

Constraints on the Perfective [V-*ko iss-*] in Korean: With Reference to a Present State Reading

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ABSTRACT

Korean [... V-*ko iss-*] is ambiguous between progressive and resultative meanings. We assume that it is ambiguous in three ways: P(rogressive)-reading, R(esultative)-reading and p(seudo)-R-reading constructions. These constructions allow different sets of predicates in the [... V] position. Most previous analyses agreed that telic predicates are responsible for the (traditional) resultative reading. However, this telicity condition does not adequately predict the occurrence of the reading: i) p-R predicates are not necessarily telic, and ii) not all telic predicates can trigger the R construction. The aim of this paper is to provide a set of constraints operating on the R construction under the understanding that p-R predicates should be excluded in advance. First, only those telic predicates that can indicate a present state in their past tense form can trigger the R construction. In addition, we show the need to posit two more constraints: a syntactic/semantic constraint and a pragmatic constraint. We further show that the present approach based on these new observations can properly characterize the R construction while excluding the P and p-R constructions. In dealing with the present state reading, we face the recalcitrant phenomenon of a theta role change in the subject of the predicate concerned.

Keywords: [V-*ko iss-*] in Korean, resultative construction, telicity, past time interpretation, present state reading

1. Introduction

In Korean, [... V-*ko iss-*] can indicate, among others, either a progressive meaning (henceforth, P-reading) or a resultative meaning (henceforth, R-reading). Let us examine the following sentences.¹⁾

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- (1) a. *swuci-ka ppalli talli-ko (*cal/*cengmal) iss-ø-ta.*
 Susie-Nom fast run-X well/really Y-NPast-Decl
 ‘Susie is running fast.’
- b. *koyangi-ka mok-ey pangwul-ul tal-ko (cal/kamanhi) iss-ø-ta.*
 cat-Nom neck-at bell-Acc attach-X well/silently Y-NPast-Decl
 ‘The cat stays (well/silently), wearing a bell on its neck.’

While (1a) has only a P-reading, (1b) has only an R-reading in normal contexts. The difference in meaning depends on the nature of the predicates in the V position, and that of the particle *-ko* and the predicate *iss-*, which are glossed as X and Y, respectively. One noticeable difference between (1a) and (1b) is that, while *iss-* cannot be modified by adverbials such as *cal* ‘well’ in the former, it can be in the latter.

There have been many different approaches to the analysis of [... V-*ko iss-*], ranging from “single-construction approaches” to “double-construction approaches” (cf. Section 2.1, Section 3.1). Among them, only a few assume that there are two constructions behind them: the progressive construction, which we will call the P(-reading) construction, and the resultative construction (M-J Kim 2009, J-B Kim 2011, Chae 2018a). Extending this position, we are under the assumption, following the arguments in Chae (2018b), that the latter must be further divided into two different constructions: the (real) R(-reading) construction and the p(seudo)-R(-reading) construction. That is, there are three constructions involved: the P construction, the R construction and the p-R construction.

Our main purpose in this paper is to provide a reasonable set of constraints operating on the R construction, under the understanding that p-R predicates should be excluded from the beginning. Although it is generally assumed that there is a close relation between telic predicates and the construction, this telicity constraint is not enough to properly characterize it. Hence, we need some further constraints. Although the p-R construction provides a kind of resultative meaning, it is not subject to any of these constraints acting upon the R construction. In providing these constraints, we will also consider how we can implement the following fact into a grammatical system: when a telic predicate requiring an Agent subject combines

1) The abbreviations used in this paper are as follows: Acc: accusative (*-ul/lul*), Adnr: adnominalizer, Advr: adverbializer, Comp: complementizer, CT: contrast/topic (*-un/nun*), Decl: declarative, Gen: genitive (*-uy*), Nom: nominative (*-i/ka*), Pas: passive, Pl: plural (*-tul*), NPast: nonpast (*-ø*) (cf. Past: *-ess/ass/yess*), Prog: progressive. As for the allomorphs of the accusative, CT and nominative markers, the first option occurs after a word ending in a consonant and the second option occurs after one ending in a vowel.

with the past tense marker (or with the particle *-ko* ‘after’), it can indicate a present state, in which case its subject requires an Undergoer role rather than an Agent role.

As for the constraints, we will first argue that only those telic predicates which can indicate a present state with their past tense form can trigger the R construction. For example, the verb *tal-* ‘to attach’ in (1b) represents a present state with its past tense form *tal-ass-* ‘attach-Past-’ (when it has a resultative meaning). We will call this property of “indicating the Present State with the Past Tense form” PSPT (cf (24)). It differentiates the R(-reading) predicates from the P(-reading) and p-R (-reading) predicates: only the R predicates have the property of PSPT. It is notable that, although the present state meaning is induced by the past tense form in the R predicates, the meaning is inherent in the p-R predicates (e.g., in verbs such as *al-* ‘to know’ and *molu-* ‘not to know’). In addition, we need to posit two more constraints on the R construction: a syntactic(/semantic) constraint and a pragmatic constraint. The former says that the (invisible) subject of V in [... V-*ko*] should be a sentient being, which reflects the fact that the subject has an Undergoer role. The latter says that the subject should be affected physically, cognitively and/or socially by the state resulting from the predicates in the [... V] position. We will see that the present approach based on these constraints characterizes the R construction properly, while excluding the P and p-R constructions.

The structure of the paper is as follows. In Section 2, we will observe properties of [... V-*ko iss-*] expressions and introduce a “triple-construction approach” proposed in Chae (2018a, 2018b). In Section 3, we will show that the telicity constraint is not enough to restrict the input predicates to the R construction properly. We propose three constraints on the construction: a lexical constraint based on PSPT, a syntactic constraint and a pragmatic constraint. In the first subsection, we will observe some constraints proposed to restrict the resultative construction in previous works. In the next subsection, we will examine the PSPT property and related issues in detail. We will see that some telic predicates in their past tense form and those in the R construction share the special properties of representing a present state and requiring an Undergoer subject. These properties are triggered by the past tense marker *-ess/ass/yess* or the adverbializer *-ko* ‘after,’ which has the function of providing a past time interpretation. In addition, we will consider how we can implement these properties into a grammatical system. In the last subsection, we will discuss the three constraints in detail. Finally, Section 4 concludes the paper, alluding to some issues for further studies. At the appropriate moment we will consider corresponding expressions in other languages such as Japanese, Mongolian and English.

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

Some of the predicates in the [... V] position can occur in more than one construction and hence can trigger ambiguity. The most salient ambiguity is one between P- and R-readings.

- (2) *nay tongsayng-i sakakmo-lul ssu-ko iss-ø-ta.*
 my younger sibling-Nom mortarboard-Acc put on-X Y-NPast-Decl
 ‘My younger sibling is putting on a mortarboard.’
 or ‘My younger sibling is wearing a mortarboard.’

Not only “*put-on* type” predicates such as *ssu-* ‘to put on,’ but some other types of predicates like *tul-* ‘to lift’ and *yel-* ‘to open’ can also trigger ambiguity between the two readings. If a particular property of predicates is responsible for the P-reading and another property for the R-reading, those predicates that have both of the two properties would trigger both of the two readings. In addition, we need to pay attention to the following set of sentences, which seem to represent a resultative reading:

- (3) a. *swuci-nun ku sasil-ul al-ko (coyonghi) iss-ø-ta.*
 Susie-CT that fact-Acc know-X quietly Y-NPast-Decl
 ‘Susie remains as she is (quietly), after knowing the fact.’
 b. *minswu-nun [wul-ci]/ [moca-lul ssu-ci] anh-ko*
 Minsoo-CT cry-Comp/ hat-Acc put on-Comp do not-X
 (*kamanhi*) *iss-ø-ta.*
 silently Y-NPast-Decl
 ‘Minsoo stays as he is (silently), without crying / wearing a hat.’

Although the predicates involved, namely *al-* ‘to know,’ [*wul-ci anh-*] ‘not to cry’ and [*ssu-ci anh-*] ‘not to put on (a hat),’ induce a kind of resultative reading, they are different from those triggering the R construction. While the R predicates indicate a present state with their past tense form, these indicate a present state with their present tense form. Note that the sentences in (3b) contain negative VPs in the [... V] position.

There have been controversies over almost all the issues regarding the constructions responsible for the different meanings of [... V-*ko iss*-]. First, scholars have different

views on the types of predicates that are responsible for the readings. Second, many scholars assume that there is only one construction involved, but some scholars argue that there are two constructions involved (e.g., M-J Kim 2009, 2011; J-B Kim 2011, 2013). We are under the assumption that there are three constructions behind the expressions. Third, among those who are assuming multiple constructions, there are controversies over the particle *-ko* and the predicate *iss-*, whether they have different morphosyntactic status and meanings/functions in the constructions or not.

In this section, we will touch upon these issues briefly, focusing on the findings of Chae (2018a) and Chae (2018b). Our proposal of the constraints on the R construction to be developed in Section 3 is based on these findings. The former has shown that [... *V-ko iss-*] realizes at least two different constructions: one for the progressive meaning (i.e., the P construction) and another for the resultative meaning. The latter has proven that [... *V-ko iss-*] expressions indicating the (seeming) resultative meaning are realizations of two different constructions: the R construction and the p-R construction. It establishes the identity of the p-R construction by factoring out spurious examples from heterogeneous groups of seemingly resultative [... *V-ko iss-*] expressions. We would not be able to come up with an appropriate set of constraints when we take into account these spurious examples together with genuine resultative expressions. The approach taken here is a triple-construction approach. While the P construction is a complement-head construction, the other two are modifier-modified constructions, i.e., adjunct-head constructions.

2.1. Properties of [*V-ko iss-*] expressions

One of the major problems of the single-construction approach lies in accounting for the syntactic properties of [... *V-ko iss-*]. For example, *iss-* cannot be modified when it has a P-reading, while *iss-* can be modified when it has an R-reading (C Lee 1999: 233, M-J Kim 2009: 5, J-B Kim 2011: 882). This difference manifests when an adverb occurs in between *-ko* and *iss-*. For example, when adverbials such as *uycesha-key* 'dignifiedly' occur before *iss-* in (2), the sentence can have only an R-reading. This phenomenon can be accounted for effectively only when we assume that [... *V-ko iss-*] manifests 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-*. According to M-J Kim (2009, 2011) and J-B Kim (2011, 2013), the *iss-* for a P-reading is an auxiliary predicate and the *iss-* for an R-reading is a main/lexical predicate. The way that they differ from each

other is 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 triple-construction approach is different from these previous approaches in other important respects.

One of the most important differences between previous double-construction approaches and the present approach 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. On the contrary, in our approach, they are in a modifier-modified relationship, which implies that *iss-* is not an essential element. Note that the unit [... *V-ko*] cannot be a complement of *iss-*. Most of all, *iss-* is not the only predicate that can occur in the R construction (Chae 2018b: 162, footnote 5):²⁾

- (4) *swuci-ka* [*tongsayng-ul ep-ko*] *talli-ø-nta* /
 Susie-Nom younger sibling-Acc carry on the back-X run-NPast-Decl /
pap-ul mek-ø-nunta / ...
 meal-Acc eat-NPast-Decl
 ‘Susie runs / eats a meal / ... while carrying her younger sibling on her back.’

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

Considering the data in (4), [... *V-ko*] can be better analyzed as an adjunct, which has the function of modifying the following V’ or VP (cf. Chae 2015b). First, in Korean, while the verbal head of a complement is V or V’, that of an adjunct is V’ or VP. The very fact that a VP can occur in the position of *iss-* indicates that

2) Hence, *iss-* is in the parentheses in the title of this paper. Hereafter [... *V-ko iss-*] will be used as indicating [... *V-ko (iss-)*]. The declarative ending *-nta/nunta* in (4) is analyzed as a portmanteau morph rather than a sequence of the “tense marker *-n/nun*” and the declarative ending *-ta*, following the arguments in Chae (2020: 90).

[...V-ko] cannot be a complement of *iss-*.³⁾ This, in turn, accounts for the fact that the main predicates in (1b), (2) and (4) can be modified and/or can take their own complements. Second, an almost unlimited number of predicates can occur in the position of *iss-*, which is related to the fact that the position is for a full phrase. These are typical properties that can be observed in modifier-modified relationships.

As we will see in Section 3.2, a very special property of the predicates that can trigger the R construction is that they can indicate a present state with their past tense forms, namely they have the property of PSPT. Keeping this property of them in mind, let us consider sentences such as (3a). The construction concerned does not seem to be much different from the R construction. The meaning in the 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 represented by the main predicate. In addition, *iss-* can be modified and can be replaced by other predicates. For example, [(*maywu*) *nolla-ass-ta*] ‘was surprised (greatly)’ can replace *iss-*. Hence, in previous studies such as EH Lee (2006), J-B Kim (2011, 2013), Hong (2013) and Park (2014), *al-* ‘to know’ is treated as one triggering the resultative construction.

