

# The Pseudo-resultative [V-ko (iss-)] Construction in Korean<sup>\*</sup>

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## ABSTRACT

Korean [... V-ko iss-] expressions are ambiguous between a progressive meaning (P-reading) and a resultative meaning (R-reading). Most previous analyses assume that there is only one construction involved. Only a few previous analyses assume that there are two: the progressive construction, which we will call the P(-reading) construction, and the resultative construction. Under this latter assumption, we argue that the resultative construction has to be further divided into two types. That is, we will show that the seeming resultative [... V-ko iss-] expressions are realizations of two different constructions: the (real) R(-reading) construction and the p(seudo)-R(-reading) construction. Although, unlike the P construction, both of them are modifier-modified constructions, they have different properties. The major source of differences is that of the verbs in the [... V] position: while the verbs in the R construction can indicate a present state with their past tense form, those in the p-R construction have a present state meaning inherently. The p-R construction comprises all those cases in which negative verbal expressions appear in the [... V] position. In addition, this construction is not subject to the constraints operating on the R construction. We will see that the present approach provides a systematic analysis and covers a wider range of data than previous approaches.

**Keywords:** [V-ko iss-] in Korean, structural ambiguity, resultative construction, modifier-modified construction, pseudo-resultative construction, negative verbal expressions

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## 1. Introduction

The Korean [... V-ko iss-] can indicate not only a progressive meaning (henceforth, P-reading) but also a resultative meaning (henceforth, R-reading). Although it is generally referred to as an “imperfective” expression (with reference to the former

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<sup>\*</sup> I express my gratitude to the reviewers of this and previous journals for their valuable comments. I am also grateful to Ilkyu Kim, Eunsuk Lim, Sungki Suh and Eun-Jung Yoo for their invaluable comments on various occasions. This work was supported by the 2017 research fund of Hankuk University of Foreign Studies.

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meaning), it can better be termed as a “perfective” expression when it has the latter meaning. As is well-known, some [ $\cdots$  V-*ko iss*-] expressions show an ambiguity between the two readings.<sup>1)</sup>

- (1) *nay tongsayng-i moca-lul ssu-ko iss-ø.ta.*  
 my younger sibling-Nom hat-Acc wear-X Y-Pres-Decl  
 ‘My younger brother/sister is putting on a hat.’ or ‘My younger brother/sister has put a hat on.’

For a successful account of the ambiguity, we need to figure out the nature of the verbs which can combine with the particle *-ko*, and that of the particle *-ko* and the predicate *iss-*, which are represented as X and Y, respectively.<sup>2)</sup> There have been many different approaches to the analysis of (ambiguous) [ $\cdots$  V-*ko iss*-] expressions, ranging from “single-construction approaches” to “double-construction approaches.”

We are under the assumption that there are at least two constructions involved: the progressive construction, which we will call the “P(-reading) construction,” and the resultative construction. The purpose of this paper is to show that what is assumed to be the resultative construction has to be further divided into two types: the “(real) R(-reading) construction” and the “p(seudo)-R(-reading)” construction. That is, we will show that the seeming resultative [ $\cdots$  V-*ko iss*-] expressions are realizations of two different constructions. Although, unlike the P construction, both of these constructions are modifier-modified constructions, they have very different properties. The major source of differences between them is that of the predicates in the [ $\cdots$  V] position: while the predicates in the R construction, like *ssu-* ‘to put on’ in (1), can indicate a present state with their past tense form, those in the p-R construction, like *al-* ‘to know’ and *molu-* ‘not to know,’ have the present state meaning inherently. To begin with, the nature of the resultative readings is different: while that of the former is semantic and, hence, cannot be cancelled, that of the latter is pragmatic and, hence, can be cancelled. In addition, the p-R construction

1) The abbreviations used in this paper are as follows: Acc: accusative (*-ul/lul*), Adnr: adnominalizer, Advr: adverbializer, Comp: complementizer, CT: contrast/topic (*-un/mun*), Decl: declarative, Gen: genitive (*-uy*), Nom: nominative (*-i/ka*), Pas: passive, Pl: plural (*-tul*), Pres: present (*-ø*), (cf. Past: *-ess/ass/yess*), Prog: progressive.

2) In Korean, there are largely two different types of predicate, i.e., verbs like *mek-* ‘to eat’ and adjectives like *khur-* ‘to be big.’ However, the predicate *iss-*, which can be used either as a main/lexical predicate or as an auxiliary predicate, is neither a verb nor an adjective. Hence, we will use the term “predicate,” which is a cover term for both of them, when we refer to *iss-*. The term will also be used to refer to all the verbal expressions, regardless of whether they are word units or phrasal units.

is not subject to any of the constraints operating on the R construction. Most of all, the fact that the p-R construction comprises, among others, all those cases in which negative verbal expressions appear in the [ $\cdots$  V] position constitutes a strong piece of evidence for our approach. For example, such expressions as [*wul-ci anh-ko iss-*] ‘to be in the state of not crying’ cannot be analyzed as either P or R constructions. We will see that these observations lead us to provide a systematic analysis, covering a wider range of data than previous approaches. Eventually, we would be able to provide a proper analysis of the R construction only when we could factor out spurious examples from the heterogeneous groups of seemingly resultative [ $\cdots$  V-*ko iss-*] expressions.

The structure of the paper is as follows. In section 2, we will first examine basic facts about [ $\cdots$  V-*ko iss-*] expressions in Korean and briefly introduce previous studies on them, pointing out their problems. Then, we will summarize the properties of the P and R constructions, on the basis of H-R Chae (t.a.), which is necessary to lay a foundation for the discussions in the following section. In section 3, it will be shown that we have to factor out expressions of the p-R construction from the resultative [ $\cdots$  V-*ko iss-*] expressions. We will also examine those expressions in which negative verbal units appear in the [ $\cdots$ V] position and will see that they belong to the p-R construction. Finally, section 4 concludes the paper.

## 2. [V-*ko iss-*] Expressions in Korean

Such “*put-on* type” predicates as *ssu-* ‘to put on’ in (1) can trigger an ambiguity between a P-reading and an R-reading, as have been pointed out in many works (e.g., S-J Chang 1973, I-S Yang 1977, Y-J Kim 1990, J-m Song 1995, C-S Suh 1996, E-J Lee 2003, M Son 2004, EH Lee 2006, T Chung 2007, M-J Kim 2009, S Nam 2010, J-B Kim 2011, C Park 2014). It has also been pointed out that some other types of predicate, like *tul-* ‘to lift’ and *yel-* ‘to open,’ can trigger an ambiguity as well (e.g., J-m Song 1995; EH Lee 2006, 2008; M-J Kim 2009, 2011; J-B Kim 2011). We need to figure out what types of predicate trigger each of the constructions. If a particular property of predicates is responsible for the P-reading and another property for the R-reading, those predicates which have both of the two properties would trigger the two readings.

There have been controversies over almost all the issues regarding the constructions responsible for the ambiguity of [ $\cdots$  V-*ko iss-*] expressions. Firstly, scholars

have different views on the types of predicate which are responsible for the two readings. Secondly, many scholars assume that there is only one construction involved and some scholars argue that there are two constructions involved. Thirdly, among those who are in the latter view, there are controversies over the status of the particle *-ko* and the predicate *iss-*, whether they have different meanings/functions in the two constructions or not. In this section, we will consider these issues with reference to previous analyses. As is shown in H-R Chae (t.a.), we are under the assumption that there are at least two constructions involved.<sup>3)</sup> As for the predicates in *V-ko*, those which have a part indicating process, i.e., activity predicates and accomplishment predicates, can trigger the P construction, and (some of) those which have a part indicating the culmination point, i.e., accomplishment predicates and achievement predicates, can trigger the R construction. In addition, we will see that *-ko* and *iss-* have different properties in the two constructions.

## 2.1. Previous analyses

There are largely two groups of approaches in dealing with the different meanings in [... *V-ko iss-*] expressions (cf. K-S Hong 2013: 1074). One group, which constitutes the majority group, assumes that the expressions realize only a single construction, say the group of “single-construction approaches” (H S Lee 1991; Y Ahn 1995; J-m Song 1995; J-s Yang 2002; M Son 2004; NS Song & J-m Song 2005; EH Lee 2006, 2008; Brown & J Yeon 2010; J-H Park 2011; K-S Hong 2013; C Park 2014; S Suh 2016, 2017; etc.). The other group assumes that there are two constructions involved, say the group of “double-construction approaches” (M-J Kim 2009, 2011; J-B Kim 2011, 2013; etc.). While single-construction approaches do not consider the morphosyntax of *-ko* and *iss-* very seriously, double-construction approaches take their morphosyntactic status into account seriously.

One of the major problems of the single-construction approaches lies in accounting for the syntactic properties of [... *V-ko iss-*] expressions. For example, the predicate *iss-* cannot be modified when the expression has a P-reading, while it can be modified when the expression has an R-reading (C Lee 1999: 233, M-J Kim 2009: 5, and J-B Kim 2011: 882). This difference manifests itself when an adverb occurs in between *-ko* and *iss-* in such sentences as the following (cf. (1)).

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3) Section 2 is mainly a summary of H-R Chae (t.a.), which argues for the structural ambiguity of [... *V-ko iss-*] expressions between the P and R constructions. Although it is a rather long section, we tried to make it as short as possible, just enough for the discussions in section 3. For a detailed analysis of the two constructions, refer to the original paper.

- (2) a. *nay tongsayng-i sakakmo-lul ssu-ko uyceshakey iss-ø-ta.*  
 my younger sibling-Nom mortarboard-Acc wear-X dignifiedly Y-Pres-Decl  
 ‘My younger sibling remains/stays in a dignified manner, while having put  
 a mortarboard on.’
- b. *koyangi-ka mok-ey pangwul-ul tal-ko-to kamanhi iss-ø-ta.*  
 cat-Nom neck-at bell-Acc attach-X-also silently Y-Pres-Decl  
 ‘The cat stays silently, even wearing a bell on its neck.’

Unlike (1), (2a) has only an R-reading, which shows that *iss-* cannot be modified when the expression has a P-reading.<sup>4</sup> The fact that the R construction allows modifiers before *iss-* becomes very clear from (2b). Although it has only an R-reading in normal contexts because a cat cannot attach a bell to its neck itself, it allows the modifier *kamanhi* ‘silently/quietly.’ This phenomenon can be accounted for effectively only when we assume that [... V-*ko iss-*] expressions manifest at least two different structures and/or constructions.

Double-construction approaches try to explain the ambiguity by positing different morphosyntactic categories for *-ko* and/or *iss-* for the constructions involved. According to M-J Kim (2009, 2011) and J-B Kim (2011, 2013), the *iss-* for P-reading is an auxiliary predicate and that for R-reading is a main/lexical predicate. What they differ from each other are on the morphosyntactic status of *-ko* and/or on the meanings of *-ko* and *iss-* for the two readings. In this paper, we also take an approach that posits different constructions of [... V-*ko iss-*] for P- and R-readings. In addition, we agree with previous double-construction approaches in that *iss-* is ambiguous between an auxiliary predicate and a main predicate. However, our analysis developed in H-R Chae (t.a.) is different from these previous approaches in other important respects.

The most important difference between them lies in the relationship between [... V-*ko*] and *iss-* in the R construction. M-J Kim (2009, 2011) and J-B Kim (2011, 2013) argue that they are in a complement-head relationship, which implies that *iss-* is an essential element in the construction. For example, J-B Kim (2011: 882) assumes that *iss-* has a key role in characterizing the R construction: “the verb

4) If one is uncomfortable with such examples as (2), that may be due to the fact that we are accustomed to the (resultative) [... V-*ko iss-*] expressions which do not contain adverbials inbetween. Note that we are inclined to think that the predicate [*kongpwu ha-*] ‘to do study’ is a verb (rather than a verb phrase) and the string [*salm-a mek-*] ‘to eat (something) boiled’ is a unit (rather than parts of two units), because we have been exposed to these expressions so many times. However, the former is a phrase and the latter is not a unit, as are shown in H-R Chae (2013) and H-R Chae (2015b), respectively.

contributes to the core meaning of the sentence, describing the resultant state of ...” On the contrary, we argue that they are in a modifier-modified relationship, i.e., an adjunct-head relationship. Note that the unit [... V-ko] cannot be a complement of predicate *iss-*. Most of all, *iss-* is not the only predicate which can occur with the resultative V-ko expressions:<sup>5)</sup>

- (3) swuci-ka [tongsayng-ul ep-ko]  
 Susie-Nom younger sibling-Acc carry on the back-X  
 talli-ø-nta / pap-ul mek-ø-nunta / ...  
 run-Pres-Decl / boiled rice-Acc eat-Pres-Decl

‘Susie runs / eats boiled rice / ... while carrying her younger brother/sister on her back.’

