9

Korean Resultative Constructions

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9.1 Introduction

This paper aims to investigate the typology of resultative constructions (henceforth RC) in Korean, to provide their relevant constraints and finally to propose formal structures of RCs in a unified way.

RCs refer to a formation that combines a simple sentence with a result phrase[1] or an expression denoting the result of an action. For example, *red* in *Lee painted the wall red*, a result phrase can be paraphrased as "*Lee painted the wall*; and, as a result, *the wall was red*." In other words, the sentence *Lee painted the wall red* holds the causal relation between Lee's painting action and the result state 'the wall is red'.

The traditional transformational approaches (Simpson, 1983, Carrier and Randall, 1992) assumed that the subject of an intransitive RC derives from the deep or underlying object position, supporting *the Unaccusative Hypothesis* by Perlmutter (1978). Despite the existence of RCs, however, it is not so easy to provide syntactic evidence for unaccusativity in such languages as Korean. We argue that RCs can be explained by type-specific but cross-linguistically plausible properties of the constructions and their relevant constraints by introducing the extended feature descriptions of RCs in connection with eventuality, i.e. telicity or delimitedness. The analysis is formulated, partially adopting Generative Lexicon Theory, in the framework of Head-Driven Phrase Structure Grammar (HPSG).

[1] Result phrases must be distinguished from depictive secondary predicates which lack this result meaning, such as the predicate *drunk* in *The chairman came to the meeting drunk.*

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9.2 Basic Facts

9.2.1 Result Expressions: A Cross-linguistic Perspective

A result expression in RCs deduces the result or causal interpretations. There is typological variation to express the phrases denoting the result state. The italicized parts in (1), for instance, demonstrate the result expression in English, Chinese, and Japanese.

(1) a. Kim painted the wall *red*
b. Lee washed the shirt *clean*
c. Ta Tu *hong le* qiang (Li and Thompson 1981)
she paint red ASP wall
'She painted the wall red.'
d. Ta (ba) chen-yi xi gan-jing le (Li and Thompson 1981)
He OBJ shirt wash clean ASP
'He washed the shirt clean.'
e. John-ga kabe-o aka-ku nutta (Washio 1997)
John-NOM wall-ACC red-KU painted.
'John painted the wall red.'
f. Kare-wa teeburu-o kirei-ni aratta (Washio 1997)
He-TOP table-ACC clean-NI washed
'He washed the shirt clean.'

In the above three languages, RCs involve different forms to express the result meaning; an adjective in English, a resultative verb compound in Chinese, and *-ku/-ni*[2] morpheme in Japanese. In addition, the productivity of some result expressions is cross-linguistically constrained. Some RCs are, for examples, available in English and Chinese, while the counterparts are more restricted in Japanese.

(2) a. John cried himself hoarse.
b. Ta (dou) han ya le sangzi. (Uehara et al. 2001)
he EMP cry hoarse ASP throat
'He cried his throat hoarse'
c. Kare-wa nodo-ga kasakasa-ni sakenda.(Uehara et al. 2001)
he-TOP throat-NOM hoarse-NI cried.
'He cried his throat hoarse'
d. Kim-wa hankachi-ga bisshorini naita.
Kim-TOP handkerchief-NOM wet-NI wept
'Kim wept his handkerchief wet'

[2] *-ku* is used with those in the canonical adjective category whereas *-ni* is used with those in nominal adjective category(Uehara et al. 2001).

In Japanese it is essential to add either change of state verbs like *naru* 'become' or a conjunctive particle *hodo* 'to the extent' as in (3) to make the sentence (2c) and (2d) grammatical (Uehara et al. 2001):

(3) a. Kare-wa [nodo-ga kasakasa-ni naru hodo] sakenda.
he-TOP throat-NOM hoarse-NI become degree cried.
'He cried to the extend that his throat became hoarse'

b. Taroo-wa [hankachi-ga bisshori-ni naru hodo]
Taroo-TOP handkerchief-NOM wet-NI become degree
naita.
weep
'Taroo wept to the extend that his handkerchief became wet.'