However, there are some noticeable differences between the R construction and the construction in (3), which we call the p-R construction. Most noticeably, the predicates allowed in the [... V-ko] position are different (Chae 2018b: Section 3.1). While the R construction requires predicates that 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:

- (5) a. *na-nun ku sasil-ul cal {anta/al-o-nta/}*.
 I-CT that fact-Acc well know-NPast-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.’

While the verb in its present tense form indicates a present state of knowing the fact in (5a), the verb in its past tense form cannot in (5b). Hence, we can say that the predicates in the p-R construction represent a present state as part of their

3) Unlike the *-ko* in the P construction, the *-ko* in the R construction is not a complement marker in our approach. Hence, it is not there to satisfy the formal requirements of the following head phrase. As an adverbializer, it has its own meaning of ‘after.’

inherent meanings. That is, here the state reading comes from the predicates themselves. In particular, all negative VPs, regardless of the aspectual properties of their component predicates, have the present state reading intrinsically and hence can trigger the p-R construction (cf. (3b)).

Now we need to consider why sentences like (3) have (wrongly) been assumed to have the same type of resultative meaning as that in (1b) in previous analyses. One of the key properties of the R construction is that the result state of the event represented by the [... V-*ko*] part maintains while the event represented by the main predicate is going on. For example, in (4), while Susie is running, her younger sibling is on her back all the way. We can say that the p-R construction in (3a) also shows this “simultaneity effect,” because it seems that Susie maintains the state of knowing the fact while the event of the main predicate is going on. However, there is a difference in the nature of the simultaneity effect between the R construction and the p-R construction. Although it is entailed in the former, it is just implicated in the latter because it is cancellable in some contexts, as shown in Chae (2018b: 182). That is, while the simultaneity effect is part of the truth-conditional meaning of the former, which is provided by the construction itself, it is pragmatically obtained in the latter. We can account for its pragmatic nature with reference to the properties of the predicates concerned and the particle *-ko* meaning ‘after.’ In (3a), the knowing event occurred before the event of remaining (as she is). Usually an event denoted by predicates such as *al-* ‘to know,’ which contain the (result) state as part of their inherent meaning, cannot be repeatable or cancellable easily. This is the main reason why sentences like (3a) have been treated as having a resultative reading in previous analyses.

The three constructions we have posited require different types of predicates in the [... V] position, which itself constitutes as a piece of evidence for the present analysis: those in the P construction contain a part indicating process, those in the R construction have a culmination point and the PSPT property, and those in the p-R construction have a part indicating (temporary) state.

(6) List of predicates in each construction

- a. P predicates: those with a part indicating activities/process
 - i) physical activity predicates: *no!* ‘to play,’ [*wuntong(-ul) ha-*] ‘to exercise,’ [*cam(-ul) ca-*] ‘to sleep,’ *sal-* ‘to live,’ etc.
 - ii) mental activity predicates: [*salang(-ul) ha-*] ‘to love,’ [*sayngkak(-ul) ha-*] ‘to think,’ *cham-* ‘to suppress,’ etc.

- iii) those inducing both P and R constructions: (“put-on” type predicates) *ip-* ‘to wear (clothes),’ *sin-* ‘to wear (socks/shoes),’ and *pes-* ‘to take off,’ etc.; (others) *ttu-/kam-* ‘to open/close (eyes),’ *tul-* ‘to lift,’ *yel-/tat-* ‘to open/close (doors),’ etc.
- b. R predicates: those with a culmination point and the PSPT property
 - i) (the same as those in (6a.iii))
 - ii) “possessive” predicates: *kaci-* ‘to have,’ [*chaci(-lul) ha-*] ‘to occupy,’ [*soyu(-lul) ha-*] ‘to possess,’ etc.
 - iii) “cognitive” predicates: *ic-/kkamek-* ‘to forget,’ *kkaytat-* ‘to realize,’ [*thetuk(-ul) ha-*] ‘to master/learn,’ etc.
- c. p-R predicates: those with a part indicating state
 - i) “mental state” predicates: *al-* ‘to know,’ *molu-* ‘not to know,’ [*kiek(-ul) ha-*] ‘to remember,’ etc.
 - ii) “belief” predicates: [*hwaksin(-ul) ha-*] ‘to have confidence,’ [*chwuchuk(-ul) ha-*] ‘to guess,’ [*kanum(-ul) ha-*] ‘to estimate,’ etc.
 - iii) “perception” predicates: [*kamci(-lul) ha-*] ‘to perceive,’ [*insik(-ul) ha-*] ‘to recognize,’ [*uysik(-ul) ha-*] ‘to be conscious,’ etc.

Most previous analyses agree that the aspectual properties of these predicates are responsible for the characterization of the progressive and resultative meanings. It is also agreed that there is a close relation between telic predicates and the latter meaning. Unlike the predicates for P and p-R constructions, however, those for the R construction are difficult to define. We have to note that p-R predicates are not necessarily telic (cf. (3b)). In addition, although it is true that the resultative meaning in the R construction is possible only when the predicates involved are telic, it is also true that not all [... V-*ko iss-*] expressions containing telic predicates have the resultative meaning. Hence, as will be seen in Section 3, we need to introduce PSPT and other constraints on the R construction.

2.2. A triple-construction analysis: Chae (2018a, 2018b)

In this section, we will briefly introduce the analysis of the three constructions behind [... V-*ko iss-*] in Chae (2018a, 2018b). In the P construction, which can be represented as [[... V-*ko*] *iss-*], the auxiliary predicate *iss-* takes the [... V-*ko*] phrase

as its complement. In the R construction, [... V-*ko*] is an adjunct of the following predicate phrase. As the predicate here constitutes a part of a phrasal unit, it can be modified by adverbials. In addition, because not only *iss-* but also other predicates can occur in the same position, the construction should be represented as [... V₁-*ko*] [... V₂] rather than as [... V-*ko*] [... *iss-*]. The p-R construction has the same structure as that of the R construction, namely [... V₁-*ko*] [... V₂]. However, there is an important difference: while the predicates in the former have the PSPT property, those in the latter do not. This difference leads to some constructional differences between them.

Before going into an analysis of the three constructions, we need to consider the particle *-ko*. Among its various uses (Chae 2015b: 737-41, 2018a: 395-6), it functions as a (meaningless) complementizer for the P-reading and as an adverbializer for the R-reading. As for their morphosyntactic status, both of them are “clitics,” linguistic units that are dependent phonologically but words syntactically (cf. Spencer & Luis 2012). As syntactic words, they belong to specific lexical categories. We will assume that the complementizer belongs to the lexical category of markers (M), which do not have their own meanings. The adverbializer can be analyzed as belonging to the category of adverbs (Adv), because a clause containing *-ko* (i.e., [S-*ko*]) shows the distribution of an adverbial expression (cf. Chae 2020: 126-8). Semantically, for the P-reading, *-ko* has no meaning and *iss-* represents a progressive meaning, whereas, for the R-reading, they have their own meanings, which can be represented roughly as ‘after’ and ‘to remain/stay (as it is),’ respectively. This R-reading [... V₁-*ko*] will be analyzed as having the meaning of ‘(while) \emptyset experiencing the result state of VP₁-ing’ specified in (9).

Under the above assumptions about the constructions behind the ambiguity of [... V-*ko iss-*], let us consider sentence (1a). It has only a P-reading and hence *iss-*, as an auxiliary predicate, cannot be modified. Since *iss-* takes a subject NP and the preceding VP as its complements, its subcategorization frame, which is the same as those for typical auxiliary predicates (cf. Chae 2015a: 556), can be established as follows:

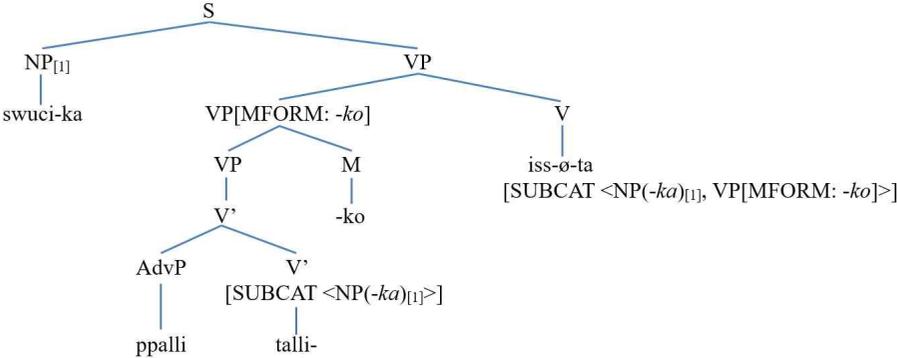
- (7) <NP(-*ka*)_[1], VP[MFORM: *-ko*, SUBCAT <NP(-*ka*)_[1]>]>

The feature MFORM has the property of taking the actual form of the marker (M) 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 subscript [1], following the tradition of non-transformational frameworks such as “Head-driven Phrase Structure Grammar” (cf. Borsley & Borjars 2011). In addition, its VP complement has *-ko*, which indicates that the VP is a complement of *iss-*.

Then, the progressive [... V-*ko iss-*] sentence in (1a) 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.

(8) An analysis of sentence (1a)



In this analysis, the progressive meaning comes solely from *iss-*, which takes an NP subject and a VP with *-ko*. In this structure, *iss-* cannot be modified by an adverbial because the daughter of the highest VP that dominates it is a V rather than a V' or VP.

Turning to the R construction, let us consider sentence (1b). Here, the main subject *koyangi* is unrelated to the entity that attached a bell to its neck. In consideration of this fact, Chae (2018a) proposes that [... V₁-*ko*] has an abstract predicate meaning ‘to experience’ (as part of the idiomatic/constructional meaning) and that the invisible subject of the predicate has an “Undergoer” role. That is, the subordinate (invisible) subject, which refers to the same entity as the main subject, is not an entity which brings about the event represented by the verb *tal-* ‘to attach’ and hence cannot be an Agent.⁴) It just experiences the (physical and/or mental)

4) Although the Undergoer is similar to an Experiencer in that it is a sentient being, they are different because the Undergoer can experience not only mental changes, including sensory/cognitive/emotional changes, but also physical and/or social changes. It cannot be a Patient or Theme because

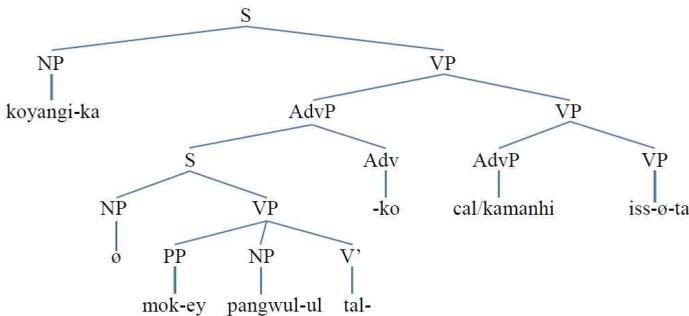
state resulting from the realization of the event represented by the VP containing V₁.⁵⁾ Then, the meaning of the whole *-ko* phrase in the R construction [... [V₁-*ko*]_{AdvP} ... V₂] can be represented as follows:⁶⁾

- (9) The meaning of [[\emptyset [... V₁]<sub>VP₁S₁}-*ko*]_{AdvP} in the R construction:
 ‘(while) \emptyset experiencing the result state of VP₁-ing’</sub>

The verb *experience* represents part of the meaning of the *-ko* phrase only when the phrase constitutes a part of the R construction. In addition, the fact that the result state brought about by V₁ is maintained at the time indicated by V₂ is implemented by the present participle form of *experience*. Now we can indicate the meaning of sentence (1b) more clearly as follows: ‘the cat stays/remains (well/silently), while experiencing the result state of (someone’s) attaching a bell to its neck.’

Under the assumption that [... V₁-*ko*] has the structure and meaning in (9), we can analyze (1b) as follows:

- (10)



it has to be a sentient being. In examples such as [*chelswu-ka ilpwule ppittak-ha-key sakakemo-lul ssu-ko iss-o-ta*] ‘Chulsoo is wearing a mortarboard at a rakish angle on purpose’ (cf. (2)), the subordinate subject (i.e., \emptyset (= Chulsoo)) seems to have an Agent role. However, the reading here is possible not because it is an Agent but because it can be the performer of the putting-on event in some contexts. Note that it is still an experiencer of the result state concerned and the reading is possible only when it itself was the performer of the putting-on event. This becomes clear from the fact that the sentence becomes abnormal when the performer was not Chulsoo.

