative predicate's [T]-position in (44) being bound by [+tense] features does not lead to ungrammaticality for the ECM context. The HAB or GEN operator's theta-binding instead steps in to take the place of tense-binding by tense features.

The second instance is where the perfective aspect marker *-ess-* with a nonstative predicate is interpreted as having a perfect sense — resultant state, as first noted by K-S. Nam (1973). Consider (45-46):

(45) a. emma-nun [ku sayngsen-i /**ul ssek -nuntako]
Mother-Top the fish -Nom/Acc get rotten-Comp
sayngkakha-yess-ta
think -Perf-Decl
'Mother thought that the fish got rotten.'

¹⁵ Nonstative predicates with generic or habitual interpretation are parallel to stative predicates. Just as the [T] argument of a nonstative verb with generic or habitual interpretation is bound by the covert HAB or GEN operator, the [T] argument of a stative predicate is bound by the covert non-delimiter operator, which, as pointed out, is similar to a temporal universal quantifier.

b. emma -nun [ku sayngsen-i/ul ssek -ess -tako]
 Mother-Top the fish -Nom/Acc get rotten-Perf-Comp
 sayngkakha-yess-ta
 think -Perf-Decl
 'Mother thought that the fish was rotten.'

(46) a. na-nun [John-i/?*lul caki apeci-lul talm -nuntako]
 I -Top John -Nom/Acc his father-Acc resemble-Comp
 mit -ess -ta
 believe-Perf-Decl
 'I believed that John was resembling his father.'

b. na-nun [John-i /-lul caki apeci-lul talm -ass -tako]
 I -Top John-Nom/ Acc his father-Acc resemble-Perf-Comp
 mit -ess -ta
 believe-Perf-Decl
 'I believed that John resembled his father.'

In (45a) and (46a), when the embedded nonstative predicate does not occur with the perfective aspect marker, ECM does not obtain. In (45b) and (46b), however, when it appears with the perfective aspect marker which is construed as having a perfect situation, ECM in fact obtains. Considering this fact, we suggest that when it has a perfect sense, *-ess-* has an effect of 'type-changing' a nonstative predicate from being nonstative to being stative, as evidenced cross-linguistically (cf. Smith (1991)).¹⁶

¹⁶ A similar situation as in Korean obtains as well in Chinese, which uses distinct aspect markers for perfective and perfect interpretation. According to Smith (1991), to express a perfective situation, the language uses the morpheme *-le* in (ia), whereas to express a perfect situation, it uses *-guo* as in (ib). What is relevant to our discussion is that (ia) with the perfective marker presents a *nonstative* situation, whereas (ib) presents a *stative* situation:

- (i) a. Wo shaiduan-le tui
 I break -Perfective leg
 'I have broken my leg.'
 b. Wo shaiduan-guo tui
 I break -Perfect leg
 'I have broken my leg.' (taken from Smith (1991))

To compare the perfective system in Chinese with that in Korean, it can be maintained that the past tense or perfective sense of *-ess-* in Korean is taken to be parallel to *-le* in (ia), and the perfective reading of *-ess-* is to *-guo*.

Nonstative predicates with perfect *-ess-* thus do not need [+tense] features to theta-bind their [T]-positions, like stative predicates.

In this connection, it seems that the perfect meaning of *-ess-* in Korean is parallel to the perfect form *have + past participle* in English in (47):

- (47) a. *John believes his father to grow old.
 (nonhabitual or nongeneric 'grow')
 b. John believes his father to have grown old.

In contrast to the Korean perfect system employing the morpheme *-ess-*, the perfect construction in English uses the periphrastic form, i.e. the stative predicate *have* followed by the past participle. The stative predicate *have* does not need [+tense] features to discharge its [T]-position, which accounts for the grammaticality of (47b) in contrast to the ungrammaticality of (47a).

4.2. Modification of Nominative Case Marking

We have argued that [+tense] features which are provided by the covert present tense marker are responsible for Nominative Case-Marking in Korean. But a recalcitrant problem is raised by the so-called multiple Nominative construction when it appears within an ECM context as in (48-49). The crucial aspect of (48-49) is that when the multiple Nominative construction appears within the ECM context, the second NP cannot be Accusative Case-marked, but it has to be Nominative Case-marked, as noted by S-J. Park (1985):

- (48) a. John-un [Mary-ka apeci -ka pwuca-lako]
 -Top -Nom father-Nom rich -Comp
 sayngkakha-nta
 think -Decl
 'John thinks Mary's father is rich.'
- b. John-un [Mary-lul apeci-ka pwuca-lako] sayngkakha-nta
 c. ?*John-un [Mary-lul apeci-lul pwuca-lako] sayngkakha-nta
 d. *John-un [Mary-ka apeci-lul pwuca-lako] sayngkakha-nta
- (49) a. John-un Mary-ka son -i khu-tako sayngkakha-nta
 -Top -Nom hand-Nom big -Comp think -Decl
 'John thinks that Mary's hand is big.'