9.2.2 Distribitions of Korean Result Morphemes: *-key/-tolok*

In Korean RCs are closely related to the morphology. There are two main morphemes, *-key* and *-tolok*, employed in result expressions in Korean.[3] These morphemes can be cross-classified with the combination of the morphemes with syntactic constituents as well as with the interchangeability of the morphemes. First, *-key* is combined not only with a predicate, but also with a clause. On the other hand, *-tolok* is combined only with a clause. Furthermore, a morphological alternation between *-key* and *-tolok* is allowed only in the combination of result morpheme with sentential argument.

(4) a. elkul-i [kem-*key*/*-*tolok*] tha-ess-ta.
face-NOM black burn-PAST-DEC
'The face burned black.'

b. Lee-ka pyek-ul [pwulk-*key*/*-*tolok*] chilha-yess-ta.
Lee-NOM wall-ACC red paint-PAST-DEC
'Lee painted the wall red.'

c. Kim-i [sinpal-i talh-*key*/*-*tolok*] talli-ess-ta.
Kim-NOM shoes-NOM threadbare ran
'Kim ran his shoes threadbare.'

9.2.3 Two Types of Result Phrases in Korean

In terms of the distribution of result morphemes *-key* and *-tolok*, this paper assumes the two types of result phrases: *non-subject-result-phrase* (henceforth *Type 1*) and *subject-result-phrase* (henceforth *Type 2*). The

[3] In Korean, clausal resulatives using connectives like *-se* are more commonly used than resultative predicates combined with result morphemes. This paper narrows down the discussion to the case in which two result morphemes in Korean are involved in RCs.

examples in (5) illustrate a rough sketch of two kinds of Korean result expressions to be treated here.

(5) · *non-subject-result-phrase* (*Type 1*)

a. kang-i [tantanha -*key*/*-*tolok*] el-ess-ta.
lake-NOM solid so that freeze-PAST-DEC
'The lake froze soild.'

b. John-i pyek-ul [pwul-*key*/*-*tolok*] chilha-ass-ta.
John-NOM wall-ACC red paint-PAST-DEC
'John painted the wall red.'

· *subject-result-phrase* (*Type 2*)

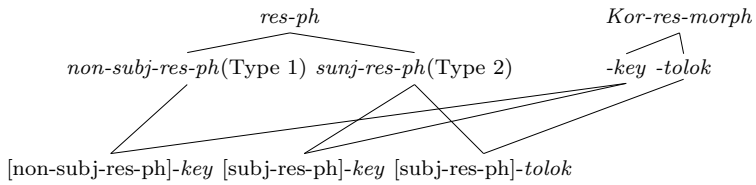
c. John-i [mok-i swi-*key*/-*tolok*] oi-chi-ess-ta.
John-NOM throat-NOM hoarse shouted
'John shouted his throat hoarse.'

The grammatical status of -*key*, as in (5a), is controversial: adverbs vs predicates. Wechsler and Noh (2001) have agreed to an assumption that -*key* marks adverbs, challenging the proposals (Kim and Mailing 1996, Kim 1999, and Jang 2000) that the grammatical status of suffix -*key* is not an adverbial but a predicative. In particular, they have put -*key* of (5a) in question, though admitting the predicativeness of the other -*key*. Their exclusion, however, is somewhat questionable.[4]

This paper argues that result expressions in *Type 1* has predicative properties and requires a semantic argument. To put differently, *Type 1* is a sort of sentential phrase, not having the syntactic subject.

To sum up, the multiple inheritance hierarchy in (6), adopted and extended from Sag and Wasow (1999), illustrates the crosscutting generalization of the classification of Korean result phrases.

(6)



[4] A piece of evidence is related to Korean morphology; specifically, -*key* formation of change of color predicates. The word 'change' or 'transition' has already implied the result state of event. Interestingly, there is no '-*i*' adverbial to express change of color in Korean; **pulk-i/pulkey*, **pulu-i/pulu-key*, **nolah-i/nolah-key*.

(i) tanphwung-i pwulk-key/*pwulk-i multul-ess-ta.
maple-NOM red get dye

9.2.4 Verb Classes and their relations to Resultatives

Much of the literature on RCs has agreed that the types of RCs are sensitive to the semantics of verbs or verb classes. There are four main verbs treated in RCs; unaccusative, unergative, passive, and transitive verbs. In Korean *Type 1* or *non-subj-re-ph* is selected in the case the main verb is unaccusative, passive and transitive verbs, as similar to English and Japanese.