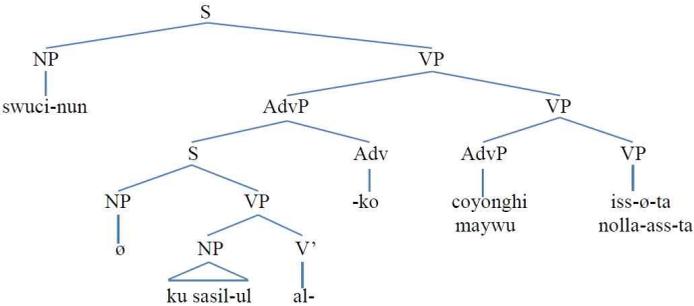
- 5) Only focusing on R-reading sentences such as (2), previous analyses could not capture the fact that the main subject is not necessarily the entity which brings about the V₁ event and hence that the causer of the event is not a part of the meaning of the sentence. These facts, however, are clear from sentences such as (1b): the cat is not an entity which can attach a bell to its neck and the information about that entity is not in the sentence.
- 6) Although the meaning of *-ko* (i.e., ‘after’) does not appear explicitly in (9), it contributes to bringing about the result state reading of V₁. Note that this reading is possible only when the V₁ event occurs before the V₂ event.

Unlike in the P-reading (1a), the adverbializer *-ko*, as an adverb, combines with an S complement, which accounts for the adverbial function of the unit containing the S. The (invisible) subject of the S refers to the same entity as the main subject, *koyangi* ‘cat,’ but has an Undergoer role rather than an Agent role. It gets the Undergoer role as the subject of *experience* posited in (9). The predicate *iss-* is dominated not by a V but by a VP, which accounts for the modifiability of *iss-* and for the occurrence of many other predicates.

The R construction, which consists of an AdvP modifier and a following verbal unit, is a subtype of modifier-modified constructions. Its peculiarity lies in the AdvP part: as we can see in (9), it has the abstract predicate *experience* and this predicate appears in a participial form, which implements the simultaneity effect. As these properties cannot be attributable to any component parts, the AdvP constitutes an idiomatic construction (cf. Culicover 2009: 33, Chae 2014: 499). In other words, although the R construction as a whole is a regular construction, its first component is an idiomatic construction.

Sentence (3a) has (seemingly) a resultative reading and has some properties similar to those of the R construction. It realizes a modifier-modified construction, which allows modification of the main predicate, which can be something other than *iss-*. However, it is analyzed as realizing a construction different from the R construction, namely the p-R construction, mainly because there are differences in the predicates involved and in the nature of the simultaneity effect. In addition, while the AdvP in the R construction is an idiomatic construction, that in the p-R construction is a regular construction. Notwithstanding their constructional differences, their tree structures are the same because [... V-ko] is an adverbial modifier in both. Now we can analyze sentence (3a) as follows:

(11)



The *-ko* phrase, as an AdvP, modifies the following VP. Unlike in the R construction, the invisible subject inside the AdvP has not only the same referent but also the same thematic role as the subject of the main predicate (i.e., Susie). In addition, this p-R construction is less restricted than the R construction: as can be seen in (9), the *-ko* phrase in the latter has a meaning which cannot be attributable to its component parts.

Thus far, we have examined important properties of [... *V-ko iss-*] in Korean. Let us consider what implications the present analysis has for the analysis of corresponding expressions in other languages such as Japanese and Mongolian. The Japanese [... *V-te i-*] and Mongolian [... *V-j bai-*] have structures similar to the Korean [... *V-ko iss-*] and all these can represent both progressive and resultative meanings (cf. Song 1995, Igarashi & Gunji 1998, Song & Song 2005, Ogihara & Park 2019). To begin with, note that Korean has one more resultative structure, namely [... *V-e iss-*] (cf. Section 3.3). On the basis of our analysis of the expressions in Korean, we can raise issues of the following and, we hope, our findings will provide some clues to exploring the counterparts in Japanese and Mongolian. First, we need to examine how the resultative meaning represented by the Korean [... *V-ko iss-*] (and [... *V-e iss-*]) is represented in the two languages. Second, it is necessary to consider how many constructions are involved in the Japanese [... *V-te i-*] and Mongolian [... *V-j bai-*]. The point here is whether these languages also have the p-R construction or not. Third, we need to compare the conditions under which [... *V-ko iss-*] (and [... *V-e iss-*]) has a resultative reading with those regarding its counterparts in the two languages.

3. Constraints on the R Construction

In the previous section, we saw that there are three types of predicates that can trigger the R construction. The first type triggers both the P and R constructions, but the second and third types trigger only the R construction. Roughly speaking, the predicates of the first type are accomplishment predicates, and those of the second and third types are achievement predicates. A common property of these telic predicates is that they have a culmination point in their meanings. This property seems to be responsible for triggering the R construction. Note that here we are considering only R predicates. Although p-R predicates also trigger a (pseudo-)resultative reading, they do not necessarily have a culmination point, especially when

they are negative VPs.

Although there is a close correlation between predicates with a culmination point and the R construction, not all telic predicates trigger the construction, as pointed out in Chae (2018a: 406-7) with reference to the following examples:

- (12) a. *kamca-lul salm-ko iss-, sakwa-lul tta-ko iss-, ...*
 potato-Acc boil-X ..., apple-Acc pick-X ...
 b. *ppang-ul kwup-ko iss-, kulim-ul kuli-ko iss-, ...*
 bread-Acc bake-X ..., picture-Acc draw-X ...
 c. *sakwa-lul mek-ko iss-, ton-ul peli-ko iss-, ...*
 apple-Acc eat-X ... money-Acc throw away-X ...
 d. *kil-ul kenme-ko iss-, cengsang-ey/ul olu-ko iss-, ...*
 road-Acc cross-X ... summit-at/Acc climb-X ...

In these examples, the predicates before *-ko* have not only a processual part but also a culmination point, which can be seen from the fact that the past tense form of the predicates can combine with expressions like [*han sikan-man-ey*] ‘in an hour,’ which are used to test the telicity of an expression.

- (13) *na-nun han sikan-man-ey ppang-ul (ta) {kwuwess/kwup-ess/}-ta.*
 I-CT one hour-only-at bread-Acc all bake-Past-Decl
 ‘I have baked (all of) the bread in an hour.’

This sentence is grammatical, but the predicates in (12) do not trigger the R construction in any contexts. Let us compare the following two sentences:

- (14) a. *swuci-ka ppang-ul kwup-ko (*cal/*coyonghti) iss-ø-ta /*
 Susie-Nom bread-Acc bake-X well/quietly Y-NPast-Decl /
 **cam-ul ca-ø-nta.*
 sleep-Acc sleep-NPast-Decl
 ‘Susie is baking bread.’
 b. *swuci-ka phal-ey mwunsin-ul ha-ko*
 Susie-Nom arm-at tattoo-Acc do-X
 (*cal/yeyppu-key*) *iss-ø-ta / cam-ul ca-ø-nta.*
 well/prettily
 ‘Susie stays/sleeps (well/prettily) while her arm being covered in tattoos.’

Although both [*ppang-ul kwup-*] ‘to bake bread’ and [*mwunsin-ul ha-*] ‘to tattoo’ are accomplishment predicates, only the latter triggers the R construction. The *iss-* in the former cannot be modified or substituted with other predicates (with the intended resultative meaning).⁷⁾ Considering the fact that not all telic predicates trigger the construction, there must be some further constraints operating on the R construction.

In this section, we are going to establish a new set of constraints on the R construction under our triple-construction approach. First, we will examine some previous approaches to constraining the (seeming) resultative reading sentences. In these approaches, there have not been any distinctions between R-reading sentences and p-R-reading sentences. Second, we will deal with the property of PSPT and related issues. As seen above, it refers to the property of “indicating the Present State with the Past Tense form,” which seems to be a special property of Korean. After introducing the concept of PSPT, we will examine how we can test whether the past tense form of a predicate can indicate a present state or not. We will also consider how we can implement the changes caused by the PSPT phenomenon into our grammatical system.

Then, in Section 3.3, we will deal with the new set of constraints on R-reading sentences.⁸⁾ It will be shown that we need to take into consideration the fact that all the predicates which can trigger the construction have the property of PSPT, which is a lexical constraint. We have to realize that we can get to this generalization only when spurious resultative expressions are excluded from the resultative expressions in consideration. Remember that p-R predicates indicate a present state with their present tense form. It will be also shown that the construction has two more constraints that reflect the existence of the abstract predicate *experience*, posited as a property of the construction itself in (9): a syntactic constraint and a pragmatic constraint. We think that these constraints properly describe the characteristics of the construction in comparison with those of the P and p-R constructions.

3.1. Previous analyses on the resultative construction

In discussing the progressive and resultative meanings of [... *V-ko iss-*], many

7) The predicate [*cam-ul ca-ø-nta*] in (14a) is acceptable when the preceding [... *V-ko*] is interpreted as a regular adverbial phrase meaning ‘after baking bread.’ In this interpretation, only the sequence of two events involved are relevant. The resultant state of the first event does not have to be maintained when the second event takes place.

8) The new set of constraints on the R construction was mentioned briefly on an abstract level in Chae (2018a: 408-9) and Chae (2018b: 175-6). However, the original source of them is this paper, as can be seen from the fact that an earlier version of this paper was cited in both of them.

previous analyses have considered conditions/constraints to define them, especially when they have the resultative meaning. One of the most important is the condition of telicity, which says that the predicates in the [... V] position should be telic. However, because telicity does not work properly in itself, different types of constraints have been proposed, with or without referring to telicity.

In Korean, resultative meanings can be expressed not only by [... *V-ko iss-*] but also by [... *V-e iss-*]. As many works refer to both of them, let us consider the latter as well. Unlike the former, it can have only a resultative meaning:

- (15) a. *khu-n namwu-ka ssuleci-e iss-o-ta.*
 be big-Adnr tree-Nom fall down-E ISS-NPast-Decl
 ‘A big tree has fallen down.’
- b. *manh-un totwuk-i kyengchal-eykey cap-hi-e iss-ess-ta.*
 be many-Adnr thief-Nom police-by catch-Pass-E ISS-Past-Decl
 ‘Many thieves had been caught by the police.’

Most works focus on the distinctions between progressive [... *V-ko iss-*] and (resultative) [... *V-e iss-*], not paying much attention to resultative [... *V-ko iss-*]. For example, H S Lee (1991) proposes that the notion of “dynamicity” is responsible for the distinction: while the former indicates “dynamic durative,” the latter indicates “static durative.” According to works such as K Lee (1978), Chung (1994) and Yang (2004), telicity plays an important role: only telic predicates can occur in the latter. Unlike these proposals assuming semantic constraints, EH Lee (2008) posits different argument structures for them (a syntactic constraint): while the predicates in the former have an “external argument,” those in the latter have an “internal argument” (as their subject). In general, unaccusative and passive predicates are assumed to have an internal argument. However, as shown in Suh (2015: 286-93), none of these proposals are successful in distinguishing the two types of expression. As for EH Lee’s (2008) analysis, two major problems are noted: many passive predicates can combine with [*-ko iss-*] and many unaccusative predicates cannot combine with [*-e iss-*] (pp. 291-3). On the basis of these observations, he argues that “only *-e iss* construction becomes subject to the unaccusativity requirement” (p. 294). That is, although unaccusativity is not valid for distinguishing [... *V-ko iss-*] and [... *V-e iss-*], only (some) unaccusative predicates are compatible with [... *V-e iss-*]. On the other hand, Hong (2013: 1085, footnote 43) argues against the unaccusativity analysis, due to the fact that predicates such as *ic-* ‘to forget’ and *kaci-* ‘to have,’ which can

combine with [-*ko iss-*], cannot be regarded as unergative predicates.

A more fundamental problem of the approaches mentioned above is that they have not considered the resultative [... *V-ko iss-*] seriously in comparing [... *V-ko iss-*] and [... *V-e iss-*]. They cannot be successful because resultative [... *V-ko iss-*] and (resultative) [... *V-e iss-*] have not only differences but also similarities. For example, telicity seems to be relevant to both of them: Almost all the predicates triggering them are telic.⁹⁾ The issue, then, is how we can factor out those predicates that can trigger the resultative [... *V-ko iss-*] and [... *V-e iss-*] from the whole range of telic predicates. As a preliminary step to obtaining this goal, we focus on characterizing the properties of the resultative [... *V-ko iss-*] in this paper. Only after we provide an appropriate analysis of them can we come up with a reasonable analysis of the contrast between [... *V-ko iss-*] and [... *V-e iss-*].