- b. John-un Mary-lul son-i khu-tako sayngkakha-nta
- c. ?*John-un Mary-lul son-ul khu-tako sayngkakha-nta
- d. *John-un Mary-ka son-ul khu-tako sayngkakha-nta

The remarkable fact of (48-49) is the contrast between the (b)-examples and the (c)-examples. The first NP can be ECMed, whereas the second NP cannot be as in the (c)-examples. Rather, it has to be Nominative Case-marked as in the (b)-examples.

To account for this array of Case facts, we first depart from the more general assumption that the multiple Nominative construction involves multiply IP-adjoined structure (cf. Y-J. Yim (1985)). We rather assume with S-H. Ahn (1990) that they involve multiply VP or AP adjoined structure. One advantage of this assumption comes from the fact that the first NP and the second NP get different interpretation (Kuno (1973); Diesing (1988)). Look at (50):

- (50) John-i ip -i khu-ta
 -Nom mouth-Nom big -Decl
 'John is big in his mouth.'

In (50), the first NP gets what Kuno calls 'the exhaustive-listing interpretation,' and the second NP 'the neutral-description interpretation.' Diesing (1988) (for Japanese) and K-S. Kim (1989) (for Korean) argue that the exhaustive-listing interpretation arises when a Nominative Case-marked NP appears in Spec of IP, whereas the neutral-description interpretation arises when it is in Spec of VP. If this is correct, for the structure of (50), (51b) is favored over (51a):

- (51) a. [_{IP} John-i [_{IP} ip-i kuh-ta]]
 b. [_{IP} John-i [_{VP} ip-i kuh-ta]]

A question then arises how the second NP in (51b) is Nominative Case-marked. Does Nominative Case of the second NP in VP- or AP-Spec stem from [+tense] features? Or is it assigned Nominative Case by default? If our discussion above as to the ECM construction is correct, it implies that the latter possibility is correct. To consider this issue carefully, let us again take a look at (48b) and (49b), which have the following LF representations, respectively. They are postulated on the basis of the hypothesis that

the multiple Nominative construction involves multiple VP or AP adjunctions:

- (52) John-un [_{CP} [_{IP} Mary-lul [_{AP} apeci-ka pwuca] [- tense]] -lako]
sayngkakha-nta
- (53) John-un [_{CP} [_{IP} Mary-lul [_{AP} son-i kuh] [- tense]] -tako]
sayngkakha-nta

Considering that the first NP is ECMed by the matrix verb, it is assumed that the [+tense] features are absent within the embedded clause of (52) and (53). This implies that the Nominative Case of the second NP in (52-53) stems from another source than [+tense] features. In this connection, we maintain that the second NP of (52-53) is Nominative marked by default (cf. M-Y. Kang (1988)).

Turning to the (c)-examples in (48-49), first consider their LF representations as in (54-55). Considering that the first NP can be ECMed, we assume that [+tense] features are absent within the embedded clauses of the (c)-examples in (48-49):

- (54) *John-un [_{CP} [_{IP} Mary-lul [_{AP} apeci-lul pwuca-] [-tense]]-lako]
sayngkakha-nta
- (55) *John-un [_{CP} [_{IP} Mary-lul [_{AP} son-ul kuh] [- tense]]-tako]
sayngkakha-nta

What is wrong with the structures in (54-55) is the Case-marking of the second NPs within the embedded clauses. If the matrix verb is able to assign Accusative Case to the second NP, it should govern through three maximal projections into it. It seems, however, that the embedded AP blocks the matrix verb from governing into the second NP.

5. Summary

Recapitulating our argument:

- ① The Case alternation for the embedded subjects of the M-verb and PC constructions which is affected by the stative vs. nonstative distinction stems from interaction between the two types of matrix verbs selecting thematically different clausal arguments and the different licensing requirements for stative and nonstative predicates.

- ② The PC verb *ha-* takes as its clausal complement the Action argument which describes a dynamic event, whereas M-verbs the Propositional argument which has a truth value determined independently of the matrix clause.
- ③ In the M-verb construction and the Nominative and Dative PCs, the time argument of the embedded predicate is theta-bound by the embedded [+tense] features. In the Accusative PCs, on the other hand, the time argument of the embedded predicate is theta-bound by the matrix [+tense] features after its theta-identification with that of the matrix causative verb.
- ④ The possibility of a stative predicate but the impossibility of a nonstative verb within the ECM context of the M-verb construction provides convincing evidence that only the time argument of the latter, but not that of the former, requires [+tense] features for binding of its time argument. The time argument of a stative verb, on the other hand, is theta-bound by a temporally-universal non-delimiter operator.
- ⑤ Our analysis of the stative vs. nonstative distinction in the two constructions at issue implies that in Korean, [+tense] features which are provided by the nonovert present tense marker (\emptyset) appear when their embedded subject is Nominative Case-marked, whereas they do not when it is Accusative Case-marked (cf. Martin (1992); Ormazabal (1994) for English).

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