As we can see, not only intransitive predicates like *talli-* ‘to run’ but also VPs like [*pap-ul mek-*] can come in the place where *iss-* occurs. As the verb *talli-* does not require any (non-subject) complement and the VP [*pap-ul mek-*] is a full phrase, the phrase containing V-ko cannot be regarded as their complement. Hence, we can only assume that the resultative reading comes from the phrase containing V-ko rather than from the main predicate involved.

Considering the facts shown in (2-3), the phrase containing V-ko can better be analyzed as an adjunct, which has the function of modifying the following V’ or VP (cf. H-R Chae 2015b). First of all, while the head of a complement is usually a lexical unit, the head of an adjunct is a larger unit. Then, we can easily account for the fact that the main predicates in (2-3) can be modified and/or can take their own complements, forming a phrasal head of the preceding modifier. Secondly, there are no specific morphosyntactic and/or syntactic requirements operating between the phrase containing V-ko and the following verbal unit. There can be only semantic and/or pragmatic restrictions on their combinations. Thirdly, almost unlimited number of predicates can occur in the position of *iss-*, which is related to the fact that the position is not for a word but for a phrase. These are typical properties which can be observed in modifier-modified relationships.

5) As was pointed out by a reviewer, the mere fact that *iss-* can be substituted with other predicates does not guarantee that [... V-ko] is an adjunct of *iss-*. In [*I bought/sold/saw/... a car*], for example, the NP [*a car*] is a complement of *buy*, although there can occur many other predicates in the position of *buy*. In these examples, each of the predicates involved takes the position of a lexical item and has the property of requiring an NP complement. On the other hand, the main predicates in (3) are in the position of a phrase, i.e., a VP, which is a unit which contains not only a predicate but also its complements. In addition, they do not have a common property which can be realized by [... V-ko].

One might argue against the present adjunct analysis on the basis that sentences like (1) become awkward when the *V-ko* phrase is omitted, as we can see in sentence (a) below:

- (4) a. ?\**nay tongsayng-i iss-ø-ta.*  
           my younger sibling-Nom      remain/stay-Pres-Decl  
       b. *nay tongsayng-i coyonghi iss-ø-ta.*  
           my younger sibling-Nom      quietly      remain/stay-Pres-Decl  
           ‘My younger brother/sister remains/stays quietly.’

Although (4a) is acceptable with the meaning of ‘my younger brother/sister is here/there,’ it is very unnatural with the meaning at issue. However, as we will see shortly, this awkwardness is unrelated to the status of the phrase being a complement or an adjunct. Note that, as we can see in (4b), the sentence becomes normal when we add even an adjunct before *iss-*.

We have seen that the predicate *iss-* is not an essential element in the R-reading [... *V-ko iss-*] expressions. It is just one of the many predicates which can occur in the *V*<sub>2</sub> position of [... *V*<sub>1-ko</sub> ... *V*<sub>2</sub>], although it has been assumed to be an indispensable element in previous approaches. As a main predicate, it has its own meaning of ‘stay/remain (as it is),’ as we have been assuming in this paper.<sup>6)</sup> It has the same meaning as that of the main predicate in the following sentence:

- (5) *minho-ka (moca-lul ssu-ko) (coyonghi) (pang-ey) iss-ø-ta.*  
       Minho-Nom hat-Acc wear-Advr quietly      room-at stay/remain-Pres-Decl  
       ‘Minho stays as it is (in the room) (quietly) (while wearing a hat).’

The phrase *pang-ey* can be regarded as a complement of *iss-*, but the other phrases in the parentheses are adjuncts of *iss-*. Any of these phrases can be omitted regardless of whether it is a complement or an adjunct, without changing the meaning of *iss-*. If all of them are omitted, the remaining expression, i.e., [*minho-ka iss-ta*], seems awkward (cf. (4a)). However, it is not due to the omission of the complement,

6) When *iss-* is used as an auxiliary predicate (in the P construction), it has the function of indicating a progressive meaning and is glossed as “Prog” (cf. (7)). On the other hand, when it is used as a main predicate, it has the meaning of ‘stay/remain (as it is),’ regardless of whether it is in the R construction or in the p-R construction, in which the preceding *-ko* has the meaning of ‘after.’ It has the same meaning even in the coordinate *-ko* ‘and’ construction because it is used as a main predicate here as well.

because the sentence becomes just fine if we have only one remaining adjunct, e.g., [*minho-ka coyonghi iss-ta*] (cf. (4b)). Hence, we can assume that the criterion whether we can omit an expression or not is unrelated to the complement-adjunct distinction in Korean (cf. H-R Chae 2000).

We are arguing that, while [... V-*ko*] is a complement of *iss-* in the P construction, it functions as an adjunct in the R construction. The *iss-* in the former, as an auxiliary predicate, does not allow any elements between it and [... V-*ko*], which implies that a P-reading is possible only when [... V-*ko*] occurs just before *iss-*. On the other hand, the *iss-* in the latter can be modified and can even be substituted with other predicates. We can see this difference clearly from the following set of sentences:

- (6) a. minswu-ka    moca-lul   ssu-ko   wul-ko   iss-ø-ta.  
       Minsoo-Nom   hat-Acc   wear-X   cry-X   Y-Pres-Decl  
       ‘Minsoo is crying, while wearing a hat.’  
       b. \*minswu-ka    wul-ko    moca-lul   ssu-ko   iss-ø-ta.  
       Minsoo-Nom   cry-X    hat-Acc   wear-X   Y-Pres-Decl

When the verb *wul-* ‘to cry,’ which can trigger only the P construction, comes just before the word *iss-* in (6a), the sentence is grammatical. However, when it comes before the phrase [*moca-lul ssu-ko iss-ø-ta*] in (6b), it cannot trigger the construction, i.e. it is ungrammatical with a P reading, regardless of whether the phrase has a P-reading or an R-reading. On the other hand, the verb *ssu-* ‘to wear’ can occur, triggering an R-reading, before the phrase [*wul-ko iss-ø-ta*] in (6a). We would not be able to account for the phenomena here effectively, if we assume that the *-ko* phrase in the R construction functions as a complement.

## 2.2. Structural ambiguity: The P and R constructions

In the preceding subsection, we have examined previous analyses and their problems. We have focused on double-construction approaches, under the understanding that single-construction approaches cannot capture the fact that [... V-*ko iss-*] expressions are structurally ambiguous. Especially, we have shown that the [... V-*ko*] phrase is an adjunct of *iss-* in the R construction. In this subsection, we will observe the properties of the constructions responsible for the ambiguity (between P- and R-readings) by taking into account both the (morpho-)syntax and semantics of *-ko* and *iss-*. We agree with such double-construction approaches as M-J Kim (2009, 2011)



and J-B Kim (2011, 2013) in that *iss-* is ambiguous between an auxiliary predicate and a main predicate.

Following the arguments in H-R Chae (t.a.), we are under the assumption that a P-reading comes from a head-complement construction and an R-reading from a modifier-modified construction. While the particle *-ko* functions as a (meaningless) complementizer for P-reading, it functions as an adverbializer for R-reading.<sup>7)</sup> As for their morphosyntactic status, both of them are “clitics,” linguistic units which are dependent phonologically but words syntactically (cf. Spencer & Luis 2012). As syntactic words, they belong to specific lexical categories. The elements functioning as complementizers can be regarded as belonging to the lexical category of markers (M), which do not have their own meanings.<sup>8)</sup> On the other hand, the adverbializer can be analyzed as belonging to the category of adverbs. Note that a clause containing *-ko*, i.e., [S-*ko*], shows the distribution not of a (bare) clause but of an adverbial expression. As the distribution of an expression is determined by its head, we can see that the head of [S-*ko*] is *-ko* rather than S. As [S-*ko*] shows the distribution of an adverb phrase, *-ko* can best be analyzed as an adverb (Adv). The word *iss-* is an auxiliary predicate for P-reading and a main predicate for R-reading. Semantically, for P-reading, *-ko* has no meaning and the auxiliary *iss-* represents a progressive meaning, whereas, for R-reading, the two lexical items have their own meanings, which can be understood roughly as ‘after’ and ‘to remain/stay (as it is),’ respectively. This R-reading [... V<sub>1</sub>-*ko*] leads eventually to the meaning of ‘(while)  $\emptyset$  experiencing the result state of VP<sub>1</sub>-ing’ (cf. (14)).

Most importantly, we have to realize that the *iss-* in the P construction is the main source for P-reading,<sup>9)</sup> while that in the R construction is not related to an

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7) The *-ko* in the R construction is a “subordinate conjunction,” according to the traditional grammar. As the clause induced by a subordinate conjunction can better be analyzed as an adverbial clause (I Lee 2003), we assume that it is an element which has the function of making a clause into an adverbial expression, i.e., an adverbializer.

8) The category M has special properties: i) all its members perform (only) grammatical functions, and ii) they consist of lexical items “borrowed” from other categories. Its members do not have their own meanings, but have the function of indicating that the unit with one is a complement. In addition, they are not “original” members of the category but are from other categories, in which they have their own meanings. Just like the English marker *that* is from the category of demonstratives, the marker *-ko* (in the P construction) is from the category of conjunctions or adverbs.

9) One might be tempted to assume that some other predicates like *sal-* ‘to live’ and *cinay-* ‘to live, to spend (time)’ can also occur as the V<sub>2</sub> predicate in the P construction:

i) na-nun nongsa-lul cis-ko (cal/coyonghi) {santa/sal- $\emptyset$ -nta/}.

I-CT farming-Acc do-KO well/silently live-Pres-Decl

‘I live (well/calmly) by doing farming.’

R-reading. As we saw in the examples of (3), sentences with other predicates show the same resultative reading as R-reading sentences with *iss-*. Hence, rigorously speaking, the [... *V-ko iss-*] with an R-reading does not constitute an independent construction. It is just a specific example of the more general modifier-modified construction [... *V<sub>1</sub>-ko ... V<sub>2</sub>*], which allows not only *iss-* but also other predicates as well. These differences between the two constructions show that the ambiguity of [... *V-ko iss-*] expressions is an accidental result of rather heterogeneous constructions. There would not be easy ways of accounting for these facts under single-construction approaches.

Under the above assumptions about the constructions behind the ambiguity of [... *V-ko iss-*] expressions, let us consider the following sentence:

- (7) swuci-ka ppalli talli-ko (\**cal*/\**cengmal*) iss-ø-ta.  
 Susie-Nom fast run-Comp well/really Prog-Pres-Decl  
 ‘Susie is running fast.’

This sentence has only a P-reading and, hence, *iss-*, as an auxiliary predicate, cannot be modified. Note that Korean auxiliary predicates combine directly with their VP complements without allowing any modifiers between them. When it is modified by such adverbs like *cal* ‘well,’ the sentence becomes ungrammatical. Here, *iss-* takes a subject NP and a preceding VP as its complements. Then, its subcategorization frame, which is the same as those for typical auxiliary predicates (cf. H-R Chae 2015a: 556), can be established as follows:

- (8) [NP-*ka*<sub>[1]</sub>, VP[MFORM: -*ko*, SUBCAT: NP-*ka*<sub>[1]</sub>]]

The feature MFORM has the property of taking the actual form of the marker (M)

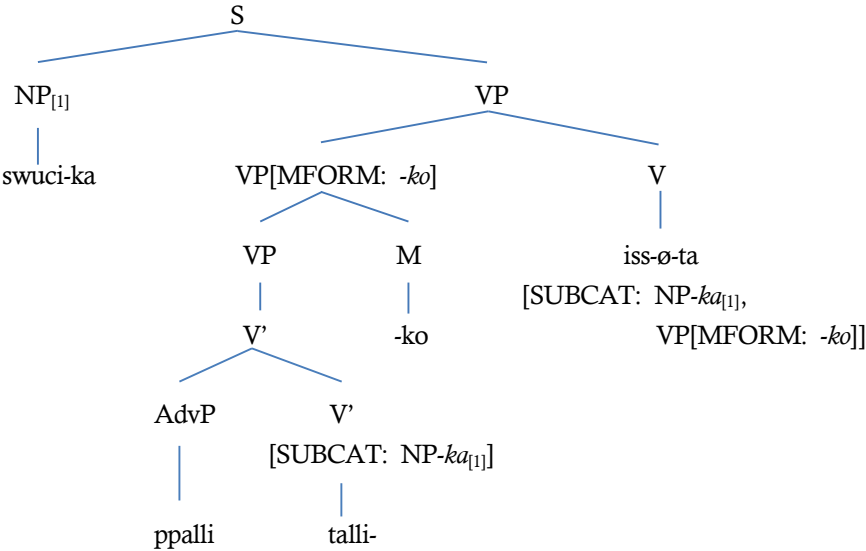
- 
- ii) minswu-nun cwuk-ul mek-ko (elyepkey) cinay-ø-nta.  
 Minsoo-CT porridge-Acc eat-KO with difficulty live-Pres-Decl  
 ‘Minsoo makes a (bad) living by eating (rice) porridge.’