There have been some typological works on the distinction between the progressive and the resultative readings of some aspectual expressions in different languages. For example, Shirai (1998) tried to provide a unified account of [... *V-te i-*] in Japanese, [... *V-ko iss-*] vs. [... *V-e iss-*] in Korean, [*be V-ing ...*] in English, and equivalent expressions in some other languages/dialects. However, although it is noted that [... *V-ko iss-*] can also indicate the resultative reading, only the progressive [... *V-ko iss-*] and the (resultative) [... *V-e iss-*] are compared. Hence, it has the same problems as those we have just observed. In addition, considering the fact that there are two different types of resultative readings (expressed by two different formal mechanisms) in Korean, it is reasonable to assume that the two readings are expressed by a single mechanism in Japanese and English, namely [... *V-te i-*] and [*be V-ing ...*], respectively. Therefore, by elucidating the nature of the resultative [... *V-ko iss-*] in Korean, we would be able to identify the two different types of resultative readings conveyed by Japanese [... *V-te i-*] and English [*be V-ing ...*] expressions more clearly.

Let us turn to our main task of accounting for the resultative [... *V-ko iss-*]. Although the criterion of telicity is not very successful in distinguishing [... *V-e iss-*] from [... *V-ko iss-*],¹⁰⁾ it is useful in characterizing the predicates inducing the

9) Following Chung (2007), Suh (2015: 288-9) assumes that *sal-* and *kwulmcwuli-* are not telic, although [*sal-a iss-*] 'to be staying alive' and [*kwulmcwuli-e iss-*] 'to be starving' are possible. As for *sal-*, we have the progressive [*sal-ko iss-*] 'to be living' as well. However, it seems to have two different meanings (Chae 2020: 122): A telic meaning (e.g., 'to obtain the properties of being alive'; [*san salam*] 'a person who is alive') and an atelic meaning (i.e., 'to live'; [*san salam*] 'a person who lived'). Then, *sal-* in [*sal-a iss-*] would be telic. Although *kwulmcwuli-* also allows [*kwulmcwuli-ko iss-*], this has only a resultative reading, which implies that it is not an activity verb. Since it is not a verb indicating a (present) state either, it can be regarded as a telic verb meaning 'to get starved' rather than 'to starve.'

resultative reading in [... *V-ko iss-*] expressions. Note that all the predicates in the resultative [... *V-ko iss-*] observed thus far are telic predicates. As we have found no counterexamples in other works as well, we will assume that only telic predicates can occur in the expression. The reason for this telicity requirement seems to be obvious. Examining relevant data from Korean, Mongolian and English, Song (1995: 264) concludes that (among telicity and transitivity) “only the distinction of telicity remains relevant cross-linguistically.” It is clear that telicity is a necessary condition for inducing the resultative meaning (in [... *V-ko iss-*]). As is pointed out in Song (1995: 262) and Song & Song (2015: 197), contrary to atelic predicates, which encode (homogeneous) process, telic predicates encode two (heterogeneous) stages of process and goal (i.e., the culmination point). The property of this heterogeneity of telic predicates “provides the opportunity” for the resultative meaning to occur. Of course, the stage of goal is responsible for leading to the resultative meaning. Hong (2013: 1084) also points out that resultative readings are expressed by telic predicates although not all telic predicates induce them.¹¹⁾

As for other constraints for the characterization of the resultative [... *V-ko iss-*], Y Kim (1993), assuming two constructions for it, argues that the resultative construction “expresses that one argument (the subject) possesses or contacts with the other argument as a result of the culmination of an event” (p. 257). This “possessor/contact condition,” however, can be neither a necessary condition nor a sufficient condition on the construction (cf. Chae 2018a: 386, footnote 16). It cannot be a necessary condition because expressions such as [*mwun-ul yel-ko iss-*] ‘to have the door opened’ can have a resultative reading even though the subject is not necessarily in possession of or in contact with the door. Nor can it be a sufficient condition because, e.g., [*uyca-ey anc-ko iss-*], cannot have a resultative reading of ‘to have sat on a chair’ even though the subject can only be in contact with the chair when the event of sitting is completed.

Some other scholars have posited a (syntactic) condition which says that only transitive (telic) predicates can trigger the construction (e.g., Ahn 1995, M-J Kim 2009).¹²⁾ It is true that those predicates that trigger the R construction are mostly

10) We cannot distinguish between [... *V-e iss-*] and [... *V-ko iss-*] with reference to telicity, because the predicates triggering the resultative reading in the former are also telic predicates.

11) We need to keep in mind that previous works, including Hong (2013), take into account not only R predicates but also p-R predicates in accounting for the resultative construction. As some p-R predicates are not telic, the generalization is not valid in their works.

12) Song (1995: 262, 264) assumes that, although both telicity and transitivity are necessary conditions for inducing the resultative reading in [... *V-ko iss-*] in Korean, “the distinction of transitivity is not

transitive predicates. However, J-B Kim (2013: 1065) points out that some intransitive predicates such as [*cengci ha-*] and *kitay-* can trigger the construction as well:

- (16) a. *yelcha-ka cengci ha-ko iss-ø-ta.*
 train-Nom stop-X Y-NPast-Decl
 ‘The train is in the process of stopping’ or ‘the train is in the state of having stopped.’
- b. *mimi-ka pyek-ey kitay-ko iss-ø-ta.*
 Mimi-Nom wall-at lean-X Y-NPast-Decl
 ‘Mimi is leaning against the wall’ or ‘Mimi has leaned against the wall.’

These sentences containing intransitive predicates are ambiguous between the two constructions. In addition to these predicates, intransitive predicates such as *ephtuli-* ‘to lie face down’ and [*(pesu-ey) tha-*] ‘to get on (a bus)’ induce an R-reading.¹³⁾

“Reflexivity” has also been proposed as a condition to account for the resultative [... *V-ko iss-*] (cf. K Lee 1993, Han 1999, Yang 2004). According to Song & Song (2005: 197-200), “the entity denoted by the subject NP obtains a new state as a result of an action taken by the same entity or a process the same entity undergoes.” In other words, “the action taken by the person denoted by the subject NP is always directed toward the same person so that the person obtains a new state through the event.” It is not clear, however, how such a condition can account for the contrast in the following set of data:

- (17) a. *chelswu-ka mwun-ul yel-ko iss-ø-ta.*
 Chulsoo-Nom door-Acc open-X Y-NPast-Decl
 ‘Chulsoo is opening the door.’ or ‘Chulsoo has the door opened.’
- b. *chelswu-ka uyca-ey anc-ko iss-ø-ta.*
 Chulsoo-Nom chair-at sit-X Y-NPast-Decl
 ‘Chulsoo is in the process of sitting on the chair.’

relevant but accidental in Korean.” He reaches this conclusion in comparison with the corresponding data in Mongolian and English.

13) As [*(pesu-lul) tha-*] is also possible, the verb *tha-* can be regarded as ambiguous between a transitive and an intransitive sense. From the fact that [*pesu-ey tha-ko iss-ta*] is more natural with an R-reading than [*pesu-lul tha-ko iss-ta*], we can see that its intransitive sense triggers an R-reading. In addition, verbal phrases such as [*kwikelil-lul ha-*] ‘to wear earrings’ and [*mwunsin-ul ha-*] ‘to tattoo’ can be regarded as having intransitive meanings, because the verb *ha-* does not have any meaning in itself.

As we can see from the translations, only (a) is ambiguous between the progressive and the resultative readings. Although the action denoted by the VP in (a) seems to be “less reflexive” than that in (b), only (a) has the resultative reading. We can say that the action of sitting on a chair is “directed” to the sitter more clearly and/or directly than the action of closing a door to the closer. Of course, if we accept the transitivity condition, (b) cannot have the resultative reading because the verb *anc-* ‘to sit’ is an intransitive verb. However, as we have just seen, the condition does not hold in Korean.

Even if we accept the reflexivity condition, we are faced with the task of showing that the situations described in the following sentences are less reflexive than that in (17a).

- (18) a. *chelswu-ka kil-ul kenme-ko iss-ø-ta.*
 Chulsoo-Nom road-Acc cross-X Y-NPast-Decl
 ‘Chulsoo is crossing the road.’
- b. *wuli-ka ilpon thim-ul iki-ko iss-ø-ta.*
 we-Nom Japanese team-Acc win-X Y-NPast-Decl
 ‘We are winning against the Japanese team.’

As these sentences have only the progressive reading (Song 1995: 262), the situations here would have to be not reflexive or, at least, less reflexive than that in (17a) under the reflexivity condition. Nam (2004) and Y-s Kim (2006) also refer to “reflexive interpretation/verbs” in accounting for the expressions concerned.¹⁴ These approaches have basically the same problems in applying the concept to actual examples. M-J Kim (2009) points out that R predicates such as *tul-* ‘to lift,’ *camku-* ‘to lock’ and [*pwul-ul phiwu-*] ‘to set (a fire)’ cannot be taken as being reflexive. In addition, according to Hong (2013: 1085), we need a more comprehensive condition like the affectedness condition to be provided in (30).

We have observed some approaches that try to characterize the resultative [... V-ko *iss-*] with reference to syntactic or semantic/pragmatic constraints. Constraints such as telicity, possessor/contact, transitivity and reflexivity have been proposed thus far.

14) Nam (2004) and Y-s Kim (2004, 2006) argue that only those predicates that contain a (result) state as part of their (inherent) meanings can have the resultative reading (cf. Hong 2013: 1084). If they really contain a state as part of their meanings, they would indicate a state with their present tense form. However, those predicates that can trigger the real resultative reading (i.e., the R predicates) can indicate a state only with their past tense forms. Only p-R predicates can indicate a state with their present tense forms.

Although telicity seems to work as a necessary condition (only for R predicates), the others do not work as proper conditions. Here we have to note that most of the approaches assume that there is only one construction involved. Those who are pursuing single-construction approaches have to distinguish between the progressive and the resultative readings only with reference to the type of predicate in [... *V-ko iss-*]. There cannot be any other differences between the sentences of the two readings, because all the sentences are assumed to be realizations of one and the same construction. On the other hand, those who are pursuing multiple-construction approaches can distinguish them with reference not only to the type of predicate but also to the differences of (the constituents of) the constructions involved. For example, *iss-* is analyzed as an auxiliary predicate in P-reading sentences and as a main predicate in R-reading sentences in those approaches positing more than one construction. In addition, they can also add conditions just like those we have seen above. For example, J-B Kim (2013: 1963) provides a licensing condition (as well as lexical and constructional differences): he claims that an R-reading is possible “when the eventuality reaches a culmination point and this property holds at the durative resultant phase.”¹⁵⁾

Considering our observations in Section 2.2, we can say that the failure of previous attempts to provide appropriate conditions on the R construction is due to their failure of capturing the relationships between different types of predicates and the readings triggered by them. Most of all, regardless of whether they are under single-construction approaches or double-construction approaches, they have failed to realize that the seeming resultative reading comes from two different types of predicates, namely the R predicates and the p-R predicates. For example, if we take into consideration of p-R predicates such as *al-* ‘to know’ in defining the R construction, we would not be able to reach the goal because they have very different properties from those triggering the R construction. Note that only the p-R predicates have the state reading inherently. In addition, p-R predicates such as *molu-* ‘not to know,’ as a verb of a negative meaning, and all negative VPs, regardless of the aspectual types of their input, are not even telic. In other words, since the two groups of predicates have heterogeneous properties and hence trigger different constructions, it would not be possible to provide a reasonable analysis of the R construction if they are taken together. As another problem with previous analyses, almost all of them assume that only the predicate *iss-* is allowed in the resultative construction. However, one of the special properties of the R construction is that it allows a VP

15) As for the problems of the conditions proposed in J-B Kim (2013), refer to Chae (2018a: 386).

that can contain a variety of different predicates.

3.2. PSPT and related issues

One of the most important differences between those predicates that trigger the progressive and the resultative reading is that of the process part and the culmination point. Activity predicates and accomplishment predicates contain the former, and accomplishment predicates and achievement predicates contain the latter. That is, only telic predicates contain a culmination point. In consideration of this fact and the fact that the culmination point is necessary for obtaining the resultative reading, many previous analyses have assumed that telic predicates are responsible for the resultative reading. However, there are a couple of issues to be clarified before we can use it as a (necessary) condition on the construction. First, as we have seen in Section 2.2, resultative reading sentences are realizations of two different constructions: the R construction and the p-R construction. As we have already factored out p-R predicates from the predicates triggering the (seeming) resultative reading, we can safely assume that only telic predicates trigger the R construction. Second, we also need further constraints because not all telic predicates trigger the construction.

