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# Light Verb Constructions and Structural Ambiguity

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#### Abstract

Previous analyses of (Korean) Light Verb Constructions (LVCs) have failed to provide objective criteria for defining LVCs. The verb ha- is inconsistently regarded as a Light Verb (LV) or as a "heavy verb" depending on its environment. In the face of this problem, I argue, firstly, that all ha-sentences should be analyzed as LVCs when the potential Verbal Noun (VN) has at least one of the verbally case-marked phrases as its argument. Secondly, LVCs (neither LVs nor VNs) are classified into two groups based on their structural differences. Thirdly, LVC sentences in general are ambiguous between the structures of these two groups. Many sentences, however, are disambiguated because the VN in each structure has its own special properties. In this approach, the differences of the behavior of the VN in (LVC) ha-sentences are attributed to their structural differences rather than to "spuriously" multiplied lexical items.

## I. Introduction

Since Cattell (1984) and Grimshaw & Mester (1988), much attention has been paid to Light Verb Constructions (LVCs), especially those in Japanese and Korean (H-S Han 1988, Miyagawa 1989, H-D Ahn 1991, K Park 1992, etc.). These analyses, however, have failed to provide objective criteria for defining LVCs (and hence "thematically incomplete" Light Verbs (LVs) and accompanying Verbal Nouns (VNs)). In Korean, for example, the verb ha- 'to do' and the noun preceding it are inconsistently analyzed as a LV and a VN, respectively, or as a "heavy verb" and a regular noun, respectively, depending on their environment. In general, sentences containing them are treated as LVCs only when the noun is not modified or "moved/extracted", which does not fit with native speakers' intuition.

### II. Previous Analyses: Multiple Lexical Items

Everyone agrees that sentence (1a) represents a LVC, which has an object NP Bill-il explicitly as well as a VN phrase SOKAE(-lil):

- (1) a. John-i Mary-hanthe Bill-i1 [SOKAE (-1i1)] ha-yass-ta.
  Nom to Acc introduction Acc do Past Decl
  'John introduced Bill to Mary.'
  - b. \*John-i Mary-hanthe Bill-il [caemi iss-nin SOKAE(-lil)] ha-yəss-ta.

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c. \*[SOKAE-1i1] John-i Mary-hanthe Bill-il ha-yass-ta.

One of the most significant characteristics of sentence (a) is that its VN phrase cannot be modified by prenominals or moved as is shown in (b-c).

There is considerable controversy, however, over the status of the following sentences, where an object NP like *Bill-il* does not appear (explicitly) as a verbally case-marked element.

- (2) a. John-i Mary-hanthe SOKAE (-1il) ha-yass-ta. Nom to introduction Acc do Past Decl 'John introduced (someone) to Mary.'
  - b. i) John-i Mary-hanthe [Bill-ii SOKAE(-lil)] ha-yəss-ta.

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- ii) John-i Mary-hanthe [caemi iss-nin SOKAE(-1i1)] ha-yəss-ta.
- c. [(caemi iss-nin) SOKAE-lil] John-i Mary-hanthe ha-yass-ta.

According to H-D Ahn (1991), sentence (a) is always treated as a LVC if the potential VN (i.e. *SOKAE* here) occurs without the Acc marker *-lil*. If the noun occurs with this marker, it is a LVC sentence only when the noun is not modified or moved. K Park (1992) argues that it should be analyzed as a LVC when the noun is not modified or moved, regardless of whether the noun bears the Acc marker or not. S-W Kim (1994) implies that it is not a LVC sentence because "true VNs" cannot be moved or focused. According to M-K Kim's (1994: 108) analysis, it is a "heavy verb" construction "in case there is no deleted object, while it is a LVC if there is a deleted object."

Most scholars argue that the sentences in (2b-c) are not LVC sentences but heavy verb sentences (except M-K Kim (1994) and a few others). That is, the ha- here is not regarded as a LV but analyzed as a heavy verb. In these sentences, one or more of the arguments of the potential VN are case-marked nominally (b-i), the VN is modified (b-ii), or the VN is moved/focused (c).

One problem of these analyses is that the noun SOKAE and the verb hashould each be treated as two different kinds of lexical items in (1-2): as a VN and a LV in (1a), but as a regular noun and a heavy verb in (2b-c). First of all, it is not convincing at all to argue that two different kinds of SOKAE are involved in these sentences. No lay native speakers of Korean would agree with the idea that the SOKAE in (1a) and that in (2b-c) are different lexical items. Only those syntacticians who put too much emphasis on the behavioral differences of the potential VN want to posit two different lexical items. It is more awkward if we have to assume that the two SOKAE's are not the same lexical item in (1a) and (2a). Considering that even arguments can naturally be deleted in Korean depending on the context, the mere presence or absence of the object NP *Bill-il* is not likely to trigger the change of the construction so significantly.