(7) a. khepi-ga [*chagap-key*] **sik**-ess-ta.
coffee-NOM cold cool-PAST-DEC
'Coffee cooled cold'

b. ttang-i [*tantanha-key*] **kut**-ess-ta.
Ground-NOM solid harden-PAST-DEC
'The ground harden solid'

c. elkul-i [*kem-key*] **tha**-ess-ta.
face-NOM black burn-PAST-DEC
'The face burned black'

d. Kim-i [*holccwukha-key*] **yawui**-ess-ta.
Kim-NOM thin become-thin-PAST-DEC
'Kim became thin'

e. sacen-i [*nedelnedelha-key*] **talh**-ess-ta.
dictionary-NOM to tatters has been worn
'The dictionary has been worn to tatters'

(8) a. os-i [*netelnetelha-key*] **ccic**-eci-ess-ta.
cloth-NOM to rags tear-PASS-PAST-DEC
The cloth tore to rags'

b. khwuki-ga [*norah-key*] **kwu**-eci-ess-ta.
cookie-NOM yellow bake-PASS-PAST-DEC
'Cookies baked yellow'

(9) a. Kim-i teipul-ul [*kaekkukha-key*] **takk**-ass-ta.
Kim-NOM table-ACC clean wipe-PAST-DEC
'Kim wiped the table clean'

b. Lee-ka pyek-ul [*norah-key*] **chilha**-ess-ta.
Lee-NOM wall-ACC yellow paint-PAST-DEC
'Lee painted the wall yellow'

In (7) all main verbs like *sik-* (cool), *kut-* (harden), *tha-* (burn), *yawui-* (become thin), and *talh-* (worn) are a subtype of intransitives, so-called unaccusative verbs that inherently have an agentless argument

in the subject position and express change of state.[5] Passive verbs also lack an agent argument but have a theme or a patient argument in the subject position. They show a similar pattern to the case involving unaccusatives, as in (8). Transitive verbs in (9) such as *tak-* (wipe) and *chilha-*(paint), realized in RCs, usually represent the meaning of change of state.

Unlike *Type 1*, the main verbs (V2) of *Type 2* must be another subtype of intransitives, so-called unergative verbs that inherently have an agent argument and express activity but not change of state. Contrary to those unaccusatives lexically entailing change of state, *Type 2* newly introduces result or causal interpretation in the construction.

(10) a. John-i [*mok-i* *swi-key/-torok*] **oyichi**-ess-ta.
John-NOM throat-NOM hoarse shouted
'John shouted his throat hoarse'

b. Kim-i [*sinpal-i* *talh-key/-torok*] **talli**-ess-ta.
Kim-NOM shoes-NOM threadbare ran
'Kim ran his shoes threadbare'

To recapitulate, the verb classes are bound to constrain the syntactic realization of result phrases or to license the two types of result phrases restrictedly. Thus, this paper tries to offer some explanation of the complex properties of RCs by introducing the extended lexical semantic structure of verbs.

9.2.5 Lexical Semantic Structure of Korean Intransitives

Within a modified framework of Pustejovsky (1995)'s Generative Lexicon Theory[6] by Lee et al. (1997) and Lee (1998), unaccusative and unergative verbs roughly illustrate the following distinction in representation:

(11) Unaccusative

[5] Unaccusative verbs belong to two subtypes; the change of state (such as *nok-* (melt)) and the change of location (such as *tochakha-* (arrive)) in terms of the lexical conceptual paradigm. Korean unaccusatives representing the change of location select the default locative argument rather than a predicate denoting the result state of the unaccusatives.
John-i Seoul-yeok-ey/*haengbokha-key tochakha-ess-ta
John-NOM Seoul-station-LOC/happily arrived

[6] Nightingale (1999) suggested the possibility to incorporate Generative Lexicon Theory into HPSG in the explanation of Japanese polysemy.