An interesting property of R predicates is that their past tense form is ambiguous between a past activity reading and a present state reading. For example, as will be seen in (19), [(*moca-lul*) *ssu-ess-ta*] can express a past activity of putting on a hat or a present state of wearing a hat. What is relevant for the R construction is that they have the latter property, namely that of PSPT. A key observation for our analysis is that there is a close correlation between the functions of the past tense marker *-ess/ass/yess* and the *-ko* in the R construction, which has the meaning of ‘after.’ Both have the function of providing a past time interpretation of the event involved. Since a result state can be reached only after the event indicated by a telic predicate is completed, this past time interpretation is an integral precondition for getting to the result state. First of all, we know that the [... V-*ko*] part in the R construction represents a state resulting from the event indicated by the V. In addition, there are many predicates, at least in Korean, which indicate a present state with their past tense form. Hence, we can assume that there is a close relationship between the predicates in this group and those in the R construction. Although not all the predicates in this group can trigger the construction, they have the function of factoring out those predicates that cannot trigger the construction

among telic predicates. Hence, we will pursue the idea that only those telic predicates that can represent a present state with their past tense form, namely those that have the property of PSPT, can be the input in the R construction.

The phenomenon of PSPT itself has long been known in the tradition of Korean linguistics (cf. Yun 1986, Yeon & Brown 2011: 196-203), and there have been heated discussions on the identity of *-ess/ass/yess* (Song 2002, Park 2011, C-H Kim 2017; cf. Hong 2013: 1085, footnote 47). For example, some scholars have argued that it is a past tense marker (even when it is related to the present state reading), and others have argued that it is a perfective marker (even when it indicates a past activity). Of course, some scholars have argued that it is ambiguous between the two markers.¹⁶ Our originality lies in establishing a close correlation between PSPT and the R construction and adopting PSPT as a constraint for characterizing the construction. Note that we would not be able to establish the relationship if we had not factored out the p-R predicates from those inducing the resultative reading. Although Hong (2013: 1085) also notices a close correlation between *-ess/ass/yess* and [... V-ko iss-] in describing a present state, it is not regarded as a precondition on the resultative construction because there are some exceptions (in her analysis). Above all, she does not separate the p-R predicates from the R predicates. As observed above, telicity is the constraint to be applied first to restrict the set of R predicates. We argue that PSPT is the next constraint to be applied, because it has the role of restricting the set further.

Chae (2018a: 408) and Chae (2018b: 175), citing earlier versions of this paper, introduce the idea that PSPT can be used as a constraint on the R construction (cf. footnote 8). The idea is based on the empirical fact that all the predicates inducing the R construction have the property. In this section, we will provide evidence for it by dealing with some issues concerning it in detail. Note that the predicates in [... V-ko] of the R construction share the following properties with those in sentences such as (19b), where they occur with the past tense marker: i) they

16) We assume that the particle *-ess/ass/yess* is a past tense marker, because we are under the conviction that the resultative reading derives from the interactions of the past time interpretation of the marker, the telic property of the predicates concerned and/or the properties of the constructions involved. Note that the resultative reading is also obtained from *-ko* 'after' in the R construction, which does not contain the tense marker. Hong (2013: 1085, footnote 47) assumes that *-ess/ass/yess* cannot be a tense marker because expressions such as *itena-ass-keyss-ta* 'would have left' are possible. This assumption is valid only if *-keyss* is a (future) tense marker. However, it cannot be a tense marker because it can occur not only with *-ess/ass/yess* in *mek-ess-keyss-ta* 'would have eaten,' which cannot have a present state reading, but also with the present tense marker \emptyset in [(*cikum*) *pi-ka o-ø-keyss-ta*] 'it would rain now.' It can better be analyzed as a modality marker indicating conjecture, inference or volition (Chae 2020: 89-90).

can indicate a present state and, more importantly, ii) their subjects have an Undergoer role (when they indicate a present state):

- (19) a. *swuci-ka moca-lul ssu-ø-nta.*
 Susie-Nom hat-Acc wear-NPast-Decl
 ‘Susie puts on a hat.’
- b. *swuci-ka moca-lul ssu-ess-ta.*
 Susie-Nom hat-Acc wear-Past-Decl
 ‘Susie put on a hat.’ or ‘Susie has put a hat on.’

While (a) indicates a present activity (or habitual activities), (b) can indicate either a past activity or a present state. When these sentences indicate activities, the subject is an Agent. However, when (b) indicates a present state, the subject cannot be an Agent because Susie is not necessarily the person who put the hat on her head. It can be assumed to have the thematic role of Undergoer because she is still the person who experiences the existence of the hat. In characterizing the R construction properly, it is very important to realize that the predicates in it have the property of PSPT and that they have an Undergoer subject.

Because only a subset of telic predicates has the property of PSPT and all the predicates in the R [... V-ko] has the property, it will serve as a good constraint on the R construction. We will focus on clarifying the following issues concerning PSPT. First, we need to consider how we can test whether the past tense form of a predicate indicates a present state or a past activity. If the predicate can indicate a present state, it would be compatible with time adverbials such as *hyencay* ‘presently’ or [*cikum hyencay*] ‘right now’:

- (20) a. **hyencay/ *cikum hyencay emeni-ka ppang-ul*
 presently/ right now mother-Nom bread-Acc
 {*kwuwusi/kwup-usi*}-*ess-supnita.*
 bake-Honor-Past-Decl

Intended: ‘Presently/ right now my mother is in the state of having baked bread.’

- b. *hyencay/ cikum hyencay emeni-ka kwi-ey*
 presently/ right now mother-Nom ear-at
kwikeli-ul ha-si-ess-supnita.
 earring-Acc do-Honor-Past-Decl
 ‘Presently/ right now my mother is wearing earrings.’

Sentence (a) is ungrammatical because the past tense form of *kwup-* is not compatible with the given adverbials, which shows that *kwup-ess-* cannot indicate a present state. On the other hand, as seen in (b), the past tense form of [*kwikeli-lul ha-*] is compatible with the adverbials, proving that it can indicate a present state. The adverbials *hyencay* ‘presently’ and [*cikum hyencay*] ‘right now’ are somewhat formal in their speech style. On the other hand, adverbs such as *acik* ‘still’ and *yecenhi* ‘as ever’ can be used in wider contexts. These adverbs can replace [(*cikum*) *hyencay*] in (20) and other sentences, as will be seen below.

The adverbs *cikum* and *icey* also have the meaning of ‘now.’ However, we need to be very careful in using them for the test, because they can indicate not only a present state but also an activity that has just been performed. For example, (20a) with *cikum* or *icey* can be regarded as grammatical when they are interpreted as ‘just now,’ which indicates the time just passed. Let us examine some [... V-*ko iss-*] examples, which contain controversial predicates:

- (21) a. *cikum/icey minswu-ka kil-ul kenne-ess-e.*
 now Minsoo-Nom road-Acc cross-Past-Decl
 ‘Minsoo crossed the road just now.’
 b. *minswu-ka kil-ul kenne-ko (*cal/*cengmal) iss-ø-e.*
 Minsoo-Nom road-Acc cross-Comp well/really Prog-NPast-Decl
 ‘Minsoo is crossing the road.’
- (22) a. *cikum/icey sey salam-i cengsang-ey olu-ass-e.*
 now three person-Nom summit-at climb-Past-Decl
 ‘Three people reached the summit just now.’
 b. *salam-tul-i cengsang-ey olu-ko (*cal/*cengmal) iss-ø-e.*
 person-Pl-Nom summit-at climb-Comp well/really Prog-NPast-Decl
 ‘People are in the process of reaching the summit.’

Although the past tense form of the predicates [(*kil-ul*) *kenne-*] and [(*cengsang-ey*) *olu-*] are compatible with *cikum/icey*, these predicates do not trigger the R construction as seen in the sentences in (b). However, as we can guess from their translations, the sentences in (a) are grammatical only when the predicates indicate past activities. In other words, (21a) becomes ungrammatical when we see only the scene where Minsoo is on the other side of the road without seeing the event of his crossing the road. Likewise, (22a) becomes ungrammatical when we see only the scene where

three people are on the summit without seeing the event of their climbing up to the summit. Then, we can conclude that the predicates cannot trigger the R construction because they cannot indicate a present state with their past tense forms.

When we use the adverbials just observed, we have to be careful as to whether they can only refer to the present moment or can also refer to the moment just passed. In this regard, adverbials such as [(*cikum*) *hyencay*] ‘presently,’ *acik* ‘still’ and *yecenhi* ‘as ever’ are better choices for the test. Unlike *cikum* and *icye*, these adverbials are allowed only when the event concerned holds true at the present moment. When we replace the time adverbials in (21a) and (22a) with *acik/yecenhi*, they become ungrammatical. Hence, we can see more clearly with this test that *kenne-* ‘to cross’ and *olu-* ‘to climb’ cannot indicate a present state with the past tense form.

Now we can judge more clearly whether a predicate with the past tense marker can have a present state reading or not. Another special property of the predicates in [... V-*ko*] of the R construction, which is closely related to PSPT, is that their subjects have an Undergoer role when they indicate a present state (cf. footnote 4). We have implemented this property with reference to the meaning of [... V-*ko*] in the R construction in Section 2.2:

- (9) The meaning of [[\emptyset [... V₁]_{VP1}]_{SI-ko}]_{AdvP} in the R construction:
 ‘(while) \emptyset experiencing the result state of VP₁-ing’

Although we have used the word *experience* to indicate the abstract predicate, it does not correctly express what we mean. We have used it for lack of a better word. For example, the meaning of the *-ko* phrase in (1b), namely [*mok-ey pangwul-ul tal-ko*], can be better represented as follows: ‘(while) the cat, after undergoing the process of (someone’s) attaching a bell on its neck, being under the influence of the result state of (someone’s) attaching a bell on its neck.’ Therefore, the general meaning of the *-ko* phrase can be schematized as follows: ‘(while) \emptyset , after undergoing the process of VP₁-ing, being under the influence of the result state of VP₁-ing.’ Hence, the meaning in (9) can be regarded to be a short version of this representation. That is, *experience* in (9) covers both ‘to undergo’ and ‘to be under the influence of.’ As an (animate) undergoer of the event represented by VP₁, the subject of the abstract predicate (i.e., \emptyset) should be a sentient being or, at least, one which can be interpreted as such. In addition, it is under the influence of the result state physically, cognitively and/or socially.

In (9) the S that combines with *-ko* consists of the invisible subject \emptyset and the

VP₁ containing V₁ syntactically. Semantically, however, \emptyset is not an argument of VP₁ but one of the abstract predicate ‘to experience,’ which comes not from the component elements but directly from the construction itself (as part of an idiomatic meaning). As the first argument of ‘to experience,’ \emptyset has the thematic role of Undergoer. In (10), for example, although the main subject *koyangi* ‘cat’ has an Agent role as the subject of *iss-* ‘to stay,’ the lower subject \emptyset has an Undergoer role, which originates from the first (semantic) argument of ‘to experience,’ as the (syntactic) subject of *tal-* ‘to attach.’ That is, the two subjects have different theta roles, although they refer to the same entity. Note that the performer of V₁, namely the person who put a bell on the neck of the cat, does not appear in the sentence because it is unrelated to the meaning of the sentence. The situation is largely the same when sentences like (19b) have a present state reading. In this sentence, *swuci* does not have the Agent role because she is not necessarily the person who put the hat on her head. The sentence is grammatical even when someone else has put it there. She just experiences the result state of her or someone else’s putting a hat there. Hence, although *swuci* is the subject of the verb *ssu-* ‘to wear’ syntactically, it is an argument of the abstract predicate ‘to experience’ semantically. Here again the information about the person who put a hat on her head is not relevant for the meaning of the sentence.

Before we observe PSPT as a major constraint on the R construction, we need to point out that it is a special property of Korean. Although many predicates in Korean have the property, there do not seem to be many other languages with the same property to such an extent. For example, very few predicates in Japanese, which is close to Korean typologically and hence shares many grammatical features, have the property. The only predicate that I found is *noko-ru* ‘to remain,’ whose past tense form (i.e., *nokotta*) can indicate a present state. Japanese predicates meaning ‘to wear, to lift, to close (one’s eyes)’ and so on can never indicate a present state with their past tense form. In English, even *remain* does not have such a property. The present state of having remained is expressed with the present tense form rather than with the past tense form (e.g., *Much remain-s/*remain-ed to be done*). In general, the present state meaning of telic predicates is represented only by the progressive [*be V-ing ...*] form (or the perfective [*have V-en ...*] form) in English (cf. Yun 1986, Hong 2013: 1088) and by only the [... V-te (i)] form in Japanese. For example, the present state of a cat’s wearing a hat is represented as [(*the cat*) *is wearing (a hat)*] and [(*neko-ga bousi-o kabu-te i-ru*), respectively. Then, the difference between Korean and these two languages is that, while both the past tense form and [...

V-ko/e (iss-)] can be used to represent a present state in Korean, only [*be V-ing ...*] and [*... V-te (i-)*] can be used in English and Japanese.