However, these are not P-reading sentences. Firstly, while the *V<sub>2</sub> iss-* has only the grammatical function of indicating on-going activities in the P construction, the *V<sub>2</sub>* predicates here, i.e., *sal-* and *cinay-*, have their own lexical meanings. Secondly, the events represented by the *V<sub>1</sub>* predicates *cis-* and *mek-* are not activities in progress but habitual activities. Lastly, the *V<sub>2</sub>* predicates can be modified by adverbs in these sentences. Hence, we can conclude that the *V-ko* phrase here is an adverbial expression modifying the following verbal unit (cf. H-c I & C-h I 2010: 71-2, J Yeon & Brown 2011: 285-6). The notation {*santa*/*sal-ø-nta*/} in (i) indicates that the surface form *santa* has the underlying form *sal-ø-nta*. This discrepancy between the two forms is due to the fact that Korean has the property of dropping the stem-final consonant /l/ when it is followed by affixes starting with /n/.

concerned as its value, just like the feature PFORM takes a specific preposition as its value (e.g., the English verb *rely* takes PP[PFORM: *on*] as its complement). The subject NP of *iss-* and the subject NP of its VP complement are identical and, hence, are “sharing the same structure,” which is represented by the subscripted [1], following the tradition of such non-transformational frameworks as “Head-driven Phrase Structure Grammar” (cf. Borsley & Borjars 2011). In addition, its VP complement has the marker *-ko*, which indicates that the VP is a complement of *iss-*.

Then, the progressive [ $\dots$  V-*ko iss-*] sentence in (7) can be analyzed as follows. The construction involved, i.e., the P construction, is an auxiliary predicate construction, which is a subtype of complement-head constructions.

(9) An analysis of sentence (7)



In this analysis, the progressive meaning comes solely from the auxiliary *iss-*. In the structure, the predicate *iss-* cannot be modified by an adverbial expression because the daughter of the highest VP that dominates it is V rather than V' or VP.

We are assuming that the progressive meaning comes from the predicate *iss-* alone. It is important to note that *-ko* is used not only with *iss-* but also with other auxiliary predicates as well. For example, *siph-* is one of the Korean auxiliary predicates which take a main predicate with *-ko* as part of its complement, and [ $\dots$  V-*ko siph-*] means ‘to want to V  $\dots$ ’. There is no common semantic factor between [ $\dots$  V-*ko iss-*] and

[V-*ko siph*-], which means that *-ko* does not contribute to the meaning of the whole phrase. Thus, if *-ko* in [... V-*ko iss*-] and *-ko* in [V-*ko siph*-] are the same element, it is reasonable to think of *-ko* in [... V-*ko iss*-] as a maker with no meaning. Then, the progressive meaning can be conveyed solely by *iss*-, just as the meaning of ‘to want to’ is expressed only by *siph*- in [V-*ko siph*-]. The particle *-ko* has only the function of accompanying the sense at issue among the senses which *iss*- has. That is, we can see that, among the various uses of *iss*-, the one which requires [... V-*ko*] as its complement is an auxiliary predicate and has the progressive meaning.

Now we will consider what kinds of predicate in the [... V] position in [... V-*ko iss*-] expressions can trigger a P-reading. First of all, the most typical P-reading verbs or verb phrases are those which represent physical activities like *nol*- ‘to play,’ *tayli*- ‘to beat,’ [*wuntong*(-ul) *ha*-] ‘to exercise,’ [(*cam*-ul) *ca*-] ‘to sleep,’ *sal*- ‘to live,’ etc. Secondly, such predicates as [*salang*(-ul) *ha*-] ‘to love,’ [*coh*-a *ha*-] ‘to like,’ [*sayngkak*(-ul) *ha*-] ‘to think,’ *cham*- ‘to suppress,’ *mit*- ‘to believe’ and [*kiek*(-ul) *ha*-] ‘to remember’ seem to indicate some kind of mental activities.<sup>10)</sup> The third type of predicate inducing a P-reading also induces an R-reading. Those predicates in (1-3) typically belong to this group. There are not only “put-on” type predicates like *ip*- ‘to wear (clothes),’ *ssu*- ‘to wear (hats),’ *sin*- ‘to wear (socks/shoes),’ *kki*- ‘to wear (gloves)’ and *pes*- ‘to take off,’ but also such predicates as *ttu*-/*kam*- ‘to open/close (eyes),’ *tul*- ‘to lift,’ *ep*- ‘to carry on one’s back,’ *yel*-/*tat*- ‘to open/close (doors),’ *tha*- ‘to get on,’ etc. All these predicates indicate some kind of activities, which can be represented as <process> predicates. Then, we can generalize that the predicates which trigger a P-reading are those which involve <process> as part of their meanings.

Among the two constructions involved in the [... V-*ko iss*-] expressions, let us now turn to the R construction. As we have seen in (2), one of the major syntactic differences between the P and R constructions is that the predicate *iss*- in the latter allows adverbial modification. In addition, as we have seen in (3), the latter construction allows a variety of predicates in the V<sub>2</sub> position. Taking these observations into consideration, we introduce an adjunct analysis of the R construction, in which the *-ko* phrase is analyzed as an adjunct of the following verbal unit. We have already seen several pieces of evidence for its adjuncthood from different points of view.

10) The “mental activity” predicates are analyzed as triggering a P-reading because they can combine with such adverbials as *kyeysok* ‘continuously’ and *yelsimhi* ‘laboriously,’ which can typically combine only with activity predicates (cf. H-R Chae t.a.). Some of them like *mit*- ‘to believe,’ [*kiek*(-ul) *ha*-] ‘to remember’ and [*insik*(-ul) *ha*-] ‘to recognize’ are ambiguous between P-reading and pseudo-R-reading predicates, as will be observed in section 3.1.

This adjunct analysis contrasts with the complement analysis of the P construction. As a complement-head construction, the P construction covers a limited range of sentences, because only *iss-* is allowed in the  $V_2$  position of  $[\cdots V_1\text{-}ko \cdots V_2]$ . On the other hand, as a modifier-modified construction, the R construction covers a wide range of sentences. There are basically no formal restrictions on the possible predicates in  $V_2$ . Any verbal expressions will do as far as they can be modified by the  $[\cdots V_1\text{-}ko]$  part semantically and/or pragmatically. However, as we will see at the end of this section, there are some important constraints operating on this part: not only a lexical constraint on the type of  $V_1$  predicates but also syntactic and pragmatic constraints on the subject of  $V_1$ .

In the P construction, *-ko* is a complementizer. In the R construction, however, it cannot be a complementizer because the unit containing it is an adjunct of the following verbal expression. To capture the nature of *-ko* in the R construction, let us examine the following sentences:

- (10) [minho-nun pap-ul mek-ess]-ko [swuci-nun enghwa-lul po-ass]-ta.  
 Minho-CT boiled rice-Acc eat-Past-KO Susie-CT movie-Acc see-Past-Ded  
 ‘Minho ate a meal and Susie saw a movie.’

- (11) a. minho-nun [pap-ul mek]-ko [yenghwa-lul po]-ass-ta.  
 ‘Minho ate a meal and (then) saw a movie.’ or ‘Minho saw a movie after he ate a meal.’  
 b. minho-nun yenghwa-lul [pap-ul mek]-ko po-ass-ta.  
 ‘Minho saw a movie after he ate a meal.’

In (10) *-ko* is used as a “coordinate conjunction,” meaning ‘and.’ It has the function of connecting two clauses which represent independent events. Sentence (11a) is ambiguous between a coordinate and a subordinate/adverbial reading (cf. footnote 7). As we can see from the unambiguous sentence (11b), where the VP with *-ko* is inserted into the second conjunct, *-ko* clearly has the function of an adverbializer, meaning ‘after,’ not only semantically but also syntactically. As the unit containing an adverbializer shows the distribution of adverb phrases, we assign the lexical category of adverbs (Adv) to adverbializers. In addition to these two uses of *-ko*, we have seen that it can also be used as a complementizer in the P construction. Now let us consider whether the *-ko* in the R construction realizes one of the two meanings in (10-11), i.e., ‘and’ and ‘after’:

- (12) koyangi-ka [mok-ey pangwul-ul tal-ko] kamanhi  
 cat-Nom neck-at bell-Acc attach-X silently  
 iss-ø-ta / cam-ul ca-ø-nta / ...  
 stay-Pres-Decl / sleep-Acc sleep-Pres-Decl

‘The cat stays/sleeps silently with a bell being attached to its neck.’

The event of attaching a bell to the cat’s neck occurred before the event of staying or sleeping silently. This past time interpretation of attaching is clearly related to the ‘after’ meaning of *-ko*. Note that the verb *tal-* ‘to attach’ does not have the past tense marker *-ess/ass*. As will be clear from the discussions below, the reading that the cat is presently in the state of wearing a bell on its neck also comes from this meaning of *-ko*.

From the above observations, we can assume that the *-ko* in the R construction is an adverbializer meaning ‘after,’ just like the one in (11b). On the other hand, there is an important difference between sentences like (11b) and sentences like (12), both of which contain the adverbializer *-ko*. For (12) to be true the state of wearing a bell has to be maintained while the cat is staying or sleeping. However, (11b) does not have such an entailment: only the sequence of eating a meal before seeing a movie is relevant. Actually, the entailment here is one of the most salient features of the R construction. We can see how this entailment difference comes about with reference to the function of *-ko* ‘after,’ which indicates a past event, and to the kinds of predicate which combine with it. The verb *tal-* ‘to attach’ in (12) is an accomplishment predicate, while the verb *mek-* ‘to eat’ in (11b) is an activity predicate. When telic predicates combine with *-ko* ‘after,’ the unit [... V-*ko*] can indicate a present state, just like when they combine with the past tense marker *-ess*:<sup>11)</sup>

- (13) swuci-ka moca-lul {ssess/ssu-ess/}-ta.  
 Susie-Nom hat-Acc wear-Past-Decl  
 ‘Susie put on a hat.’ or ‘Susie has put a hat on.’

That is, the entities responsible for the result state reading of telic predicates are the past tense marker and the *-ko* in the R construction. Now we can see how and why the R construction has a result state reading as its important property.

11) As was pointed out in footnote 9, there are cases where discrepancies occur between the surface and underlying forms when the stem of a predicate combines with a following affix. In (13), the stem-final vowel /u/ is deleted when it is followed by an affix starting with a vowel.

We are assuming, following the arguments in H-R Chae (t.a.), that there has to be an abstract predicate in the [... V<sub>1</sub>-ko] part of the R construction. In sentence (1), for example, the person who put a hat on the head of my brother does not have to be himself, because the sentence is grammatical even when someone else put the hat on him. He just experiences the state resulting from the realization of the event represented by the VP containing V<sub>1</sub>.<sup>12)</sup> Hence, we assume that the abstract predicate is *experience* and its subject has an Undergoer role.<sup>13)</sup> The abstract predicate comes not from any component words or phrases but from the construction itself (cf. Goldberg 2006, Hoffmann & Trousdale 2013). Then, the meaning of the whole -ko phrase in the R construction [... [... V<sub>1</sub>-ko]<sub>AdvP</sub> ... V<sub>2</sub>] can be represented as follows:

- (14) The meaning of [[ $\emptyset$  [... V<sub>1</sub>]<sub>VP1</sub>]<sub>SI</sub>-ko]<sub>AdvP</sub> in the R construction:  
 ‘(while)  $\emptyset$  experiencing the result state of VP<sub>1</sub>-ing’

The predicate ‘to experience’ appears in the meaning of the -ko phrase only when the phrase constitutes a part of the R construction. In addition, the entailment about the maintenance of the result state, which is a consequence of the interactions of -ko and the preceding predicate attached to it, is implemented as well in (14). The present participle form of the verb *experience*, i.e., *experiencing*, indicates that the state

12) In some cases, the volition/intention of the experiencer is required to maintain the result state. Let us examine the following sentences of the R construction:

- i) minho-ka yekki-lul tul-ko iss- $\emptyset$ -ta.  
 Minho-Nom barbell-Acc lift-Advr remain-Pres-Decl  
 ‘Minho stays as it is, while having a barbell lifted.’  
 ii) minho-ka pascwul-ul tantanhi pwuthcap-ko iss- $\emptyset$ -ta.  
 Minho-Nom rope-Acc firmly hold-Advr remain-Pres-Decl  
 ‘Minho stays as it is, while holding the rope firmly.’