In addition, under previous approaches, we are forced to say that phrases containing VNs cannot be modified or moved (by their own nature of being VNs) and that the "regular nouns under consideration" should always be modified or moved. It would be simply impossible to show that none of these regular nouns can occur without being modified or moved. No other subclasses of the noun (or no other classes) seem to be restricted this manner in their distribution.

A more serious problem is that the verb ha- in (2a-c) is still thematically incomplete in that the verbally case-marked Mary-hanthe is an argument of SOKAE rather than that of ha-, just as in (1a). If we want to maintain that some or all of the sentences in (2) are not LVC sentences, we must assume that Mary-hanthe is an argument of ha- rather than that of SOKAE. Then. we have to posit numerous different kinds of heavy ha- because we need as many types of it as there are different subcategorization frames of the VNs, which are defined on the basis of the number and type of the arguments that Now we will have the same number of different ha-'s as VNs can take. There will be no advantage of when we do not posit any LVs at all. introducing the concept of LVs. Originally we came to posit the dummy LV ha- because the arguments of the sentence concerned is determined not by the verb but by another element in the sentence (i.e. the VN), which made it possible to assume just one verb, the LV ha-.

# III. A New Analysis: Structural Ambiguity

On the face of the above-mentioned and other related problems, I argue that all ha-sentences should be analyzed as LVCs when the potential VN has at least one of the verbally case-marked phrases as its argument (i.e., at least one (NP-)external argument). From this point of view, all the sentences in (1-2) are treated as LVCs because all the sentences have the external argument *Mary-hanthe* as well as their subjects. This new analysis comprises some other major contentions. LVCs (neither LVs nor VNs) are classified into two groups based on their structures (see (8) below) and LVC sentences in general are ambiguous between these two structures.

Before we consider these major contentions, we will examine a set of properties which characterize LVC sentences. Firstly, the VN should have at least one verbally case-marked argument. That is, at least one argument should be realized outside of the VN phrase. Secondly, although the sentential arguments are subcategorized by the VN, the VN itself is subcategorized by the LV ha-. Let us examine the following sentences:

(3) a. suhak-il KONGPU ha-n-ta

mathematics study do Nonpast Decl '(Someone) studies mathematics.'

b. suhak-il KONGPU-lil ha-n-ta

Acc Acc

(4) a. sukak-il KONGPU cung

process '(in) the process of studying mathematics'

b. \*suhak-i1 KONGPU-1i1 cung

From the data in (3) we can see that the VN KONGPU can be optionally marked with the Acc marker when the LV ha- follows it. However, the VN cannot have the marker when the LV does not follow it as we can see in (4). This difference shows that the existence of the VN is dependent on the LV in (3) but on something else in (4).

Considering the data in (3-4) and that in (5), we can come up with the principle (6), which regulates the distribution of VNs which have external arguments:

- (5) a. hankuk-i yangtampae-lil SUIP-il KAEPANG(-il) ha-yess-ta. Korea Nom Western tobacco import open Acc Past Decl 'Korea opened the tobacco market for the imported tobaccos.'
  - b. hankuk-i yangtampae-1il SUIP-il KAEPANG hu, ...

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(6) VNs with external arguments should be licensed by an adjacent lexical item in the clause.

In sentence (3), the VN is licensed by the LV ha- because this verb subcategorizes the VN. For such non-LVC examples as (4a) and (5b), we assume that the unit of the VN plus the noun following it is a compound noun. Under this assumption, the VN is licensed by its neighboring element in the compound (or vice versa). Compounds would not be composable if their elements are not compatible with each other. In the sentences of (5), the VN *SUIP* is not licensed by the LV even though it has an external argument. Here the VN is licensed by another VN *KAEPANG* because this VN subcategorizes the former VN. In all these cases, each VN is licensed by an adjacent lexical item in the clause.

In view of such data as in (4a) and (5), we must assume that the VN is responsible not only for the thematics (and subcategorization) but also for the (indirect) case-marking of its dependents (contra J Yoon (1991) and others). The VN KONGPU and KAEPANG in (4a) and (5b), respectively, are not associated with the LV ha- but with a subclass of nouns. The VN SUIP in (5) is not associated with the LV ha-, either. Hence, we cannot rely on the LV ha- even indirectly in accounting for the (thematics/subcategorization and) case-marking in these sentences. We have to rely on the VN directly.

The last characteristic of LVCs to be considered here is that the VN phrase is a non-saturated NP. This non-saturatedness requirement comes from the fact that the VN has its arguments outside of the VN phrase.