However, it is not very peculiar that the past tense form of telic predicates represents a present state in Korean. For example, the predicates ‘to remain’ and ‘to resemble’ are very likely to indicate a present state with their past tense form, because what remains/resembles now is a consequence of an event in the past. If someone resembles someone else, the process of resembling necessarily took place in the past. That is, we can only see the present state resulting from the process of resembling, which we cannot be aware of. This phenomenon is reflected in the past tense form in Korean, while it is not in English and Japanese.

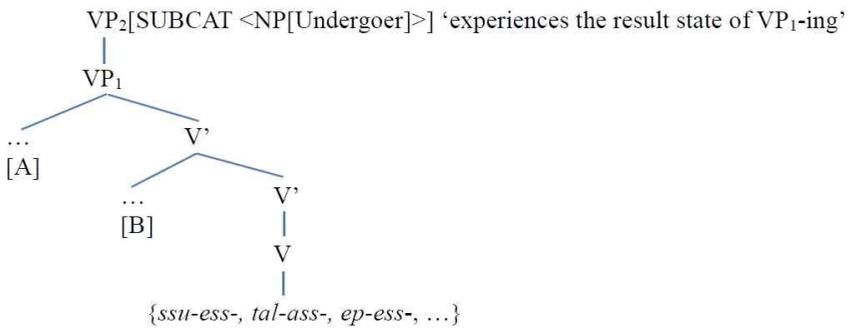
Let us consider how we can implement the fact that the past tense form of predicates such as *ssu-* ‘to put on’ in (19b) can have the meaning of a present state into our grammatical system. It would not be easy to provide the relevant mechanisms because the phenomena involved are somewhat mysterious. As we have observed, the subject of the sentence has an Undergoer role rather than an Agent role when it has a present state reading. We have seen the same phenomenon in sentences of the R construction such as (2). We have accounted for it by postulating an abstract predicate ‘to experience’ in the [*... V-ko iss-*] phrase in (9). Now we can assume that the same abstract predicate is involved in (19b), producing the meaning ‘Susie experiences the result state of putting a hat on.’ Then, we need to provide the mechanisms to account for the fact that the past tense form of a predicate can trigger the “emergence” of an abstract predicate meaning ‘to experience.’ Once this part gets resolved, the concomitant change of the theta role of its subject from an Agent to an Undergoer would follow naturally, because the subject of *experience* can be justifiably assumed to be an Undergoer.

In an attempt to deal with the special properties at hand, one might assume that all and only those predicates with the PSPT property have a “derived sense,” which combines with only a past tense form and has a present state meaning related to the “original sense.” For example, although the verb *ssu-* in (19a) has only the original sense ‘to put on,’ the past tense form of *ssu-* in (19b) is ambiguous between the past time interpretation of the original sense and the present state interpretation of the derived sense, namely ‘to experience the result state of putting on a hat.’ The derived sense would always be realized with the past tense form and would have an interpretation of a present state. However, this approach is untenable because the derived meaning of a predicate V refers to the meaning of the VP which contains the V itself. That is, the derived sense can only be defined circularly. For

example, the derived sense of *ssu-* assumed above contains the meaning of the VP [*moca-lul ssu-*] ‘to put on a hat.’ Note that the noun *moca* and the verb *ssu-* in this VP can be modified, for example, by *yeyppu-n* ‘pretty’ and *kwiyeop-key* ‘cutely,’ respectively. Then, the derived sense would be ‘to experience the result state of putting on a pretty hat cutely.’ This extensibility of the VP clearly shows that the phenomenon cannot be handled on a lexical level. On the other hand, it seems to be true that only some specific lexical items, although the number may not be very small, can have a present state reading with their past tense form. Hence, we are also faced with the difficult task of handling both the phrasal and lexical/ idiosyncratic properties involved.

We are going to propose a constructional approach in dealing with (19b), under the assumption that the special phenomena concerned are idiomatic. There are largely two different types of constructions: regular constructions and idiomatic constructions (cf. Culicover 2009: 33, Chae 2014: 499). While the meanings and/or properties of the former can be derived from their components compositionally, not all the meanings/properties of the latter can be obtained compositionally. Chae (2014) provides a system for representing idiomatic expressions, which can deal with both irregular and regular properties. According to the system, we can provide an analysis of (19b) as follows. Note that it is idiomatic only when it has a present state reading.

(23)



The whole VP (i.e., VP₂) is an idiomatic construction because it has some

unpredictable properties.¹⁷⁾ First, it is specified as having the (final) meaning of ‘experiences the result state of VP₁-ing.’ The verb *experience* is in its (3rd person) present tense form to implement the fact that it indicates a present state. Second, it has the feature [SUBCAT <NP[Undergoer]>], which means that the category requires an Undergoer subject. Third, the lexical items which can occur in the construction are listed in the parentheses {...}, all of which are in their past tense forms.

In addition to unpredictable properties, the construction has predictable properties of regular phrases as well. First, the predicates in the parentheses can be modified by adjuncts in the position of [B] and they can have their complements in the position of [A], as in [*moca-lul kwiyeop-key ssu-ess-ta*] ‘experiences the result state of putting on a hat cutely.’ The combinations of the predicates with these dependents are handled with the rules of regular phrases. Second, the meaning of VP₁ obtained by these rules becomes the input to the (final) idiomatic meaning of VP₂. For example, in (19b), we can get the idiomatic meaning ‘experiences the result state of putting on a hat’ on the basis of the regular meaning ‘did the action of putting on a hat.’

We have to note that sentences like (19b) can be analyzed either with reference to the construction in (23) or with reference only to regular rules. While the sentence gets a literal meaning, namely a past activity reading, in the latter case, it gets an idiomatic meaning, namely a present state reading, in the former case. As we know, while Susie is the person who is responsible for putting on a hat in the latter, she is the person who just experiences the result state of (someone’s) placing a hat on her head in the former. As we can guess from this difference, there is a mismatch between the subject and the first argument in (23), which is due to the existence of the abstract predicate ‘to experience.’ That is, while *swuci* is the subject of *ssu-* ‘to wear’ syntactically, it is an argument of ‘to experience’ (rather than one of *ssu-*) semantically. This mismatch arises only with those predicates which can have a present state reading with the past tense form, namely those which can occur in construction (23).

In providing an analysis of (19b), we have seen that the “PSPT predicates” in (23) have largely the same properties as those of the PSPT predicates in the [... V-*ko*] part of the R construction, which is analyzed in (10): they contain the abstract

17) In actual fact there is another group of predicates which can trigger a present state reading in their past tense form, such as *anc-* ‘to sit’ and *se-* ‘to stand.’ These predicates induce a reading of ‘to be in the result state of VP-ing’ and hence requires a Theme subject rather than an Undergoer subject. They trigger not the resultative [... V-*ko* (*iss-*)] construction but the [... V-*e* (*iss-*)] construction. We will not deal with these in this paper due to space limitations.

predicate 'to experience' and their subjects have an Undergoer role. Hence, we can conclude that PSPT predicates can be licensed when they combine either with the past tense marker or with the particle *-ko* in the R construction. There do not seem to be many other contexts where they can occur. A common factor here is the past time interpretation obtained by the past tense marker in the former and by *-ko* in the latter. It eventually gives rise to the meaning 'to experience the result state of VP-ing,' by way of an intermediate stage of representing the present state resulting from VP-ing. Although the meaning is expressed in the format '(while) ... experiencing ...' in the R construction, it is a reflection of the simultaneity entailment unique to the construction. Hence, we can conclude that PSPT predicates have the same meanings/functions regardless of whether they combine with the past tense marker or the particle *-ko* in the R construction. A difference between the two constructions involved is that only a subset of those PSPT predicates in the former can occur in the latter. Hence, we need further constraints on the R construction.

Since Japanese and Mongolian do not have the PSPT property, we do not have to provide an analysis corresponding to (23). However, we need a similar mechanism for the resultative [... *V-te i-*] and [... *V-j bai-*], respectively. Note that, although the V that can occur in these structures requires an Agent subject outside of the construction concerned, it requires a subject with a non-Agent subject in it (e.g., an Undergoer or a Theme). Therefore, a big issue here is how we can account for this "shift" of the thematic role. We would need an idiomatic approach similar to that in (9) for these two languages as well. Even English shows a similar phenomenon in some [*be V-ing ...*] constructions. For example, although the subject in [*Susie wears a pink hat (habitually)*] and [*the boy (usually) sits on the swing*] is an Agent, the subject in [*Susie is wearing a pink hat*] and [*the boy is sitting on the swing*] is not an Agent when these sentences indicate a present state. In this case, Susie is not necessarily the person who performed the action of putting on the hat because someone else may have put it on her head. Likewise, the boy is not necessarily the person who performed the action of sitting on the swing because his mother may have put him on it. Our analysis would shed a light on accounting for these phenomena.

3.3. Our constraints on the R construction

Because previous approaches failed to properly restrict the predicates which can trigger the R construction, we need to find some new constraints that prevent

expressions such as those in (12) from being included. We have seen that *-ko* ‘after’ has the same function as the past tense marker in making the predicate in question have a present state meaning. Then, we can predict that only those predicates that can represent a present state with their past tense forms, namely only PSPT predicates, can combine with *-ko* in the construction. Indeed, this prediction is borne out, because all the R predicates observed thus far and none of the predicates in (12) can indicate a present state in their past tense forms. For example, [*ppang-ul kwup-ess-ta*] ‘baked bread’ cannot indicate a present state of having baked bread. It can only mean the past activity of baking bread. In addition, expressions such as [*(pomwul-ul) palkyen ha-ko iss-*] cannot have the resultative reading ‘to have discovered (treasure)’ because [*palkyen ha-yess-*] ‘discovered’ can never indicate a present state. Based on these observations, we will posit the PSPT phenomenon observed thus far as a lexical constraint on the predicates in the R [... V-ko]:¹⁸⁾

(24) The PSPT constraint (a lexical constraint)

Only those (telic) predicates whose past tense form can represent a present state can trigger the R construction.

This constraint leads us to select, among telic predicates, the ones that can occur in [... V-ko] of the R construction.

The constraint has not only an empirical basis but also a conceptual basis. Note that it is a natural consequence of the fact that the past tense marker and *-ko* ‘after’ have the same function of providing a past time interpretation and, consequently, of deriving a present state reading. From this relationship between the two elements, we can infer that the meaning of the past tense form of the V in [... V-ko] can be used as a criterion to test whether [... V-ko *iss-*] can express an R-reading or not. That is, if its past tense form can be interpreted as indicating a present state, it can trigger the R construction. Hence, we can predict that, when it is not clear whether its past tense form can indicate a present state or not, to that extent the resulting expression would be difficult to be interpreted as an R-reading, as will be evident from the behavior of *cis-* ‘to build’ discussed with reference to (33-34) below.

In addition to the lexical constraint in (24), there must be other constraints

18) In addition to the PSPT constraint in (24), we propose two more constraints in (27) and (30). “Affected verbs” such as *mac-* ‘to be beaten’ and [*koso(-lul) tangha-*] ‘to be accused’ are telic and satisfy the Undergoer constraint in (27). In addition, they are typical predicates that satisfy the affectedness constraint in (30). However, as Ki-Sun Hong (p.c.) pointed out, they cannot induce the R construction because they do not satisfy the PSPT constraint. That is, their past tense forms [*mac-ass-, koso(-lul) tangha-yess-*] cannot indicate a present state.

operating on the R construction, because not all PSPT predicates can induce the construction. For example, the past tense forms of both the active *camku-* ‘to lock’ and the passive *camki-* ‘to be locked’ can indicate a present state.¹⁹⁾

- (25) a. *minho-ka (acik/yecenhi) mwun-ul kkok {camkass/camku-ass}-e.*
 Minho-Nom still/ as ever door-Acc tightly lock-Past-Decl
 ‘Minho is (still) locking the door firmly (as ever).’
 b. *mwun-i (acik/yecenhi) kkok {camkyess/camku-i-ess}-e.*
 door-Nom still/ as ever firmly lock-Pas-Past-Decl
 ‘The door is (still) locked tightly (as ever).’

However, while the transitive active verb *camku-* can induce the R construction, the corresponding intransitive passive verb *camki-* cannot:²⁰⁾

- (26) a. *minho-ka mwun-ul camku-ko (kamanhi) iss-ø-ta.*
 Minho-Nom door-Acc lock-X motionlessly Y-NPast-Decl
 ‘Minho is in the process of locking the door.’
 or ‘Minho stays (as he is) (motionlessly), while in the state of having locked the door.’
 b. *mwun-i (minho-eykey) {camki/camku-i/}-ko iss-ø-ta.*
 door-Nom Minho-by lock-Pas-Comp Prog-NPast-Decl
 ‘The door is in the process of being locked (by Minho).’