Maintaining the state of having lifted a barbell or holding a rope requires the volition of Minho. However, this does not mean that the subject has an Agent role. Note that Minho is not necessarily the person who brought about the result state in question. Actually, the information about the person is not part of the meaning of the sentence. Hence, the subject of the two sentences can be a ‘snowman’ (even without being personified), which does not have any volition. The volition at issue, if necessary, is only for maintaining the result state not for bringing about the state. Similarly, in such sentences as [*John enjoys skating these days*], although the subject has an Experiencer role, John needs to have volition/intention to skate for him to enjoy the activity of skating.

13) A couple of comments are in order. Firstly, rigorously speaking, the predicate *experience* is supposed to mean ‘to be under the influence of the result state of VP<sub>1</sub>-ing, after undergoing the process of VP<sub>1</sub>-ing’ (cf. H-R Chae t.a.: footnote 28). Secondly, we have posited a new thematic role of “Undergoer” for the R construction. Although it is similar to Experiencer in that it represents a sentient being, they differ in that the Undergoer can experience not only cognitive changes (including sensory and emotional changes) but also physical/social changes. It cannot be Patient or Theme because it has to be a sentient being.

resulting from VP<sub>1</sub> is maintained at the time indicated by V<sub>2</sub>. Although the activity represented by V<sub>1</sub> took place before the time indicated by V<sub>2</sub>, what is relevant here is the fact that the result state caused by the telic property of V<sub>1</sub> is maintained at the time indicated by V<sub>2</sub>. The invisible subject  $\emptyset$  has a fixed thematic role of Undergoer and refers to the same entity as the referent of the main subject, which has a thematic role required by V<sub>2</sub>. Now we can represent the meaning of the first sentence in (12) more clearly as follows: ‘the cat stays/remains (as it is) silently, while experiencing the result state of (someone’s) attaching a bell to its neck.’

Summarizing what we have observed thus far, we conclude that the R construction is a subtype of modifier-modified constructions. In addition, the *-ko* here is an adverbializer meaning ‘after,’ which has the function of making the S preceding it an adverbial expression so that it can modify the following verbal unit. Morphosyntactically it is a clitic, i.e., a syntactic word, and hence it belongs to a lexical category. As the unit containing it has the same distribution as adverbials, we have assigned the lexical category Adv to it. Then, putting aside the properties specified in (14), we can represent the R construction schematically as follows:

$$(15) \cdots [ [\emptyset \cdots V_1]_{S_1-ko_{Adv}} ]_{AdvP} [ \cdots V_2 ]_{V_2/VP_2}$$

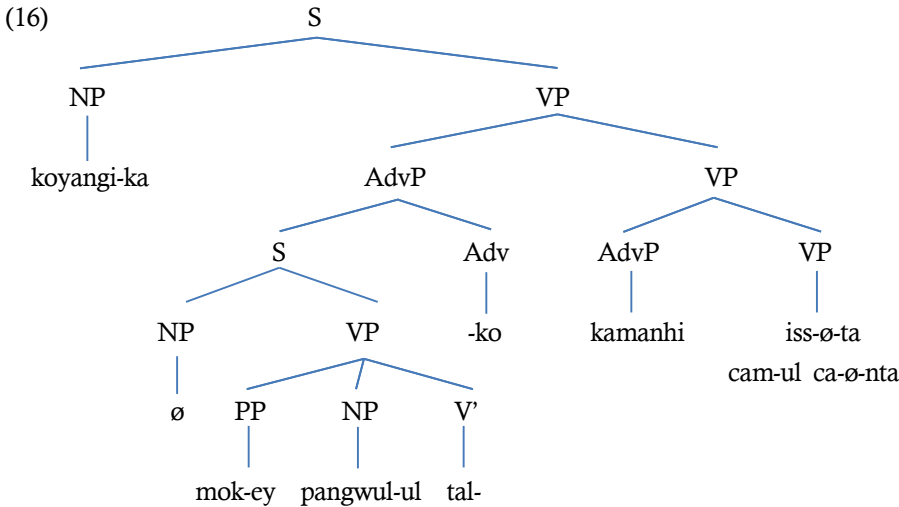
This construction consists of an AdvP and its head phrase. The Adv *-ko*, which is the only lexical item specified in the construction, takes the subordinate S<sub>1</sub> as its complement and becomes an AdvP. The head phrase can be either V<sub>2</sub> or VP<sub>2</sub>, depending on the position where the AdvP is positioned.

With reference to the data in (11b) and (12), we have seen that the two constructions concerned have similarities and differences. They are similar in that both of them contain the Adv *-ko* ‘after’ and consist of the adverbial S-*ko* phrase and its head phrase. They are different in that the latter construction, i.e., the R construction, has some additional properties: those properties which are implemented in (14). Then, we can say that the former is a more general modifier-modified construction than the R construction. Actually, the schema in (15) is for this general construction. Therefore, the R construction has to be characterized not only with the schema in (15) but also with the properties in (14). On the other hand, the construction for the general modifier-modified construction, i.e., that for sentence (11b), has schema (15) and a regular compositional rule for its meaning. In turn, a still more general construction than this construction would be schematized as  $[[S_1]-Adv]_{AdvP} [\cdots V_2]_{V_2/VP_2/S_2}$ , in which the subject of the subordinate clause S<sub>1</sub> does not have to be



empty and any adverbializers can occur in the place of the Adv *-ko*.

Now we have all the information to provide an analysis of the R construction. Let us consider sentence (12), which is a typical example of the construction:



The element *-ko*, as an adverbializer, combines with an S complement, which accounts for the adverbial function of the unit containing the S. The subject of the S is “an inferential gap” (H-R Chae 2015b: 721-2), because we have to figure out (from the constructional meaning) that its (hidden but real) predicate is *experience* and its thematic role is different from that of the main predicate. It refers to the same entity as the main subject, *koyangi* ‘cat,’ but has an Undergoer role. The gap gets the Undergoer role from the constructional meaning specified in (14). In addition, *iss-* is dominated by a VP rather than by a V, which reflects the modifiability of *iss-* and the occurrence of many other predicates.

We have seen above that activity predicates like *no!* ‘to play’ and *mek-* ‘to eat,’ which represent process, trigger the P construction. Accomplishment predicates like [(*moca-lul*) *ssu-*] ‘to wear (a hat)’ and [(*yekki-lul*) *tul-*] ‘to lift (a barbell),’ which contain both a process part and a culmination point, also trigger the construction. However, sentences containing both of them are ambiguous between the P and R constructions. As the property which is responsible for the P construction is the part indicating process, we can assume that the property which is responsible for the R construction is the part indicating the culmination point. Starting from this assumption, let us consider what types of predicate can trigger the R construction (for a list of more predicates, refer to H-R Chae (t.a.)).

First, such predicates as the following trigger an ambiguity between P- and R-readings: i) “put-on” type predicates like *ip-* ‘to wear (clothes)’ and *ssu-* ‘to wear (hats),’ and ii) some other predicates like *ttu-/kam-* ‘to open/close (eyes)’ and *tal-* ‘to attach.’ An interesting property of these predicates is that the past tense form of them is also ambiguous between a past activity reading and a present state reading, as we have seen in (13). What is relevant for the R construction is that they can indicate a present state with the past tense form. Secondly, “possessive predicates” like *kaci-* ‘to have’ and [*chaci(-lul) ha-*] ‘to occupy’ trigger the R-reading [... V-ko *iss-*] construction.

- (17) a. *ce salam-un coh-un ttang-ul*  
           that person-CT be good-Adnr land-Acc  
           *kaci-/chaci ha-ko iss-ø-ta.*  
           have/occupy-Advr stay/remain-Pres-Decl  
           ‘That person has/occupies the good land.’
- b. ... *kaci-/chaci ha-ko (coyonghi/kemanhakey) iss-ø-ta/wus-ø-nunta.*  
   quietly/arrogantly laugh-Pres-Decl  
           ‘... remains/laughs (quietly/arrogantly)’

Sentence (a) has a present state reading: it does not have a progressive meaning. As we can see in (b), adverbials can be inserted between V-ko and *iss-*, which is a property of the R construction. Moreover, *iss-* is not the only main predicate which can occur in the construction. Thirdly, a group of “cognitive predicates” like *ic-/kkamek-* ‘to forget,’ *kkaytat-* ‘to realize,’ [*thetuk(-ul) ha-*] ‘to master/learn,’ etc. also triggers the R construction.

- (18) a. *swuci-nun kwake-lul ic-/kkamek-ko (cal/hayngpokhakey)*  
           Susie-CT past-Acc forget-Advr well/happily  
           *iss-ø-ta/ cinay-ø-nta.*  
           stay-Pres-Decl/spend-Pres-Decl  
           ‘Susie stays/spends her time (well/happily), forgetting the past.’
- b. *ku-nun poncil-ul kkaytat-/thetuk ha-ko (coyonghi)*  
           he-CT essence-Acc realize/master-Advr quietly  
           *iss-ess-ta/ miso-lul {ci/cis/}-ess-ta.*  
           stay-Past-Decl/smile-Acc make-Past-Decl  
           ‘He stayed/smiled (quietly), realizing/mastering the essence.’

The predicate *iss-* can be modified by adverbials and it can be substituted with other predicates.

The three types of predicate which we have just observed are all telic predicates. However, because not all telic predicates trigger the R construction, we need to posit some constraints to account for the properties of the construction properly. For example, although such expressions as [(*kamca-lul salm-*] ‘to boil (potatoes)’ and [(*ppang-ul kwup-*] ‘to bake (bread)’ are telic (in some contexts), they cannot trigger the construction. H-R Chae (ms.) proposes three constraints besides the telicity constraint: a lexical constraint, a syntactic constraint and a pragmatic constraint. The lexical constraint says that only those (telic) predicates which can represent a present state with their past tense forms can trigger the construction. This constraint rules out [(*kamca-lul salm-*] and [(*ppang-ul kwup-*] from being the input to the construction, because the past tense form of the predicates involved, i.e., *salm-ass-* and *kwuwess-/kwup-ess-*, can never indicate a present state.

Then, with reference to the abstract element *experience*, which is posited as the logical predicate in the [ $\cdots$  V<sub>1</sub>-*ko*] adverbial phrase, we can establish a syntactic constraint and a pragmatic constraint. The former says that the invisible subject of the predicate, i.e., the experiencer of the result state of VP<sub>1</sub>, should carry the Undergoer role. The latter says that the subject has to be affected by the result state physically, cognitively and/or socially. The former constraint accounts for the contrast in the following set of data.

- (19) a. minho-ka            mwun-ul        yel-ko        iss-ø-ta.  
           Minho-Nom        door-Acc        open-X        Y-Pres-Decl  
           ‘Minho is opening the door’ or ‘Minho has the door opened.’
- b. (\*)sinpal        kakey-ka        mwun-ul        yel-ko        iss-ø-ta.  
           shoe        store-Nom        door-Acc        open-X        Y-Pres-Decl  
           Intended: ‘The shoe store is opening the door’ or ‘The shoe store is open.’

While (19a) is ambiguous between P- and R-readings, (19b) is very awkward with either of the two readings when [*sinpal kakey*] is interpreted literally. It cannot have a P-reading because a ‘shoe store’ cannot be a performer of opening the door. It cannot have an R-reading because a ‘shoe store’ cannot satisfy the syntactic constraint. Note that a ‘shoe store’ is not animate. In usual contexts, the entity which can experience something is an animate one. As a store is not animate, it cannot be a normal experiencer. However, we need to note that (19b) becomes acceptable, especially with an R-reading, when the meaning of [*sinpal kakey*] is extended

metonymically to indicate a person working in the store. This fact is in support of the syntactic constraint because the sentence becomes grammatical when the shoe store, which is an inanimate entity, is interpreted as a human being, which is animate and, hence, can be an experiencer.