$$\begin{bmatrix} \text{EVENT-STR} & \begin{bmatrix} \text{E1=e1:process} \\ \text{E2=e2:state} \\ \text{HEAD=e2} \end{bmatrix} \\ \text{ARG-STR} & [\ \text{arg1=x}\ ] \\ \text{QUALIA-STR} & \begin{bmatrix} \text{FORMAL=Vresult-state(e2,x)} \\ \text{AGENTIVE=Vprocess(e1,x)} \end{bmatrix} \end{bmatrix}$$

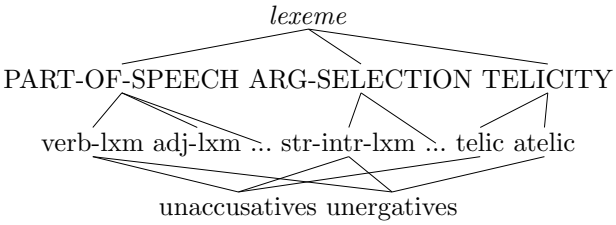
(12) Unergative

$$\begin{bmatrix} \text{EVENT-STR} & \begin{bmatrix} \text{E1=e1:process} \\ \text{HEAD=e1} \end{bmatrix} \\ \text{ARG-STR} & [\ \text{arg1=x}\ ] \\ \text{QUALIA-STR} & [\ \text{AGENTIVE=Vact(e1,x)}\ ] \end{bmatrix}$$

As shown above, the main difference between unaccuastive and uneragive verbs lies in EVENT structure: Unaccusative verbs assume the result state of an event while unergative verbs do not. In light of telicity or delimitedness, an unaccusative verb lexically has a telic or delimited event, in contrast with an inherent atelic or undelimited event of an unergative verb.

This paper proposes the extended lexeme hierarchy to capture the notion of telicity by introducing another dimension: TELICITY. Thus, an unaccusative is telic intransitive while an unergative is atelic intransitive.

(13)



9.3 Syntax and Semantics of RCs

9.3.1 Syntactic structures of Korean RCs

In this section, we investigate the syntactic structures of RCs, focussing on the distinction between two types of intransitives. We further argue that in unergatives, the agent employs his/her (in-)alienable part for the action involved but there is no such process in unaccusatives.

There are, as Carrier and Randall (1992) suggested, two main analyses of the syntactic structure of the English resultative construction; the Binary Small Clause Analysis and Ternary Analysis.

Given the above distinction between two types, it is reasonable to use the so-called Hybrid Analysis of Korean RCs (Kim 1999). With respect to *Type 1*, we propose that result expressions be predicative properties and have a semantic subject, thus treated as a sort of phrase. Another syntactic properties of *Type 1* or *non-subj-res-ph* is that it can license the 'Predicate-*key*' result phrase, rather than a clause as in (14).

(14) a. kang-i [(?*phyomyen-i*) tantanha-key] el-ess-ta.
river-NOM surface-NOM solid freeze-PAST-DEC
'The surface of a river froze solid.'

b. khepi-ka [(?*onto-ka*) chakap-key] sik-ess-ta.
coffee-NOM temperature-NOM cold cool-PAST-DEC
'The temperature of coffee cooled down'

c. Kim-i [(?*mom-i*) holccwukha-key]
Kim-NOM body-NOM thin
yawui-ess-ta.
become-thin-PAST-DEC
'The body of Kim became thin'

To put differently, *Type 1* does not license a visible syntactic subject in its phrase. Kim and Mailing (1996) suggested an interesting example that could be a counterexample (15a) of the classifications of result phrases dealt with in this paper (Kim and Mailing 1996):

(15) a. Kil-i cilphenha-key nwun-i nokassta.
Road-NOM slushy-KEY snow-NOM melted

b. ?Kil-i nwun-i cilphenha-key nokassta.
Road-NOM snow-NOM slushy-KEY melted

c. Kil-ui nwun-i cilphenha-key nokassta.
Road-GEN snow-NOM slushy-KEY melted

d. Kil-ey nwun-i cilphenha-key nokassta.
Road-LOC snow-NOM slushy-KEY melted

However, the cross-linguistic considerations provide us with a piece of evidence to support the validity of our classification. Consider the following examples where a Japanese unaccusative verb *toke*-(melt) is involved with RCs; (16a), a counterpart of (15a), is never acceptable in Japanese.