Here we can see a contrast between transitive active predicates and intransitive passive predicates. When the adverb *kamanhi* does not appear, (a) is ambiguous between P- and R-readings. On the other hand, (b) has only a P-reading. It cannot

19) Although both *camku-* ‘to lock’ and *camki-* ‘to be locked’ satisfy constraint (24), only the former appears in the idiomatic construction (23). As is suggested in footnote 17, we need another idiomatic construction for the latter.

20) According to the “unaccusative hypothesis” in EH Lee (2008), passive predicates are not allowed in the R [... V-ko iss-] construction because, as unaccusative predicates, they are argued to occur in the [... V-e iss-] construction. However, some passive predicates can occur in the former construction:

- i) *swuci-ka (minho-eykey) cap-hi-ko coyonghi iss-ø-ta/ wus-ø-nunta.*
 Susie-Nom Minho-by hold-Pas-Comp silently stay-NPast-Decl/ smile-NPast-Decl
 ‘Susie stays/smiles (silently), while being held (by Minho).’

This sentence is grammatical as an R-reading, at least, to those people to whom the past tense form of *cap-hi-* ‘to be held’ (i.e., *cap-hi-ess-*) is acceptable as indicating a present state. Then, the issue is not the contrast between unaccusative and other predicates. As we argue, while (25b) cannot have an R-reading because the inanimate subject *mwun* ‘door’ cannot be an Undergoer, sentence (i) can have an R-reading because the subject *swuci* can be an Undergoer.

have an R-reading of ‘the door remains as it is, while experiencing the result state of having been locked (by Minh).’²¹⁾

Although it is tempting to assume that only transitive predicates are allowed in [... V-ko], we cannot due to intransitive predicates such as those in (16). Here we need to pay attention to the characteristics of the logical predicate *experience* assumed in (9) ‘(while) \emptyset experiencing the result state of VP₁-ing.’ We have seen that the invisible subject of V₁, which is the first argument of *experience* semantically, has an Undergoer role rather than an Agent role. We believe that this restriction on the invisible subject of V₁ has the function of constraining the possible set of PSPT predicates for the R construction. Hence, we are going to propose it as a syntactic (or semantic, depending on the framework adopted) constraint on the construction.²²⁾

(27) The Undergoer constraint (a syntactic/semantic constraint)

As an entity with an Undergoer role, the (invisible) subject of V in [... V-ko] should be a sentient being (or, at least, should be interpreted as such).

We will show that this constraint, which is based on the properties of the construction itself (cf. (9)), plays an important role in sorting out R-reading expressions out of those [... V-ko iss-] expressions containing PSPT predicates.

We have seen in (16) that intransitive predicates such as [*cengci ha-*] ‘to stop’ and *kitay-* ‘to lean’ trigger the R construction. We have also seen in (26) that the passive verb *camki-* ‘to be locked’ does not trigger the construction in contrast to its active counterpart *camku-* ‘to lock.’ All these predicates can indicate a present state with their past tense forms. However, unlike the rest, (26b) containing *camki-* cannot have an R-reading. It has only a P-reading. Here we need to pay attention to the nature of the (invisible) subject of the predicates. In (16b), Mimi can be regarded as an entity experiencing the resultant state of leaning against the wall. Although Minh can be regarded as the one who experiences the result state of locking the door in (26a), the door, as an inanimate entity, cannot be an experiencer of the state of its being locked in (26b). Therefore, we can account for the data in (16) and (26) with reference to the Undergoer constraint on the (invisible) subject of V₁.

There would be cases where we cannot judge easily whether the subject of the

21) The resultative reading of *camki-* ‘to be locked’ can be expressed not by [... V-ko (iss-)] but by [... V-e (iss-)], which has the meaning of ‘to be in the result state of VP-ing’ and has a Theme subject.

22) As seen in footnotes 17 and 19, there are two groups of predicates that satisfy constraint (24): those in construction (23) and those in another construction. Among these two groups, all and only those predicates in the former satisfy constraint (27). Hence, the predicates in (23) satisfy both (24) and (27).

predicate concerned can be regarded as an Undergoer or not. In (16a), for example, it becomes less evident whether we can assign the Undergoer role to the subject *yelcha* ‘train’ when it has an R-reading. Although we usually assume that such moving entities like cars and trains have some degree of animacy, it is true that they are less typical than animals and humans as experiencers. Nonetheless, the sentence is grammatical because [*cengci(-lul) ha-*] is registered as a predicate that occurs in the construction in (23) and that allows self-moving entities as its subject.²³⁾ That is, it is grammatical because the predicate is designated as one that can have an Undergoer subject and *yelcha* can be interpreted as an animate entity.²⁴⁾

The contrast between a subject that is animate and hence can be an Undergoer and one that is not animate becomes clearer in the following pair of sentences:

- (28) a. *minho-ka mwun-ul yel-ko iss-ø-ta.*
 Minho-Nom door-Acc open-X Y-NPast-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-NPast-Decl
 Intended: ‘The shoe store is opening the door’ or ‘The shoe store is open.’

While (a) is ambiguous between P- and R-readings, (b) 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 constraint (27). Note that a ‘shoe store’ is not animate. At least, it is less animate, if animate at all, than a ‘train’ in (16a). In usual contexts, the entity that can experience something is an animate one. However, we need to note that (b) 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 constraint because the sentence becomes grammatical when the shoe store, which is an inanimate entity, is interpreted as being related to a human being, which is animate and hence can be an experiencer.

Thus far, we have posited a lexical constraint and a syntactic constraint operating

23) The predicate [*cengci(-lul) ha-*] seems to be unnatural with humans or animals as its subject. However, *memchwu-* ‘to stop,’ which has largely the same meaning as the former, allows animate entities as well as inanimate moving entities as its subject.

24) In addition, entities such as (personified) snowmen, scarecrows and dolls are usually assumed to be animate and hence can be a legitimate subject of V_1 in the R construction.

on the R construction. Only PSPT predicates can appear in the V position and the invisible subject of V has an Undergoer role. The following sentences seem to be counterexamples to our analysis (cf. Chung 2005: 557):

- (29) a. *motwu hakkyo-ey ka-ko yeki-nun amwuto eps-ø-ta.*
 all school-at go-KO here-CT nobody not exist-NPast-Decl
 ‘All went to school and nobody is here.’
- b. *motwu yehayng ttena-ko na-man honca cip-ul cikhi-ø-nta.*
 all trip leave-KO I-only alone house-Acc keep-NPast-Decl
 ‘All others left on a trip and I am alone staying home.’

The VPs combining with *-ko* are telic and they seem to represent a result state. However, these sentences violate two constraints on the R construction. First, the past tense form of the VPs does not represent a present state. That is, [*hakkyo(-ey) ka-ass-ta*] ‘went to school’ and [*yehayng(-ul) ttena-ass-ta*] ‘left on a trip’ do not indicate a present state. Second, the predicates involved cannot have Undergoer as their subject. The subject of [*hakkyo-ey ka-*] ‘to go to school’ or [*yehayng(-ul) ttena-*] ‘to leave on a trip’ is *motwu* ‘all,’ which can only be an Agent.

We have to note, however, that the sentences in (29) are not realizations of the R construction. Remember that, in the R construction, the subject of V_1 in [... V_1 -*ko* ... V_2] is empty and the subjects of V_1 and V_2 are coreferential (although they can have different thematic roles). In (29), on the other hand, the subject of V_1 (i.e., *motwu* ‘all’) is present explicitly and the two subjects cannot refer to the same entity. When someone has gone to school or has left on a trip, that person cannot be present here to do what is indicated by V_2 . Therefore, we can conclude that the sentences in (29) are not realizations of the R construction but another construction (probably the same as the p-R construction), which represents a list of two events. The fact that we can add the past tense marker *-ass* to *ka-* ‘to go’ and *ttena-* ‘to leave’ supports this assumption, because, among the various uses of *-ko*, only the one meaning ‘and’ allows a tense marker before it. The sequential reading of the two events involved and the result state reading of the first event seems to come from the semantic properties of the two clauses and the relation between them.

In our framework, the two properties of the R construction which are captured by way of the two constraints are implemented into the specifications of the construction in (9). Only those [... V -*ko iss-*] expressions which satisfy both of these constraints can have an R-reading. However, will be seen shortly, not all [... V -*ko*

iss-] expressions satisfying them have an R-reading. Once again, let us consider the meaning posited in (9) for the AdvP in the R construction, namely '(while) \emptyset experiencing the result state of VP₁-ing.' Here the invisible subject, which is coreferential with the main subject, is supposed to experience the state resulting from what is represented by the VP. For someone to experience the result state, the state should exert influence on the person to the extent that he can realize it consciously. That is, he himself should be affected by the state. Based on this observation, we assume that a pragmatic constraint of the following operates on the relationship between the invisible Undergoer subject of V₁ and what is experienced by the subject.²⁵⁾

(30) The affectedness constraint (a pragmatic constraint):

The (invisible) subject of V₁ should be affected physically, cognitively and/or socially by the state resulting from VP₁-ing.

Among the three types of predicates triggering the R construction, predicates of the first type, which induce both P- and R-readings, require a change in the posture of the body of the subject or in its direct environment. Predicates such as [(*mwun-ul kam-*] 'to close (eyes)' bring about a change in the body (posture) itself. As another example, sentence (16b), which contains the verb *kitay-* 'to lean,' can have an R-reading because the result state of leaning against the wall brings about a posture change that the subject can clearly experience with its own body. Predicates such as [(*moca-lul ssu-*] 'to put on (hats)' bring about a change in the body part that is in contact with the hat. On the other hand, predicates such as [(*mwun-ul tat-*] 'to close (doors)' bring about a change in the direct environment where the experiencer is. As for the predicates of the second and third types, for example, *kaci-* 'to have/possess' and *ic-* 'to forget,' the result state brings about a significant change to the subject socially and/or cognitively. We believe that this pragmatic constraint is a good test for deciding whether those PSPT predicates that require an Undergoer subject actually induce the R construction or not.

Some previous works such as Nam (2004: 112) and Hong (2013: 1084-5) also

25) In a sense, the reflexivity condition observed in Section 3.1 is similar to our affectedness condition in (30). However, there are important differences. As for the former, it is not always easy to figure out whether the action involved is reflexive or not, because the condition is not likely to be defined clearly. In addition, as a semantic condition, it is supposed to play a decisive role in characterizing the resultative [... V-ko *iss-*]. On the other hand, the latter is a pragmatic constraint and hence describes a (cancellable) context-dependent tendency.

refer to “affectedness” in accounting for the resultative [... *V-ko iss-*] expressions. According to the former, these expressions bring about a meaning in which the result of the event represented by [... *V*] affects the performer of the *V*. However, as seen, the affected entity is not the performer of the *V*. That is, the invisible subject of *V*₁ in (30) is only an experiencer of the result state. The information about the performer of the *V* is not part of the expression. The latter says that the subject of the *V* (not only in [... *V-ko iss-*] but also in [... *V-e iss-*]) should be an “affected theme” that is influenced semantically by the event represented by the *V*. Contrary to this position, we argue with reference to (30) that the affected entity is not a Theme but an Undergoer. Remember that the entity should be a sentient being (cf. footnote 4). In addition, the condition in (30) is not semantic but pragmatic, as will become evident below. If it is a semantic condition, it has to be defined in such a way that we can count on it to decide whether a predicate can trigger the R construction or not.

The pragmatic nature of the constraint in (30) and its usefulness can be observed clearly from examples such as the following (the data are from Ilkyu Kim, p.c.):

- (31) 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-NPast-Decl
 ‘John is putting a band aid on Mary’s face.’
- b. *cyon-i yeyppu-n phosuthe-lul meyli-uy pang pyek-ey*
 John-Nom pretty-Adnr poster-Acc Mary-Gen room wall-at
pwuthi-ko iss-ø-ta.
 put on-X Y-NPast-Decl
 ‘John is putting a pretty poster on the wall in Mary’s room.’
- (32) a. *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-NPast-Decl
 ‘John is putting a band aid on his face.’
 or ‘John has put a band aid on his face.’
- b. *cyon-i yeyppu-n phosuthe-lul caki-uy pang pyek-ey*
 John-Nom pretty-Adnr poster-Acc self-Gen room wall-at
pwuthi-ko iss-ø-ta.
 put on-X Y-NPast-Decl
 ‘John is putting a pretty poster on the wall in his room.’
 or ‘John has put a pretty poster on the wall in his room.’