(7) a. [Mary-eke] [yəlsimhi kongpu-ha-lako] [komaun CHUNGKO-lil] ha-yəss-ta. to hard study Quot thankful advice

'(Someone) gave Mary a thankful advice that she should study hard.'

b. \* ... [yəlsimhi kongpu-ha-lako] [palo kɨ CHUNGKO-lɨl] ha-yəss-ta.

just that

The grammaticality difference here is due to the status difference of the NP containing the VN: it is non-saturated in (a) but it is saturated in (b). In general demonstratives have the function of closing NPs (i.e., making them saturated).

Turning to the major contentions in this paper, we are assuming that LVCs (neither LVs nor VNs) are classified into two groups based on their structures:  $v_{P}[..., v'[VNP + LV]v']v_{P}$  (S1) and  $v_{P}[..., VNP, LV]v_{P}$  (S2):

(8) Mary-ka KONGPU-1i1 ha-yass-ta. Nom study Acc do Past Decl



There does not seem to be significant meaning differences between the two groups of LVCs. Syntactically, however, there are noticeable differences between them. First of all, the position of the VN phrase (VNP) is different in the structures of the two constructions. The VN phrase is in a position which renders it "special" in the former structure (S1) while it is not in the latter structure (S2). It has more verbal properties and (hence) more deeply embedded in S1 than in S2. Because of these characteristics the VN phrase in S1 cannot be modified or moved. Notice that the VN (and ha-) is the same in the two structures regardless of the differences of its syntactic behavior, which will be considered shortly.

Our last main point for a new analysis is that LVC sentences in general

are ambiguous between S1 and S2. For example, sentence (2a) and (8) are ambiguous (between the senses of 'introduced'/'studied' and 'made an introduction'/'did studying') because the VN phrase can occur either within or outside the V' phrase. The sentence will have an S1 structure when this NP occurs within the V' phrase and it will have an S2 structure when the NP occurs outside of the phrase.

However, many of the LVC sentences become disambiguated because of the specific properties of the VN phrase in each structure. Some of them have only the S1 structure. As we can see from the data in (1b-c), the VN phrase in (1a) cannot be modified or moved. Notice that there is another Acc-marked NP outside the V' phrase. We can easily account for the disambiguation here if we assume that there can be only one Acc-marked phrase on the same level of the tree structure. Under this assumption the VN phrase can only occur within the V' phrase because the position for an Acc-marked NP outside of the V' phrase is taken by another phrase.

Another group of LVC sentences with only SI structure is "ergative" LVC sentences:

(9) a. pongkip-i INSANG(-i1) ha-yess-ta.

salary Nom raise do Past Decl 'The salary has been raised.'

b. ki hoisa -ka pongkip-il INSANG(-il) ha-yess-ta.

that company Nom Acc 'That company raised the salary.'

(10) a. \*pongkip-i [kin/amchangnan INSANG(-i1)] ha-yess-ta.

big huge

- b. **\***INSANG-**i**1 pongk**i**p-**i** ha-yess-ta.
- c. \*[pongkip-i ha-n] INSANG

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The data in (9) show that the VN *INSANG* makes sentence (a) an ergative sentence. The Nom-marked subject NP in (a) corresponds to the Acc-marked object NP in (b). From the data in (10) we can see that the VN phrase cannot be modified, scrambled or relativized, which is a characteristic of the S1 structure. As is widely assumed, the subject in an ergative sentence has an object-like property at least logically and/or semantically. Then, we may assume that sentence (9a) has two "objects-like entities", just like sentence (1a). For the moment, until we can implement this idea into a theoretical mechanism, we can assume that the subject NP of structure S2 must be [+Agent]. Note that ergative sentences such as (9a) do not have agent subjects.

Some other sentences have only the S2 structure. Firstly, in all the following examples, the VN is not in its "original position" (cf. (8)):

# (11) a. KONGPU-nin Mary-ka ha-yass-ta. (topicalization) study Top

- b. KONGPU-lil Mary-ka ha-yəss-ta. (scrambling)
- c. [Mary-ka ha-n] KONGPU (relativization)

We have seen that the VN can be moved only in the S2 structure. Therefore the above examples have nothing to do with the S1 structure. We can say that they are disambiguated by syntactic (movement) operations.

Another group of LVC sentences which have only the S2 structure is those containing adnominal modifiers. For example, the sentences in (2b) are disambiguated because only the S2 VN phrase can be modified (cf. (2b.ii)).