The usefulness of the pragmatic constraint can be observed very clearly from such examples as the following (the data from Ilkyu Kim, p.c.):

- (20) a. *cyon-i meyli-uy elkwul-ey payndu-lul pwuthi-ko iss-ø-ta.*  
 John-Nom Mary-Gen face-at band-Acc put on-X Y-Pres-Decl  
 'John is putting a band aid on Mary's face.'
- b. *cyon-i caki-uy elkwul-ey payndu-lul pwuthi-ko iss-ø-ta.*  
 John-Nom self-Gen face-at band-Acc put on-X Y-Pres-Decl  
 'John is putting a band aid on his face.' or 'John has put a band aid on his face.'

We feel that an R-reading is almost impossible in (20a), although the verb *pwuthi*- 'to stick' satisfies the lexical constraint. However, (20b) is ambiguous. There are no syntactic differences between the two sentences. The only difference is that between *meyli-uy* 'Mary's' in (20a) and *caki-uy* 'self's' in (20b). This difference of the lexical items cannot cause any syntactic differences in structures/constructions concerned, because they are just modifiers in one of the complements of  $V_1$ . Now we can count on the pragmatic constraint. As for (20a), it would be very difficult to find a situation where the result state of putting on a band aid on Mary's face can affect the experiencer, i.e., John, physically. Note that the verb *pwuthi*- brings about physical changes, not cognitive and/or social changes. On the other hand, the result state of what is described in the VP of (20b) can naturally affect the experiencer John physically. John cannot be unaffected by the result state because he has the band aid on his own face.

### 3. The Pseudo-R-reading Construction

In the previous section, we have examined two different types of [ $\cdots V\text{-ko iss-}$ ] constructions: the P(-reading) construction and the R(-reading) construction. In addition to the structural differences between them, they have different sets of  $V_1$  predicates. Those triggering the former contain process as part of their meaning, but

those triggering the latter are telic predicates (including both accomplishment predicates and achievement predicates), which have a culmination point as part of their meaning. In this section, we will show that the seeming resultative [... *V-ko iss-*] expressions, which seem to be realizations of the R construction, have to be further divided into two types: those of the “(real) R construction” and those of the “p(seudo)-R(-reading)” construction. Although these are both modifier-modified constructions, they have very different properties. The major source of differences between them is the difference of the predicates in the [... *V<sub>i</sub>*] position: while those in the former can indicate a present state with their past tense form, those in the latter have the present state meaning inherently. As an important difference, the p-R construction is not subject to the constraints operating on the R construction. As we will see in section 3.2, the p-R construction comprises, among others, all those cases in which negative verbal expressions appear in [... *V<sub>i</sub>*]. These negative verbal expressions have a stative meaning, regardless of the aspectual property of their input predicates. A common property of all the predicates triggering the p-R construction is that they carry stative meanings as their inherent properties. However, the stative meaning in them is different from that in adjectives, which cannot appear in the [... *V-ko iss-*] constructions.

### 3.1. Heterogeneous resultative [*V-ko iss-*] expressions

In such previous studies as EH Lee (2006), J-B Kim (2011, 2013) and K-S Hong (2013), predicates like *al-* ‘to know’ are treated as triggering the regular R construction.<sup>14)</sup> It is true that *al-* triggers a construction which does not seem to be much different from the R construction discussed in the previous section:

- (21) *swuci-nun*    *ku sasil-ul*        *al-ko*        (*coyonghi*)    *iss-ø-ta* /  
       Susie-CT     that fact-Acc     know-X       quietly       Y-Pres-Decl  
       (maywu) *nolla-ass-ta* / ...  
       greatly    be surprised-Past-Decl / ...  
       ‘Susie remains as it is (quietly) / was surprised (very much) / ... after  
       knowing the fact.’

14) Although EH Lee (2006) and K-S Hong (2013) posit only one construction for the [... *V-ko iss-*] expressions, they regard *al-* ‘to know’ as having the same properties as those predicates triggering an R-reading. S Suh (2015: 285), citing some works, notices that “*-ko iss* is often compatible with the predicates not belonging to the category of activity or accomplishment predicates” with reference to such predicates as *al-* ‘to know’ and [*wichi ha-*] ‘to be located.’

As *iss-* can be modified and can be replaced with other predicates, the construction concerned cannot be the P construction.<sup>15)</sup> The meaning in this sentence is largely the same as that of a regular R-reading sentence. That is, Susie is in the state of knowing the fact when she is in the event of remaining as it is (quietly) or when she is in the event of being surprised (very much).

However, there are some noticeable differences between the (regular) R construction and the construction in (21), which we call the “p(pseudo)-R construction.” First of all, the predicates allowed in the V-*ko* position are different. While the R construction requires those predicates which can represent a present state with the past tense form, the predicates in the p-R construction represent a present state with the present tense form.<sup>16)</sup> For example, let us observe the following sentences containing the verb *al-* ‘to know’:

- (22) a. na-nun ku sasil-ul cal {anta/al-ø-nta/}.
- I-CT that fact-Acc well know-Pres-Decl
- ‘I know the fact well. = I am in the state of knowing the fact well.’
- b. na-nun ku sasil-ul cal al-ass-ta.
- know-Past-Decl
- ‘I knew the fact well. ≠ I am in the state of knowing the fact well.’

From (22a), we can see that the verb in its present tense form indicates a present state of knowing the fact, just as the present tense adnominal form *-nun* indicates a present state (e.g., [... {*anun/al-nun*/} *salam*] ‘the person who knows ...’) (cf. footnote 26). Sentence (22b), which has the past tense form of the verb, cannot indicate a present state.<sup>17)</sup> Remember that the predicates in the R construction can indicate a present state with their past tense form V-*ess-* and with their past tense

15) We believe that the structure of (21) is the same as that for the (regular) R construction (cf. (16), (26)).

16) According to S Nam (2004) and Y-s Kim (2004, 2006), all the predicates which trigger the resultative [... V-*ko iss-*] (and [V-*e iss-*]) have the result state as their inherent meanings (cf. K-S Hong 2013: 1084). However, we are under the conviction that only those which trigger the p-R construction have the state meaning inherently.

17) One might assume that the past tense form of *al-* ‘to know’ can indicate a present state in [*cikum al-ass-e(-yo)*] (cf. K-S Hong 2013: 1087). Note that *cikum* ‘now’ is an adverbial noun which usually indicates the present time. However, as far as the expression is acceptable, there seems to be involved a kind of coercion in the interpretation of *cikum*. The expression means ‘(I) became to know (it) just now’ rather than ‘(I) am in the state of knowing (it) presently.’ The word *cikum* (in its coerced sense of ‘just now’) can occur even with such activity predicates like *mek-* ‘to eat’ and *po-* ‘to see’: [(*na-to cikum mek/po-ass-e(-yo)*] ‘(I also) ate/saw (it) just now.’ In addition, [*al-ass-e(-yo)*] can be used as an answer to such questions as [do you know what I mean?]. Here it means ‘(I) got it’ rather than ‘I am in the state of knowing (it) presently.’

adnominal form *V-un* (e.g., [*... ip-ess-ta*] ‘is wearing,’ [*... ip-un salam*] ‘a person who is wearing ...’). Then, we can conclude that the predicates in the p-R construction represent state as part of their inherent meanings.<sup>18)</sup> That is, here the state reading comes from the predicates themselves as their intrinsic nature. On the other hand, the predicates triggering the R construction are not intrinsic stative predicates. The resultative reading does not come from the predicates themselves, but is caused by the interactions of *-ko* ‘after’ and the preceding predicate attached to it.

Secondly, there is a difference in the nature of the “simultaneity effect” between the R and p-R constructions. As we have observed in section 2.2, there is an important difference between sentences like (11b) and sentences like (12), although both of which contain the Adv *-ko* ‘after.’

- (11) b. minho-nun yenghwa-lul [pap-ul mek]-ko po-ass-ta.  
 Minho-CT movie-Acc boiled rice-Acc eat-Advr see-Past-Decl  
 ‘Minho saw a movie after he ate a meal.’

- (12) koyangi-ka [mok-ey pangwul-ul tal-ko]  
 cat-Nom neck-at bell-Acc attach-Advr  
 (kamanhi) iss-ø-ta / cam-ul ca-ø-nta / ...  
 silently stay-Pres-Decl / sleep-Acc sleep-Pres-Decl  
 ‘The cat stays/remains (as it is) / sleeps (silently) after tying a bell on his neck.’

While (12) is a realization of the R construction, (11b) is one of a more general modifier-modified construction.

Before we go into the simultaneity difference, however, we need to identify the status of the *-ko* in the p-R construction, whether it is the same as the one in the sentences above:

- (23) a. minho-nun [ku sasil-ul al-ko]  
 Minho-CT that fact-Acc know-X  
 motun kes-ul phoki ha-yess-ta.  
 all thing-Acc abandonment do-Past-Decl  
 ‘Minho abandoned everything after knowing the fact.’

18) The fact that the p-R predicates represent a present state (as part of their meanings) with their present tense form does not mean that the verb *al-* ‘to know’ is a real “stative verb” like *khu-* ‘to be big,’ which is called an adjective in Korean, as we will observe in section 3.2.

- b. minho-nun    motun    kes-ul    [ku    sasil-ul    al-ko]  
 Minho-CT    all    thing-Acc    that    fact-Acc    know-X  
 phoki    ha-yess-ta.  
 abandonment    do-Past-Decl

‘Minho abandoned everything after knowing the fact.’

As in (23b), the phrase [*ku sasil-ul al-ko*] ‘after knowing the fact’ can be inserted between the main predicate [*phoki ha-*] and its object [*motun kes-ul*]. This clearly shows that the *-ko* here cannot be a coordinate conjunction meaning ‘and.’<sup>19)</sup> Judging from the translations of the sentences, it would be reasonably analyzed as the same *-ko* as that in (11b) and (12). As we can see from the following data, all of them have a common property.

- (24) a. minho-nun    yenghwa-lul    [(*\*swuci-ka*)    pap-ul  
 Minho-CT    movie-Acc    Susie-Nom    boiled rice-Acc  
 mek]-ko    po-ass-ta.  
 eat-Advr    see-Past-Decl

‘Minho saw a movie after he ate a meal.’

- b. koyangi-ka cam-ul    [(*\*kay-ka*)    mok-ey pangwul-ul    tal-ko  
 cat-Nom    sleep-Acc    dog-Nom    neck-at bell-Acc    attach-Advr  
 ca-ø-nta / ...  
 sleep-Pres-Decl

‘The cat sleeps, while attaching a bell on its neck.’

- c. minho-nun    motun    kes-ul    [(*\*swuci-ka*)    ku    sasil-ul  
 Minho-CT    all    thing-Acc    that    fact-Acc  
 al-ko    phoki    ha-yess-ta.  
 know-Advr    abandonment    do-Past-Decl

‘Minho abandoned everything after knowing the fact.’

In all these sentences, the subject of the *-ko* phrase and that of the main clause have to refer to the same entity, although they can have different thematic roles.<sup>20)</sup> Based

19) As was pointed out by a reviewer, the fact that the verb *al-* ‘to know’ does not allow the past tense marker *-ess* also indicates that the *-ko* concerned cannot be a coordinate conjunction.

20) A reviewer said that (24a) is grammatical, with “an intonational pause around the *-ko* phrase,” even when it has the subordinate subject explicitly. As is argued in NIKL (2005: 126), however, the



on the discussions here, we will assume that the *-ko* in the p-R construction is the adverbializer *-ko* meaning ‘after.’<sup>21)</sup>

Now, let us turn to the issue of simultaneity effect with reference to the difference between (11b) and (12). For the R-reading (12) to be true, the state resulting from attaching a bell has to be maintained while the cat is staying or sleeping. However, sentence (11b), which realizes a more general modifier-modified construction, does not have such an entailment: only the temporal order of two separate events, i.e., eating a meal and seeing a movie, is relevant. Remember that the entailment about the maintenance of the result state in (12) is implemented in (14):

- (14) The meaning of  $[[\emptyset [\dots V_1]_{VP1}]_{S1}-ko]_{AdvP}$  in the R construction:  
 ‘(while)  $\emptyset$  experiencing the result state of VP<sub>1</sub>-ing’

The present participle form of the verb *experience* indicates that the result state is maintained at the time represented by V<sub>2</sub> in the R construction (cf. (15)).

The p-R construction in (21) also shows a simultaneity effect. That is, it is generally assumed that Susie maintains the state of knowing the fact when she ‘remains as it is (quietly)’ or ‘was surprised (very much).’ However, there is a difference in the nature of the simultaneity effect between the R and p-R constructions. As we have just seen, the former entails it and, hence, it is implemented as the meaning of the construction. On the other hand, we believe that the nature of the simultaneity effect in the latter is pragmatic rather than semantic. We can account for the effect pragmatically with reference to the properties of the predicates concerned and the Adv *-ko* meaning ‘after.’ In (21), the knowing event occurred before the event of remaining or being surprised. Usually an event denoted by such predicates as *al-* ‘to know,’ which contain the (result) state as part of their inherent meaning, cannot be repeatable or cancellable easily. Hence, in most contexts, the state resulting from the V<sub>1</sub> *al-* would hold when the event represented by V<sub>2</sub> is in effect.