In general, an R-reading is almost impossible in the sentences of (31), although the verb *pwuthi-* 'to stick' satisfies both the lexical and syntactic constraints. However, the sentences in (32) are ambiguous. There are no syntactic differences between the two sets of data. The only difference between them is the difference between *meyli-uy* 'Mary's' in (31) and *caki-uy* 'self's' in (32). This difference cannot cause any syntactic differences in structures/constructions concerned, because they are just modifiers in one of the complements of V₁. Now we can count on the pragmatic constraint in (30). As for (31a), 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 (potential) experiencer (i.e., John) physically. Note that *pwuthi-* brings about only physical changes, not cognitive and/or social changes. As for (31b), the result state of putting a pretty poster on the wall in Mary's room cannot affect John physically. On the other hand, the result state of what is described in the VPs of the sentences in (32) can naturally affect the experiencer physically. John cannot be unaffected by the result state because he has the band aid on his own face or he has the poster in his own room.

In some cases, it is not clear whether a [... V-*ko iss-*] expression embodies the R construction or not. The expression [*cip-ul cis-ko iss-*] is one of them.²⁶⁾ J-B Kim (2011) assumes that (33a) has only a P-reading (p. 877) and that (33b) has (only) an R-reading (p. 880):

- (33) a. *minho-ka cip-ul cis-ko iss-ø-ta.*
 Minho-Nom house-Acc build-X Y-NPast-Decl
 'Minho is building a house.'
- b. *minho-ka cip-ul cis-ko honca iss-ø-ta.*
 Minho-Nom house-Acc build-Advr alone stay-NPast-Decl
 'Minho stays alone while being in the result state of building a house.'

Disregarding the reading of two sequential events, it is true that (33b) has only an R-reading. It can only be a realization of the R construction because *iss-* is modified by *honca*. However, we cannot agree with his assumption that (33a) has only a P-reading. It is not understandable that the existence of a modifier triggers a change from the P construction to the R construction. Rather, we assume that (33a) is

26) As another example, [(*ku sasil-ul kkaytat-ko iss-*] is not assumed to have a resultative reading in Hong (2013: 1084). However, we believe that the R-reading 'to have realized the fact' is more salient than the P-reading 'to be realizing the fact' (cf. Chae 2018b: 174).

ambiguous between the two readings, just like sentence (2). In some contexts, for example, if we are in a society where people are not expected to live in a house because most people are living in a cave, it would be perfect as an R-reading sentence. In (33b) only the R-reading survives between the two possible readings due to the modifier *honca* ‘alone.’

Although it is reasonable to assume that (33a) is ambiguous between P- and R-readings, it is also true that an R-reading is less significant than a P-reading in normal contexts.²⁷⁾ Under our analysis, we can provide an account of the reason why an R-reading is not salient in the sentence. First, the past tense form of the verb *cis-* ‘to build’ (i.e., {*ciess-/cis-ess-/*}) is not very natural in indicating a present state. Remember that only PSPT predicates can trigger the R construction. As *ciess-* cannot be easily interpreted as indicating a present state, to that extent the construction containing it might not be natural. However, it can indicate a present state in some special contexts. Let us assume that a couple of close friends are talking about how their old friends are getting along. When one asks about Minho, the other can reply with the following sentence:

- (34) *ku chinkwu-nun kohyang-ey taykwel kath-un cip-ul*
 that friend-CT hometown-at palace be like-Adnr house-Acc
 {*ciess/cis-ess/*}-e.
 build-Past-Decl
 ‘He built (let people build) a palace-like house in his hometown and lives in it.’

Although *ciess-* usually indicates a past activity, it can indicate a present state in the given context, as we can see from the translation. Furthermore, the subject ‘that friend’ is not likely to be the builder of the house, which implies that it has an Undergoer role rather than an Agent role (in the R-reading). Remember that the R predicate has an Undergoer subject.

The affectedness constraint also tells us that an R-reading is not significant in (33a). Building a house (of someone else’s) does not bring about a change in the body posture of the (potential) experiencer or his direct environment significantly enough for him to be affected. Only when the referent of the subject itself lives in the house and hence is affected by the result of building the house, could the

27) In accounting for the R-reading in (33b), J-B Kim (2011: 880) refers to “the help of proper context or additional elements,” which is pragmatic in nature.

sentence be interpreted as an R-reading. We can increase the degree of affectedness by adding some modifiers and/or by changing some words in the sentence:

- (35) a. *minho-ka swuph sok-ey wummak-ul cis-ko iss-ø-ta.*
 Minho-Nom forest inside-in mud hut-Acc build-X Y-NPast-Decl
 ‘Minho is building a mud hut in the forest.’ or ‘Minho stays in the forest living in a mud hut.’
- b. *minho-ka wummak-ul cis-ko untwun saynghwal-ul ha-ø-nta.*
 mud hut-Acc build-Advr life in seclusion-Acc do-NPast-Decl
 ‘Minho lives in seclusion, staying in a mud hut.’

We have added a PP [*swuph sok-ey*] ‘in the forest’ and replaced *cip* ‘house’ with *wummak* ‘mud hut’ in (35a), and we replaced *iss-* with [*untwun saynghwal-ul ha-*] ‘to live in seclusion’ in (35b). These changes enhance the possibility that Minho is the person who lives in the mud hut. In other words, to the extent that the result state of the VP in question affects the experiencer, the sentence would be natural as a realization of the R construction. We guess that there would be much variation among speakers in their judgments on the grammaticality of sentences containing predicates such as *cis-*.

In our analysis, the assumption that those predicates that trigger the R construction have the property of PSPT and their invisible subjects have an Undergoer role plays a very important role. Let us summarize these properties with reference to the relationships between [... V-ess-] and [... V-ko]:

- (36) a. *swuci-ka/nwunsalam-i moca-lul ssu-ess-ta.*
 Susie-Nom/snowman-Nom hat-Acc wear-Past-Decl
 ‘[Susie/ ?*The snowman] put on a hat.’ or ‘[Susie/ The snowman] is wearing a hat.’
- b. *swuci-ka/nwunsalam-i moca-lul ssu-ko iss-ø-ta.*
 Susie-Nom/snowman-Nom hat-Acc wear-KO ISS-NPast-Decl
 ‘[Susie/ ?*The snowman] is putting on a hat.’ or ‘[Susie/ The snowman] is wearing a hat.’

In (36a), the verb *ssu-* in its past tense form can indicate either a past activity or a present state. When it indicates a past activity, the snowman cannot be an appropriate subject because it, being an inanimate entity, cannot perform the action

of putting on a hat. In (36b), [... V-ko iss-] is ambiguous between P- and R-readings. When it has a P-reading, the snowman cannot be an appropriate subject for the same reason. On the other hand, when (36a) has a present state reading and (36b) has an R-reading, not only Susie but also the snowman is allowed as an Undergoer subject. We can see that, although the snowman cannot be an Agent subject, it can be an Undergoer subject (cf. footnote 24).

In addition, recapitulating from earlier observations, [... V-ess-] and [... V-ko] have the following (common) properties when they have the function of indicating a present state. Considering with the two sentences in (36), first, the elements that are responsible for the present state reading is the past tense marker *-ess* in (a) and the particle *-ko* 'after' in (b), together with the telic property of V. Second, the thematic role of the subjects of *ssu-* in the two sentences is Undergoer. These subjects are not the performer of the action of putting on a hat but the experiencer of the state resulting from (someone's) putting on a hat on their heads. Of course, the performer can be the person represented by the subject (accidentally). Third, although both have the Undergoer role, the range of the subjects allowed in (a) is wider than that of the invisible subjects allowed in (b). For example, [*sinpal kakey*] 'shoe store' can be the subject of [*mwun-ul yel-ess-ta*] 'have opened the door,' but it cannot be a natural subject of [*mwun-ul yel-ko iss-ta*] 'have opened the door' when it is interpreted literally (cf. (28b)).

In this paper, we have employed the criterion/constraint of whether the past tense form of a predicate can represent a present state or not as a major tool for restricting the range of the telic predicates that can trigger the R construction. However, this does not mean that the aspectual properties of the predicates do not play any roles in restricting the range. In actual fact, there seems to be a strong correlation between the PSPT constraint and aspectual properties of the predicates concerned. Let us examine these correlations by comparing the two telic predicates [*tochak(-ul) ha-*] 'to arrive' and [*cengci(-lul) ha-*] 'to stop' (cf. (16a)). Since both trigger the P construction, they contain a part indicating process in their meanings. However, from an intuitive point of view, the process before the culmination point is more salient than the state after it in the former. On the other hand, the state after the culmination point is more salient than the process before it in the latter. Then, the issue becomes how we can verify whether our intuition is correct or not. We think that our criterion comes to our rescue here. It is a reasonable assumption that those predicates that have saliency in the state after the culmination point is more likely to indicate a present state with the past tense form than those predicates that have saliency in

the process before the culmination point. This assumption is borne out: [*cengci ha-yess-ta*] ‘stopped’ can indicate a present state while [*tochak ha-yess-ta*] ‘arrived’ cannot. In turn, [*cengci ha-ko iss-ø-ta*] can have an R-reading, while [*tochak ha-ko iss-ø-ta*] cannot. We can see from these observations that our criterion is simpler and easier to apply than using aspectual properties to determine whether a predicate can trigger the R construction or not. We can test the criterion only on the basis of our intuition on the possibility of whether the past tense form of a telic verb can indicate a present state or not. Most of all, our approach employing the PSPT constraint, together with other constraints, can account for the data concerned very effectively.

4. Conclusion and Further Studies

In this paper, we are under the assumption that [... *V-ko iss-*] is ambiguous in three ways: P, R and p-R constructions. Each of these constructions has a separate set of predicates that can occur in the [... *V*] position. We could provide an appropriate set of constraints on the R construction because we had factored out the p-R construction from the resultative construction in previous analyses. That is, our analysis is based on the understanding that the traditional resultative construction comprises two heterogeneous constructions: the R and p-R constructions. Crucially, the predicates involved are very different: the predicates in the latter have a state meaning inherently, while those in the former have a state reading derived from other sources.

Accepting the three-way ambiguity, we have established a new set of constraints operating on the construction behind (real) resultative [... *V-ko iss-*] expressions, namely the R construction. The set comprises three different types of constraints: a lexical constraint, a syntactic constraint and a pragmatic constraint. In distinguishing the progressive and resultative constructions, many previous analyses have posited constraints such as telicity, possessor/contact, transitivity and reflexivity. Although telic predicates are closely related to the (traditional) resultative construction, this telicity condition does not work properly in characterizing it: i) p-R predicates are not necessarily telic, and ii) not all telic predicates can trigger the R construction. Our approach, on the other hand, has started from the understanding that the resultative construction has to be divided into the R construction and the p-R construction, and from the observation that all the

predicates that can trigger the R construction have the property of PSPT. By establishing two more constraints (syntactic and pragmatic constraints), which are based on the abstract predicate *experience*, we could properly characterize the construction, in contrast to the P construction and the p-R construction.

In providing these constraints, we have focused on elucidating the nature of the PSPT property and related issues. First, we have noted that some telic predicates in their past tense form and those that combine with *-ko* 'after' in the R construction share special properties. They have the properties of representing a present state and requiring an Undergoer subject rather than an Agent subject. These properties are triggered by the past tense marker *-ess/ass/yess* or the particle *-ko* 'after,' both of which have the same function of providing a past time interpretation. Second, we have considered how we can implement into a grammatical system the fact that predicates with an Agent subject can have an Undergoer subject when they combine with the past tense marker, in comparison with the R construction. We have provided a constructional analysis of the sentences concerned, focusing on their idiomatic properties.

This paper has provided a rather comprehensive analysis of [... *V-ko iss-*] expressions. For a deeper analysis, however, we need to compare the resultative [... *V-ko iss*] with the (resultative) [... *V-e iss-*]. As these two types of resultative constructions have similarities and differences, further studies on [... *V-e iss-*] will lead to a better understanding of the two resultative constructions in Korean. In addition, languages such as Japanese and Mongolian have constructions similar to those in Korean. A comparative study of these constructions will also be very fruitful in understanding their properties more deeply. A major difference between Korean and these languages is that only Korean predicates have the property of PSPT. It is intriguing, without recourse to this property, how the constructions would be handled in these languages. A more interesting property of the resultative construction in all these languages is that the predicates in them require an Undergoer or a Theme subject even though they require other thematic roles in non-resultative contexts. As far as I know, there does not seem to be any work providing mechanisms dealing with this phenomenon. We may need an analysis such as (23) for other languages as well. Even in English, we can observe a similar phenomenon of thematic role change with some verbs occurring in [*be V-ing ...*]. Although they usually indicate an on-going activity, they can also indicate a present state in sentences such as [*the baby is sitting on a chair*]. Unlike in its other uses, the verb *sit* does not have an Agent role because the baby itself does not have to

be the performer of the action of sitting. It can be analyzed either as an Undergoer or as a Theme, but not as an Agent.

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