- (12) John-i Mary-hanthe [caemi iss-nin SOKAE(-1i1)] ha-yass-ta.
- (13) a.[caemi iss-nin SOKAE-lil] John-i Mary-hanthe ha-yass-ta.
  - b.[John-i Mary-hanthe ha-n] [caemi iss-nin SOKAE]

The data in (13) show that the modified VN phrase in (12) can be moved by syntactic operations.

Before we leave this section, let us see how we can analyze sentence (1a) under the present approach. Let us also compare the structure posited here with an alternative structure:

(14) John-i Mary-hanthe Bill-il [SOKAE (-lil)] ha-yəss-ta. Nom to Acc introduction Acc do Past Decl



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We analyze sentence (1a) as in (14a). The VN phrase can only occur under the V' node, which renders the sentence non-ambiguous (with the S1 structure).

Some people prefer such "left-branching" structures as in (14b) to the "right-branching" structure that we posited in (14a), on account of convenience in dealing with semantic facts. The left-branching structure, however, have difficulties in dealing with the following data, among others:

(15) a. [Bill-il] John-i Mary-hanthe e SOKAE(-lil) ha-yəss-ta.

b. John-i Mary-hanthe Bill-il [canghoang-ha-ke SOKAE(-lil)] ha-yəss-ta. verbosely

In sentence (a), the object *Bill-il* is extracted to the sentence-initial position. In (b) the adverb *canghoang-ha-ke* modifies the VN *SOKAE*. If we assume the structure in (14b), sentence (a) is predicted to be ungrammatical because it violates all sorts of restrictions regarding extraction (such as "A-over-A Constraint" and "Complex-NP Constraint"). As for sentence (b), there is no plausible way of analyzing the adverb occurring in between two nominal expressions.

Summarizing the discussions in this section, all the sentences in (1) and (2) are analyzed as LVC sentences. Among these sentences, sentence (2a) is ambiguous between the S1 and S2 structures. All the other sentences are disambiguated. Sentence (1a) has only the S1 structure because it has two Acc-marked objects. The sentences in (2b-c) have only the S2 structure because the VN phrase in S1 is in a position where movement or modification is not allowed.

### **IV.** Conclusion

In this paper, we have argued that all ha-sentences should be analyzed as LVCs when the potential VN has at least one of the verbally case-marked phrases as its argument, regardless of whether the VN phrase is modified or moved. Under this definition of LVCs, we have examined important properties/criteria which characterize LVC sentences. With some assumptions about the LVCs, we could account for all the relevant data in a way which conforms to the native speakers' intuition. Most of all, VNs and the LV ha-are analyzed uniformly, as single lexical items. The differences in their behavior in some related sentences are attributed to their structural differences. We need not have to multiply the number of lexical items "spuriously".

The contents of this paper are mainly from Chae (1996), which are written (unfortunately to some people) in Korean. For more detailed discussions of the issues dealt here and other related issues, you may consult this Korean article. In particular, we provided some criteria to distinguish VNs from regular nouns in this article.

## <Selected References>

- Ahn, Hee-Don. 1991. Light Verbs, VP-movement, Negation and Clausal Architecture in Korean and English. Ph.D. dissertation, Univ. of Wisconsin at Madison.
- Cattell, R. 1984. Composite Predicates in English (Syntax and Semantics 17). Academic Press.
- Chae, Hee-Rahk. 1996. Properties of *ha-* and Light Predicate Constructions (written in Korean). *Language Research* 32.3: 409-476.
- Grimshaw, Jane & Armin Mester. 1988. Light Verbs and Theta-Marking. Linguistic Inquiry 19.2: 205-232.
- Han, Hak-Sung. 1988. Light Verbs and Verb Raising. Language Research 24.4: 565-581.
- Kim, Jeong-Ryeol. 1991. A Lexical Functional Grammar Account of Light Verbs. Ph.D. dissertation, Univ. of Hawaii at Manoa.
- Kim, Mi-Kyung. 1994. Predicate Union in Korean Light Verb Constructions. Linguistic Journal of Korea 19.1: 87-115.
- Kim, Sun-Woong. 1994. A Study on the Light Verb Construction in English and Korean. *Language Research* 30.1: 137-159.
- Miyagawa, S. 1989. Light Verbs and the Ergative Hypothesis. *Linguistic Inquiry* 20: 659-88.
- O'Grady, William. 1992. On the Status of ha-ta in Multiple Complement Structures. SICOL '92 Proceedings.
- Park, Kabyong. 1992. Light Verb Constructions in Korean and Japanese. Ph.D. dissertation, Univ. of North Carolina at Chapel Hill.
- Yoon, James H.S. 1991. Theta Operations and the Syntax of Multiple Complement Constructions in Korean. *Harvard Studies in Korean Linguistics* IV: 433-445.