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subjects of the two clauses connected with the subordinate/adverbial *-ko* ‘after’ seem to refer to the same entity. If it is acceptable, there may have been involved a kind of coercion in its interpretation (probably caused by the intonation pause).

- 21) Eun-Jung Yoo (p.c.) suggested that the *-ko* in (24b-c) can be regarded as having the meanings ‘experiencing the resultant/continuing state of V,’ respectively. This suggestion is based on the intuition that, while the ‘after’ meaning is apparent in (24a), that meaning is not so obvious in (24c). What is important, however, is the fact that the event of knowing occurred/started before the event of abandoning in (24c) rather than the fact that the former event continues up to the point of the latter event (cf. (25)). Even in such expressions as  $[(ku\ sasil-ul)\ molu-ko \dots V_2]$  ‘not knowing (the fact),’ the state/event of not knowing has to precede the V<sub>2</sub> event. In addition, it is not clear how the particle *-ko* itself can have such complex meanings of such subtle differences.

We can see the contrast in the nature of the simultaneity effect between the two constructions clearly from the following set of data:

- (25) a. i) minho-nun moca-lul ssu-ko halwu congil  
Minho-CT hat-Acc wear-Advr all day

mes-ul pwuli-ess-ta.  
smartness-Acc adonize-Past-Decl

‘Minho adonized himself the whole day with wearing a hat.’

- ii) #cwungkan-ey palam-i pwul-e ku moca-lul  
middle-at wind-Nom blow-because that hat-Acc

ilh-e peli-ess-ciman.  
lose -Past-although

‘although he lost the hat midway due to the wind blow.’

- b. i) minho-nun ku sasil-ul al-ko sam nyen tongan  
Minho-CT that fact-Acc know-Advr three year span

swum-e sal-ass-ta.  
live in hiding-Past-Decl

‘Minho lived in hiding for three years after knowing the fact.’

- ii) cwungkan-ey meli-lul tachi-e ku sasil-ul  
middle-at head-Acc get hurt-because that fact-Acc

ic-e peli-ess-ciman.  
forget -Past-although

‘although he forgot the fact midway because he got hurt in the head.’

The two utterances in (25a) are not compatible, while those in (25b) constitute a natural sequence. The unnaturalness of the second utterance in the former shows that the simultaneity effect in the R construction cannot be cancelled. On the other hand, the naturalness of the second utterance in the latter shows that the simultaneity effect in the p-R construction can be cancelled. Hence, we can say that the R construction entails the simultaneity effect but the p-R construction just implicates the effect.<sup>22)</sup> In this sense, the p-R construction is the same as that in sentence (11b),

22) Eun-Jung Yoo (p.c.) said that it is not clear whether the simultaneity effect induced by such p-R predicates as *molu-* ‘not to know’ and [*uycon(-ul) ha-*] ‘to rely’ in (27-29) can really be cancelled. We have to establish a set of criteria to test whether the simultaneity effect can be cancelled or not. If it is not cancellable with some predicates, we may need to distinguish two different types of p-R construction: one with a cancellable simultaneity effect and the other with a non-cancellable one.

which is a realization of a general modifier-modified construction. That is, just like the construction for (11b), the p-R construction can be represented as in (15).

$$(15) \dots [[[\emptyset \dots V_1]_{SI-ko_{Adv}}]_{AdvP} [\dots V_2]_{V2/VP2}]$$

Unlike the R construction, however, the [ $\dots$  V-*ko*] phrase in it does not have the meaning represented in (14) and, hence, it is not subject to the constraints reflecting the meaning.

We have observed that there are differences between the R and p-R constructions in the predicates triggering them and in the nature of the simultaneity effect. There is a third difference between them: the implicit subject in the [ $\dots$  V-*ko*] phrase in (21), i.e., [ $\emptyset$  *ku sasil-ul al-ko*] ‘after knowing the fact,’ does not have an Undergoer role, unlike in the R construction.<sup>23)</sup> The phrase has the meaning of ‘after knowing the fact’ rather than ‘(while)  $\emptyset$  experiencing the result state of knowing the fact.’ What we know is not likely to be regarded as something we experience. For example, when we ‘know’ the fact that the earth is round, we cannot say that we ‘experience’ the knowledge. We are just in a mental state of knowing the fact, a state in which we have one more piece of information about the world than the state in which we do not have the information. Considering the fact that the syntactic and pragmatic constraints on the R construction are based on the abstract predicate *experience* posited for the construction, we can predict that no such constraints would operate on the p-R construction. This prediction will be borne out below when we deal with those cases in which -*ko* is preceded by negative verbal expressions.

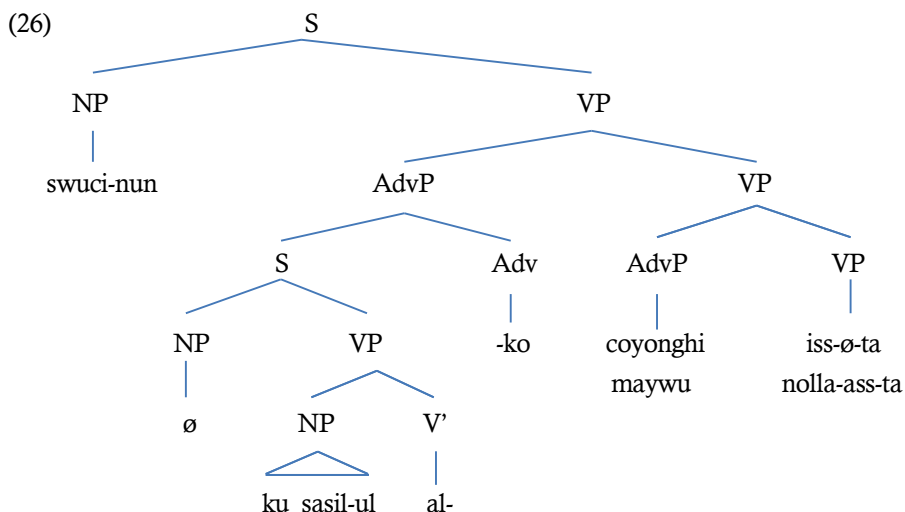
Despite the differences between the two constructions observed thus far, their tree structures are the same because the [ $\dots$  V-*ko*] phrases in them are both adverbial modifiers. As the [ $\dots$  V-*ko*] phrase in the p-R construction is the same as that in sentences like (11b), all the three constructions concerned have the same tree structures (cf. (24)). Now we can analyze sentence (21) as follows:

23) We assume that the subject of *al-* ‘to know’ has the thematic role of Theme or, more preferably, Possessor, like that of such predicates as *kaci-* ‘to possess,’ [*(ton-i) manh-*] ‘to have much (money),’ *kenkang-ha-* ‘to be healthy,’ *alumtap-* ‘to be beautiful,’ [*yeyu-ka iss-*] ‘to have time/money to spare.’ Just as the subject of these predicates possesses some physical and/or mental “objects/properties,” that of *al-* can be regarded as possessing what we have learned.

- (21) swuci-nun      ku    sasil-ul    al-ko  
 Susie-CT        that fact-Acc   know-Advr

(coyonghi) iss-ø-ta /                      (maywu) nolla-ass-ta / ...  
 quietly    remain-Pres-Decl / greatly    be surprised-Past...

‘Susie remains as it is (quietly) / was surprised (very much) / ... after knowing the fact.’



The *-ko* phrase, as an AdvP, modifies the following VP. The invisible subject inside the AdvP has the same referent as the subject of the main predicate, i.e., Susie, due to the property of the adverbializer *-ko* ‘after.’ Although, compared with the modifier-modified construction behind sentences like (24a) and (24c), the R construction behind sentences like (24b) is a more restricted construction, the structures concerned are all the same. The R construction has restrictions in the sense that the *-ko* phrase in it has a meaning which cannot be attributable to its component parts, as we have seen in (14): it has the abstract predicate *experience* and implements the simultaneity effect semantically.

In addition to the verb *al-* ‘to know,’ predicates of the following also trigger the p-R construction. One of the most characteristic properties of them is that their present tense form with *-ø* and their present tense adnominal form with *-nun* represent a present state (cf. footnote 26).<sup>24)</sup>

24) I have classified the predicates concerned into three groups and came up with a term for each of

(27) Predicates of “mental state”:

- |    |                            |                         |                                    |
|----|----------------------------|-------------------------|------------------------------------|
| a. | al- 'to know,'             | molu- 'not to know,'    | [kiek(-ul) ha-] 'to remember,' ... |
| b. | molu- $\emptyset$ -nta,    | molu-nun salam;         |                                    |
|    | -Pres-Decl                 | -Adnr person            |                                    |
|    | 'does not know'            | '... who does not know' |                                    |
|    | kiek ha- $\emptyset$ -nta, | kiek ha-nun salam       |                                    |
|    | -Pres-Decl,                | -Adnr person            |                                    |
|    | 'does remember'            | '... who does remember' |                                    |

(28) Predicates of “belief”:

- a. mit- 'to believe,' [hwaksin(-ul) ha-] 'to have confidence,' [uysim(-ul) ha-]  
'to doubt,' [chwuceng(-ul) ha-] 'to estimate,' [chwuchuk(-ul) ha-] 'to  
guess,' [kanum(-ul) ha-] 'to estimate,' [cimcak(-ul) ha-] 'to guess';  
[uyci(-lul) ha-] 'to depend,' [uycon(-ul) ha-] 'to rely,' ...
- b. mit- $\emptyset$ -nunta,            mit-nun    salam;  
      -Pres-Decl            -Adnr    person  
  
'does believe'            '... who does believe'  
  
uyci ha- $\emptyset$ -nta,            uyci ha-nun    salam  
      -Pres-Decl            -Adnr    person  
  
'does depend'            '... who does depend'

(29) Predicates of “perception”:

- a. [kamci(-lul) ha-] ‘to perceive,’ [cikak(-ul) ha-] ‘to perceive,’; [insik(-ul) ha-]  
‘to recognize,’ [inci(-lul) ha-] ‘to become aware of,’ [uysik(-ul) ha-] ‘to be  
conscious,’ ...
- b. kamci ha-Ø-nta,      kamci ha-nun salam;  
      -Pres-Decl                  -Adnr person  
  
‘does perceive’      ‘... who does perceive’  
  
insik ha-Ø-nta,      insik ha-nun salam  
      -Pres-Decl                  -Adnr person  
  
‘does recognize’      ‘... who does recognize’

them. However, as the classification and the terms are just based on my intuitions, we need further studies to provide an objective classification of them. In addition, there may be other types of predicates which can trigger the p-R construction.

Unlike the predicates triggering the R construction, these predicates have a state after the culmination point as their inherent property. Hence, they can represent a present state reading with their present tense form rather than with their past tense form. In addition, when the predicates modify the following nouns, they take the present tense form of the adnominalizer to indicate a present state. Remember that the R-reading predicates take the past tense form of the adnominalizer for the same purpose.

Broadly speaking, the p-R predicates in (27-29) can be termed as “predicates of cognition.” However, as our classification of P, R and p-R predicates are based not only on their semantic properties but also on their lexical and syntactic properties, our predicates of cognition are more restricted than those based mostly on their semantic properties. For example, in the list of the predicates of cognition in C Lee (1999: 233-) are also included predicates like [*sayngkak(-ul) ha-*] ‘to think,’ *ic-* ‘to forget’ and *kkaytat-* ‘to realize.’ In our analysis, the first one belongs to the P predicates and the second and third ones belong to the R predicates.

We need to note that some of the predicates in (27-29) are ambiguous between a P-reading and a p-R-reading: e.g., predicates like [*kiek(-ul) ha-*] ‘to remember,’ *mit-* ‘to believe’ and [*insik(-ul) ha-*] ‘to recognize’ (cf. footnote 10). When they trigger the P construction, they have the meaning of (mental) activities. When they trigger the p-R construction, they have the meaning of (mental) states. Among the two senses they have, the sense which triggers a P-reading becomes salient when the predicates are modified by *kyeysok* ‘continuously’ or *yelsimhi* ‘laboriously,’ which can typically combine with activity predicates taking animate subjects.