(16) a. *Miti-ga dorodoro-ni yuki-ga toke-ta.
Road-NOM slushy-NI snow-NOM melted.

b. *Miti-ga yuki-ga dorodoro-ni toke-ta.
Road-NOM snow-NOM slushy-NI melted.
c. Miti-no yuki-ga dorodoro-ni toke-ta.
Road-GEN snow-NOM slushy-NI melted.
d. Miti-de yuki-ga dorodoro-ni toke-ta.
Road-LOC snow-NOM slushy-NI melted.

Both Korean and Japanese are grammatical in case that *kil* and *miti* have locative markers *-e* and *-de*, respectively, which have been traditionally classified as adjuncts. Intuitively, "the road is slushy" means "snow there but not road itself is slushy". In other words, when saying that the road is slushy, we already assume there is something that melted or liquid in the road. Hence, it is perfectly grammatical in the case that *Kil-i* in (15a) and *miti-ga* in (16a) are removed.

Type 2 or *subj-re-ph* reveals some of the different syntactic constraints from *Type 1*. First, it requires that NP 2 or the subject of a result clause be obligatory.

(17) a. John-i [mok-i swi-key] oyichi-ess-ta.
John-NOM throat-NOM hoarse shouted
b. *John-i [swi-key] oichessta.
John-NOM hoarse shouted
c. *John-i [Mary-ui mok-i swi-key] oichessta.
John-NOM Mary-GEN throat-NOM hoarse shouted
d. Kim-i [sinpal-i talh-key] talliessta.
Kim-NOM shoes-NOM threadbare ran
e. *Kim-i [talh-key] talliessta.
Kim-NOM threadbare ran
f. *Kim-i [Mary-ui sinpal-i talh-key] talliessta.
Kim-NOM Mary-GEN shoes-NOM threadbare ran

Unlike English, the Korean RC with *Type 2* cannot be passivized (Goldberg 1995).[7]

(18) a. Kim-i [mok-i swi-key] oichiessta.
Kim-NOM throat-NOM hoarse shouted
b. *mok-i swi-key oichi-eci-essta.
throat-NOM hoarse shout-PASSIVE-Past

[7] Consider these examples in English:

(i) a. The joggers ran their Nikes threadbare.
a'. Their Nikes were run threadbare.
b. The joggers ran the pavement thin.
b'. The pavement was run thin.

Thus, this fact implies that RCs with *Type 2* are different from the English unergative resultative construction. Alternatively, we can say that the Korean resultative does not take the ECM parameter. It is just a matter of whether the underlying embedded subject is raised/EC-marked or not. But both for English and Korean the part-whole constraint holds. Finally, in preposing or topicalzation, both the nominative NP and its predicate in *Type 2* must be fronted together as a clausal unit at the one time. The ungrammaticality arises if either the NP or its predicate undergoes preposing separately.

(19) a. [mok-i swi-key/-tolok] Kim-i oichessta.
throat-NOM hoarse Kim-NOM shouted.

b. [sinpal-i talh-key/-tolok] Lee-ka talliessta.
shoes-NOM threadbare Lee-NOM ran.

c. ?*mok-i Kim-i swi-key/-tolok oichessta.
throat-NOM Kim-NOM hoarse shouted.

d. ?*sinpal-i Lee-ka talh-key/-tolok talliessta.
shoes-NOM Lee-NOM threadbare ran.

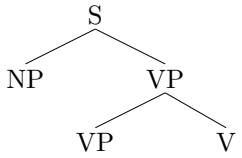
e. *swi-key/-tolok Kim-i mok-i oichessta.
hoarse Kim-NOM throat-NOM shouted.

f. *talh-key/-tolok Lee-ka sinbal-i talliessta.
threadbare Lee-NOM shoes-NOM ran.

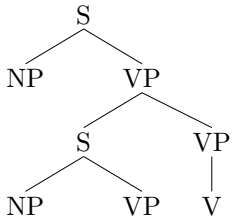
Unergative verbs selecting *Type 2* license only a clausal constituent. There is a part-whole relation between the topic/subject of the main clause and the subject of the embedded clause and they are causally connected in internal causation involved in unergative processes. An intense unergative process causes the result state concerned. This is why a reflexive pronoun or part nominal, as in *Mary cried herself hoarse*, is employed as a raised or exceptional object in English. In a depictive construction, such a reflexive is not allowed. In English the object and a result state expression such as a past participle or adjective is underlyingly clausal and thus possible differences among languages are simply apparent.