- (30) a. swuci-nun kyeysok ku il-ul kiek ha-ø-nta /  
 Susie-CT continuously that incident-Acc remember-Pres-Decl /  
 mit-ø-nunta / insik ha-ø-nta.  
 ‘Susie remembers / believes / recognizes that incident as ever.’
- b. swuci-nun kyeysok ku il-ul kiek ha-ko  
 Susie-CT continuously that incident-Acc remember-Comp  
 (\*cal/\*cengmal) iss-ø-ta.  
 well/really Prog-Pres-Decl  
 ‘Susie is still remembering the incident (well/really).’

Although the sentences in (30a) would be ambiguous without *kyeysok* ‘continuously,’ they have only an activity reading due to the disambiguating nature of the adverb.

With this activity sense the [... V-ko iss-] expression can have only a P-reading, as we can see in (30b). On the other hand, the following sentences have only a p-R-reading:

- (31) swuci-nun ku il-ul kiek ha-ko  
 Susie-CT that incident-Acc remember-Advr  
 coyonghi iss-ess-ta / miso-lul {ciess/cis-ess/}-ta.  
 quietly stay-Past-Decl smile -Past-Decl  
 ‘Susie stayed (as it is) / smiled quietly, after remembering the incident.’

These sentences cannot have a P-reading due to the modifier *coyonghi* ‘quietly.’ They have only a p-R-reading and, hence, predicates like [*miso-lul cis-*] can occur in the position of the main predicate. Such expressions as the following are awkward because there is a conflict between the requirements of the two senses:

- (32) \*swuci-nun [kyeysok ku il-ul kiek ha-ko] miso-lul cis-ess-ta.  
 Susie-CT continuously that incident-Ac remember-X smile-Past-Decl  
 Intended: ‘Susie smiled after remembering that incident as ever.’

The adverb *kyeysok* is compatible only with the first sense, but the predicative [*miso-lul cis-*] is compatible only with the second sense.

### 3.2. Negative verb phrases and adjectives

There are some [... V-ko iss-] expressions where the V is negated. Previous analyses such as M-J Kim (2009) analyze these expressions as realizing either the P construction or the R construction. However, we will show that they have to be analyzed as neither of them but as the p-R construction. To begin with, we have seen that the verb *molu-* ‘not to know,’ which has a negative meaning, belongs to the p-R-reading predicates, just like its positive counterpart *al-* ‘to know.’ It is very clear that verbal expressions with a negative meaning typically represent a state, because they are the denial of what is represented by the input verb.<sup>25)</sup> The situation resulting from the denial of an event cannot be other than a state. Regardless of the aspectual type

25) We may use the test of [X is in the state of ...] or [X keeps the state of ...] (Ilkyu Kim, p.c.). For example, [X is in the state of not crying / not building a house / not coughing] are good, while [X is in the state of crying / building a house / coughing] are very awkward.

of the source, whether it is an activity predicate, an accomplishment predicate or an achievement predicate, the whole negative expression always indicates a state. That is, negative VPs are atelic, which cannot trigger the R construction because they do not contain a culmination point. In addition, the fact that the predicates *al-* ‘to know’ and *molu-* ‘not to know’ show the same properties in indicating a present state with the present tense form and with the present tense adnominal form, as we can see in (33a) below, is an indication that they cannot belong to the R-reading predicates. In other words, they do not satisfy the lexical constraint, one of the three constraints operating on the R construction (cf. section 2.2).

- (33) a. ku    sasil-ul    molu-ø-nta,                      ku sasil-ul molu-nun    salam  
           that fact-Acc do not know-Pres-Decl,                      -Adnr person  
           ‘does not know the fact’                      ‘... who does not know the fact’
- b. minho-nun    ku    sasil-ul    molu-ko  
    Minho-CT    that fact-Acc do not know-Advr  
    chenchenhi    hakkyo-ey    ka-ass-ta.  
    slowly            school-at go-Past-Decl  
    ‘Minho went to school slowly not knowing the fact.’

Sentence (33b) shows that the construction induced by *molu-* ‘not to know’ is not the P construction, either, because the main predicate can be other than *iss-* and it can be modified. Hence, as far as the sentence has a resultative reading, it has to be analyzed as realizing the p-R construction.

If such negative meaning predicates as *molu-* ‘not to know’ trigger the p-R construction, then we can conjecture that negative VPs can also trigger the same construction. Let us first consider examples containing activity predicates:<sup>26)</sup>

- (34) a. an    wul-ess-ta /    wul-ci            anh-ass-ta  
           not cry-Past-Decl cry -Comp do not-Past-Decl  
           ‘did not cry’

26) There are three factors involved in determining the forms of the adnominalizers in Korean. When they are attached to verbs, *-nun* is used to indicate the present tense and *-(u)n* to indicate the past tense (cf. (36b)). When they are attached to adjectives, *-(u)n* is used to indicate the present tense. As for *-(u)n*, *-un* is used when its host ends in a consonant and *-n* is used when its host ends in a vowel. In (34b) and (35b), although the verb *wul-* ‘to cry’ ends in a consonant, it combines with *-n* to indicate the past tense, because the stem-final consonant /l/ is dropped (cf. footnote 9).



- b. an {wun/wul-un/} / wul-ci anh-un salam  
 -Adnr(Past) -Adnr(Past) person  
 'a person who did not cry'
- c. minho-nun an wul-ko / wul-ci anh-ko  
 Minho-CT not cry-Advr cry-Comp do not-Advr  
 (cal) iss-ø-ta / nol-ø-nta / cinay-ø-nta.  
 well stay ... / play ... / spend ...  
 'Minho stays / plays / spends (his time) (well) without crying.'

- (35) a. mos wul-ess-ta / wul-ci mosha-yess-ta  
 not cry-Pres-Decl cry -Comp cannot-Past-Decl  
 'could not cry'
- b. mos {wun/wul-un/} / wul-ci mosha-n salam  
 -Adnr(Past) -Adnr(Past) person  
 'a person who could not cry'
- c. minho-nun mos wul-ko / wul-ci mosha-ko  
 Minho-CT not cry-Advr cry-Comp cannot-Advr  
 (wuwulha-key) iss-ø-ta / cinay-ø-nta.  
 gloomily stay ... / spend ...  
 'Minho stays/spends (his time) (gloomily) without being able to cry.'

In (34) we have the negative adverb *an* or the negative auxiliary predicate *anh-*, which represent neutral negation or an intention not to do something. These negative forms of *wul-* 'to cry' cannot indicate a present state with the past tense form or with the past tense adnominal form, as we can see in (34a-b). Hence, they cannot induce the R construction. They cannot induce the P construction either, because the main predicate can be other than *iss-* and it can be modified, as we can see in (34c). This is congruent with our intuition that a stative predicate, which does not have any part indicating process, cannot be used in [ $\dots$  V-*ko iss-*] to indicate an on-going activity. These facts clearly show that the construction involved is the p-R construction. In (35) we have the negative adverb *mos* or the negative auxiliary predicate *mosha-*, which have the implication of lack of ability. The facts here also lead us to the same conclusion. It is noteworthy that, while the [ $\dots$  V<sub>1</sub>-*ko*  $\dots$  V<sub>2</sub>] sentences with the positive forms of activity predicates cannot have resultative readings, those with the negative forms of them have only resultative readings.

From the data in (34-35), we can see that negative expressions involving the verb *wul-* ‘to cry,’ which is an activity predicate, trigger the p-R construction. Now let us consider negative expressions of the verb *ssu-* ‘to wear,’ which is an accomplish predicate:

- (36) a. moca-lul an ssu-ess-ta / ssu-ci anh-ass-ta  
 hat-Acc not wear-Past-Decl wear -Comp do not-Past-Decl  
 ‘did not put a hat on’ or ‘have not put a hat on’
- b. moca-lul an ssu-n / ssu-ci anh-un salam  
 hat-Acc Adnr(Past) -Adnr(Past) person  
 ‘a person who did not put a hat on’ or ‘a person who has not put a hat on’
- c. minho-nun moca-lul an ssu-ko / ssu-ci anh-ko  
 Minho-CT hat-Acc not wear-Advr wear-Comp do not-Advr
- (cal) iss-ø-ta / nol-ø-nta.  
 well stay ... / play ...
- ‘Minho stays/plays (well) without wearing a hat.’

Unlike those of *wul-* ‘to cry’ in (34), the *an* or [*-ci anh-*] negative expressions of *ssu-* ‘to wear’ can indicate a present state with the past tense form and with the past adnominal form, as we can see in (36a-b). Hence, the construction in (36c) satisfies the lexical constraint for the R construction. However, as we will see just below, this does not mean that (36c) is actually a realization of it, because it has to further satisfy the other two constraints to be a real example of it. On the other hand, the situation with the negative expressions containing *mos* or [*-ci mosha-*] is different from that in (36):

- (37) a. moca-lul mos ssu-ess-ta / ssu-ci mosha-yess-ta  
 hat-Acc not wear-Pres-Decl wear-Comp cannot-Pres-Decl  
 ‘could not put a hat on’
- b. moca-lul mos ssu-n / ssu-ci mosha-n salam  
 -Adnr(Past) -Adnr(Past) person  
 ‘a person who could not put a hat on’
- c. minho-nun moca-lul mos ssu-ko / ssu-ci mosha-ko  
 Minho-CT hat-Acc not wear-Advr wear-Comp do not-Advr
- (wuwulha-key) iss-ø-ta / cinay-ø-nta.  
 gloomily stay ... / spend ...
- ‘Minho stays/spends (his time) (gloomily) without being able to wear a hat.’

Contrary to the negative expressions in (36), the expressions here cannot indicate a present state with the past tense form or with the past adnominal form, as we can see in (37a-b). This property is enough to show that sentence (37c) is a realization of the p-R construction.

We have observed some resultative [ $\dots V_1$ -ko  $\dots V_2$ ] sentences containing negative expressions in the [ $\dots V_1$ ] position. The expressions with *an* or [*-ci anh-*] do not have the same properties as those with *mos* or [*-ci mosha-*].<sup>27)</sup> None of the latter can indicate a present state with the past tense form or with the past adnominal form, regardless of the type of the input verb (cf. (35), (37)). As they do not satisfy the lexical constraint, they cannot trigger the R construction. On the other hand, the former can indicate a present state with the past tense form or the past tense adnominal form when the input verb is telic (cf. (36)), although they cannot when the input verb is non-telic (cf. (34)). That is, the negative VP in the [ $\dots V_1$ ] position in sentence (36c) satisfies the lexical constraint for the R construction.

Let us consider whether sentence (36c) is really a realization of the R construction. As we have seen in section 2.2, the construction satisfies not only the lexical constraint but also two other constraints: syntactic and pragmatic constraints. In addition, as we have observed before, the sentences in (19b) and (20a) cannot be realizations of the R construction, because they violate the syntactic constraint and/or the pragmatic constraint:

- (19) b. (\*)sinpal kakey-ka    mwun-ul    yel-ko    iss-ø-ta.  
          shoe store-Nom    door-Acc    open-X    Y-Pres-Decl  
          Intended: ‘The shoe store is opening the door’ or ‘The shoe store is open.’

- (20) a. cyon-i            meyli-uy    elkwul-ey payndu-lul    pwuthi-ko    iss-ø-ta  
          John-Nom Mary-Gen face-at    band-Acc    put on-X    Y-Pres-Decl  
          ‘John is putting a band aid on Mary’s face.’

Sentence (19b) is ungrammatical when [*sinpal kakey*] is interpreted literally, because the R construction requires the invisible subject of  $V_1$  to have an Undergoer role.

27) The difference between the two groups of negative expressions may be due to the fact that the former group have the property of inheriting the characteristics of the input predicate. For example, while [*mek-ci anh-nun-ta*] ‘does not eat’ is a verb phrase because *mek-* ‘to eat’ is a verb, [*khu-ci anh-ta*] ‘is not big’ is an adjective phrase because *khu-* ‘to be big’ is an adjective. On the other hand, the latter group do not have the inheritance property. Note that, unlike the former group, they cannot usually combine with adjectives and cannot indicate neutral negation.

Sentence (20a) does not have an R-reading because the invisible subject is not affected by the state resulting from the VP concerned. In (36c), Minho cannot be analyzed as having an Undergoer role because he cannot experience (the existence of) a hat which is not on his head. Likewise, he cannot be affected anyway by such a nonexistent hat. Hence, we can conclude that (36c) does not satisfy either of the two constraints, which proves that it is not a realization of the R construction.

In conclusion, we can say that none of the [ $\dots V_1$ -*ko*  $\dots V_2$ ] sentences containing negative predicates in the [ $\dots V_1$ ] position can be analyzed as realizing the R construction. As these predicates are stative predicates, which do not have any part indicating process, the sentences cannot be realizations of the P construction either. Hence, they have to be analyzed as the p-R construction. One of the basic properties of this construction is that the predicates in the [ $\dots V_1$ ] position indicate a present state with the present tense form (rather than with the past tense form). The negative VPs in (36a), i.e., [*an ssu-*] and [*ssu-ci anh-*] do not seem to show this property, because their past tense forms indicate a present state. However, we have to note that their present tense forms can also indicate a present state, as we can see in (38a) below.

- (38) a. (cikum) moca-lul an ssu- $\emptyset$ -nta / ssu-ci anh- $\emptyset$ -nunta  
           now hat-Acc not wear-Pres-Decl wear -Comp do not-Pres-Decl  
           ‘is (now) in the state of not putting a hat on’  
       b. (cikum) an {wunta/wul- $\emptyset$ -nta/} / wul-ci anh- $\emptyset$ -nunta  
           now not cry-Pres-Decl cry -Comp do not-Pres-Decl  
           ‘is (now) in the state of not crying’

Although the accomplishment predicate *ssu-* ‘to wear’ itself indicates an activity in the present tense, its negative forms indicate a state of not performing the activity (cf. footnote 25). That is, while [(*cikum*) *moca-lul ssu- $\emptyset$ -nta*] indicates a present activity, its negative counterparts in (38a) indicate a situation of not performing the activity, which can only be a state as the denial of an event.<sup>28)</sup> As we can see in (38b), the situation is exactly the same with the activity verb *wul-* ‘to cry’ (cf. (34)). We assume that the stative reading in these examples is responsible for the p-R construction.<sup>29)</sup> In addition, note that the meaning of *molu-* ‘not to know,’ which

28) The present tense form [*moca-lul ssu- $\emptyset$ -nta*] and its negative counterpart [*moca-lul an ssu- $\emptyset$ -nta*] share the property of indicating habitual activities (without the adverb *cikum* ‘now’).

29) The present tense forms of the verb phrases in (35a), i.e., [*mos wul- $\emptyset$ -nta*] and [*wul-ci mosha- $\emptyset$ -nta*],

is a typical p-R predicate, can be specified as ‘to be in the state of not knowing.’

In consideration of the above observations about the [... V<sub>1-ko</sub> ... V<sub>2</sub>] sentences containing negative VPs, let us evaluate the analysis of M-J Kim (2009: 3, 6):

- (39) a. wucwu-nun wuntongcang-eyse an talli-ko iss-ø-ta.  
           Uju-CT       playground-at       not   run-KO   ISS-Pres-Decl  
           ‘Uju is not running in the playground.’  
       b. kutul-un samang sinko-lul acik ha-ci anh-ko iss-ø-ta.  
           they-CT   death   report-Acc yet do-Comp do not-KO   ISS-Pres-Decl  
           ‘They are not reporting on the death yet.’ or ‘They have not reported  
           on the death yet.’

She assumes that (39a) is an example of the P construction (probably because *talli-* ‘to run’ is an activity verb) and (39b) is ambiguous between the P and R constructions (probably because [*samang sinko(-lul) ha-*] ‘to report on the death’ is an accomplishment verb phrase). However, according to our observations above, it is most likely that they have only the following meanings: ‘Uju is in the state of not running in the playground’ and ‘they are in the state of not reporting on the death yet,’ respectively. That is, both of the two sentences have only resultative readings. We have already seen that all the [... V<sub>1-ko</sub> ... V<sub>2</sub>] sentences containing negative VPs have to be analyzed as the p-R construction, regardless of whether the input is an activity predicate or a telic predicate.<sup>30)</sup>

There are some other cases in which we can see the contrast between positive VPs and negative VPs clearly, which, in turn, confirm that the R construction and the p-R construction are different. Firstly, we have seen that sentence (20a) does not have a resultative reading (of the R construction). It cannot be a realization of the R construction because it violates the pragmatic constraint. However, when the VP in the [... V-ko] position is negated, it is just fine with a resultative reading (of the p-R construction):

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have the meaning of ‘is in the state of not being able to cry,’ and those in (37a), i.e., [*moca-lul mos ssu-ø-nta*] and [*moca-lul ssu-ci mosh-a-ø-nta*], have the meaning of ‘is in the state of not being able to put a hat on.’

30) Such telic predicates as [*(moca-lul) ssu-*] ‘to wear a hat’ indicate a present state with their past tense form either in positive expressions or in negative expressions (cf. (1), (36-37)). However, the telic predicate [*samang sinko(-lul) ha-*] ‘to report on the death’ in (39b) cannot indicate a present state with its past tense form in the positive expression [*samang sinko-lul ha-yess-ta*]. It can indicate a present state with its past tense form only in the negative expression [*samang sinko-lul ha-ci anh-ass-ta*].

- (40) cyon-i            meyli-uy            elkwul-ey            payndu-lul            pwuthi-ci  
John-Nom        Mary-Gen            face-at            band-Acc            put on-Comp  
  
anh-ko            iss-ø-ta.  
do not-Advr      remain-Pres-Decl

The fact that this sentence is an example of the p-R construction shows that the construction does not obey (some of) the constraints operating on the R construction. Remember that the subject in negative sentences cannot be regarded as having an Undergoer role.

- (41) a. minho-ka      mwun-ul      tat-ko      (kamanhi)      iss-ø-ta.  
 Minho-Nom   door-Acc   close-X   motionlessly   Y-Pres-Decl  
 'Minho is in the process of closing the door.'  
 or 'Minho stays (as it is) (motionlessly) while the door is closed.'  
 b. mwun-i      (minho-eykey)      tat-hi-ko      (\*kamanhi)      iss-ø-ta.  
 door-Nom (Minho-by)   close-Pas-Comp   motionlessly   Prog-Pres-Decl  
 'The door is in the process of being closed (by Minho).'

- (42) a. mwun-i      tat-hi-ci                  anh-ass-ta.  
          door-Nom   close-Pas-Comp   do not-Past-Decl  
          ‘The door was not being closed’ or ‘The door has not been closed.’  
      b. mwun-i tat-hi-ci                  anh-ø-nunta.  
                                  -Comp   do not-Pres-Decl  
          ‘The door is not being closed. = The door is in the state of not being closed.’  
      c. mwun-i tat-hi-ci anh-ko      iss-ø-ta /                  telkheng-keli-ø-nta.  
                                  -Advr   remain-Pres-Decl   rattle                  -Pres-Decl  
          ‘The door stays (as it is) / rattles, while being in the state of not being closed.’

Although the past tense form of [*tat-hi-ci anh-*] can indicate a present state, as we can see in (42a), sentence (42c) is not a realization of the R construction because it does not satisfy the syntactic and pragmatic constraints. It realizes the p-R construction, as we can judge from the data in (42b), which shows that the present tense form indicates a present state (cf. (38)).

In this section, we have seen that the p-R predicates represent a present state (as part of their inherent meanings) with their present tense form. This fact, however, does not mean that they are real stative predicates, which are called “adjectives” in Korean (cf. footnote 2, 18). We know that the verb *al-* ‘to know’ and the negative auxiliary *anh-* ‘not to do’ induce the p-R construction. However, the adjective *yeyppu-* ‘to be pretty’ does not induce the construction:

- (43) \**swuci-nun yeyppu-ko iss-ø-ta.*  
 Susie-CT be pretty-X Y-Pres-ta

This sentence has neither a progressive reading nor a resultative reading. Then, we need to figure out the reason why adjectives cannot induce the p-R construction. Let us compare the following set of data:

- (44) a. *na-nun ku sasil-ul sam nyen-maney al-ass-ta.*  
 I-CT that fact-Acc three year-in know-Past-Decl  
 ‘I came to know the fact in three years.’  
 b. *na-nun ku sasil-ul sam nyen tongan al-ass-ta.*  
 I-CT that fact-Acc three year during know-Past-Decl  
 ‘I knew the fact for three years.’
- (45) a. \**minho-nun sam nyen-maney ku chayk-ul ilk-ci anh-ass-ta.*  
 Minho-CT three year-in that book-Acc read-Comp do not-Past-Decl  
 Intended: ‘??It is in three years that Minho did not read the book.’  
 b. *minho-nun sam nyen tongan ku chayk-ul ilk-ci anh-ass-ta.*  
 Minho-CT three year during that book-Acc read-Comp do not-Past-Decl  
 ‘Minho did not read the book for three years.’
- (46) a. \**swuci-nun sam nyen-maney yeyppu-ess-ta.*  
 Susie-CT three year-in be pretty-Past-Decl  
 Intended: ‘Susie became pretty in three years.’

- b. ?\*swuci-nun sam nyen tongan yeypu-ess-ta.  
 Susie-CT three year during be pretty-Past-Decl  
 Intended: 'Susie was pretty for three years.'

Such "terminative adverbials" as 'in three years' are compatible with telic predicates, which have a culmination point, and such "durative adverbials" as 'for three years' are compatible with activity predicates or stative predicates with limited duration. As the verb *al-* 'to know' in (44) allows both [*sam nyen-maney*] 'in three years' and [*sam nyen tongan*] 'for three years,' we can see that it has both a culmination point and a state of limited duration as parts of its meaning. The unit containing the auxiliary *anh-* in (45) allows only 'for three years,' which shows that it makes the whole negated VP have only limited duration as part of its meaning. Although (45a) is grammatical when [*sam nyen-maney*] is in the scope of negation, it is ungrammatical when it is outside of the scope. The reading which is relevant here is the latter one, in which only [*chayk-ul ilk-*] is negated. On the other hand, the adjective *yeypu-* 'to be pretty' in (46) does not allow either of them, which shows that it represents neither a culmination point nor limited duration.<sup>31)</sup> The difference between this adjective and the predicates *al-* 'to know' and [*... ilk-ci anh-*] 'not to read' lies in their compatibility with the durative adverbials. Hence, we can conclude that for a predicate to be able to induce the p-R construction it has to have limited duration as part of its meaning.<sup>32)</sup> Note that the state represented by the p-R-reading predicates are changeable, while that represented by adjectives are unchangeable or, at least, not easily changeable.

#### 4. Conclusion

Under the assumption that there is more than one construction behind [*... V-ko iss-*] expressions in Korean, at least a progressive construction (the P construction)

31) Adjectival sentences containing a durative adverbial become more acceptable when the period mentioned is contrasted with other periods of time.

i) ?swuci-ka cinan sam nyen tongan-un yeypu-ess-ta.  
 Susie-ka past three year during-CT be pretty-Past-Decl  
 'Susie was pretty for the past three years (contrasted with other periods of time).'

Here the period of the past three years is contrasted with other periods of time with the use of the particle *-un*, which has the function of indicating contrast in the middle of the sentence.

32) K-S Hong (2013: 1079, 1082) assumes that [*... V-ko iss-*] is not compatible with the lexical category of adjectives (in contrast to that of verbs).



and a resultative construction, we have shown that the latter has to be further divided into two different constructions: the (true) R construction and the p(seudo)-R construction. That is, we have shown that the so-called resultative construction comprises two heterogeneous constructions. Although these constructions show similarities as modifier-modified constructions, the former is a more specialized one and, hence, the latter is a more general one. As the predicates involved are different, the constructions have different properties. For example, none of the constraints operating on the former applies to the latter. By positing the p-R construction, we could, among others, handle the expressions where *-ko* combines with negative VPs very systematically. As far as we know, no previous analyses have provided a framework which can handle all the [... V-*ko iss*-] expressions containing negative VPs.

As a consequence of establishing two different types of constructions behind the resultative [... V-*ko iss*-] expressions, we could provide a reasonable classification of the predicates involved. The predicates in the R construction are those telic predicates which can represent a present (resultative) state with their past tense forms. This implies that the predicates have a state reading derived from other sources. On the other hand, the predicates in the p-R construction, including negative VPs, have a state meaning inherently. That is, the predicates in the p-R construction contain a state as part of their inherent meanings and, hence, they can represent a present state with their present tense forms. However, the state indicated by these predicates has limited duration and, hence, can be changeable. This changeable state contrasts with the unchangeable state represented by adjectives, which cannot trigger the p-R construction. This fact shows that the “stative” predicates triggering the construction are different from adjectives in Korean. Consequently, adjectives can trigger none of the three constructions discussed in this paper. Note that, as predicates indicating a stable state, they do not contain a part indicating process, which is necessary for triggering the P construction. They do not contain a culmination point either, which is necessary for triggering the R construction.

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Received: June 22, 2018

Revised: July 31, 2018

Accepted: July 31, 2018