In short, we introduce different syntactic structures or hybrid analysis in Korean RCs. Nevertheless, they commonly lead to the causal interpretation.

(20) RC with *Type 1*



(21) RC with *Type 2*



9.3.2 Result Interpretation by Event Inheritance

From the discussion so far, we point out that there are two types of RCs in Korean and propose two different syntactic structures. Let us now turn to the semantics of RCs. RCs are aspectually constrained, as many researchers argued(Dowty 1979, Levin and Hovav 1995). It is important here to differentiate the telicity of lexical items from the causal interpretation. We can say that the result predicate denotes the result state of an event. That is, result phrases must have a delimiting or telic function.[8] Hence, the result phrase is responsible for the result state in causal relation.

The main verb of *Type 1*, as discussed in (9.2.5), is an unaccusative denoting a telic or delimited event. In other words, unaccusatives itself imply the causal relation in its lexical respresentation. In *Type 1* with a lexically delimited unaccusative main verb, as Levin and Hovav (1995) noted, the result expression provides a further specification of the result or achieved state.

(22) Kang-i (*han sikan-tongan) tantanha-key el-ess-ta
Lake-NOM (for one hour) solid froze

(23) Kang-i han sikan-maney tantanha-key el-ess-ta.
Lake-NOM in one hour solid froze

In RC with *Type 1* the existence of the result expression does not have new effects on result interpretation since unaccusative verbs inherently assume the telicity of an event.

[8] Consider these examples:
a. The waiter wiped the table (in/for two minutes).
b. The waiter wiped the table dry (in/*for two minutes).

Contrary to unaccusatives, unergatives do not imply the causal relation in its lexical respresentation. Interestingly enough, RC with *Type 2* is related to the combination of atelic unergative main verbs with telic result expression. With regard to this type, many researchers (see **?**) have assumed the 'event shift' from atelic to telic. It could also be predicted that there might be changes of the event in the merge of atelic main verb and telic result expressions into RCs. This incorporation, however, brings about somewhat different consequence compared to RC with *Type 1*. Both *-maney* and *-tongan* are compatible with RCs, though with different readings as in (24) and (25):

(24) John-i ilnyen-**maney** sinpal-i **talh**-key ttwi-ess-ta.
John-NOM in a year shoes-NOM thredbare ran

(25) John-i ilnyen-**tongan** sinpal-i talh-key **ttwi**-ess-ta
John-NOM for a year shoes-NOM thredbare ran

(24) implies that *sinpal* 'shoes' became threadbare, but (25) does not. The meaning of the result phrase in (25) is a kind of hyperbole, i.e., (25) could be paraphrased as 'ran very hard.' We can conclude that *-mane* modifies the result event of the result predicate, while *-tongan* does the process event of the main verb or *ttui-ta*. This consequence of scope difference has led to the assumption that RC with *Type 2* inherit their type-specific lexical eventuality to the construction, rather than necessarily involve an event shift from atelic to telic but they. A telic point of being completely threadbare as in RC with *Type 1* must be in the speaker's mind but in reality the unergative process is salient and telicity fades away in vagueness. The example of modification by duration in the progressive of an accomplishment verb as in *Mary is building a house for a year* may be considered in a similar fashion.

9.3.3 Selectional Restriction on Result Phrases

In this section we overview selectional restrictions on the result phrase in English and Japanese, offered by Wechsler (1997) and Washio (1997). Next, we examine the characteristics of Korean result phrase, in contrast to that in English and Japanese. Let us consider the following English examples.

(26) a. Kim ran clear of the fire/free of the car/*exhausted (Control / Weak)

b. *We yelled hoarse. (Control / Weak)

c. The joggers ran themselves exhausted. (ECM / Strong)

d. The joggers ran their Nikes threadbare. (ECM / Strong)

Wechsler (1997) argues that there are two types of resultatives, i. e. Control resultatives and ECM resultatives, and explain the semantic restriction of English RCs in light of Canonical Result Restriction. He argues that Control resultatives are subject to semantic sortal restrictions imposed by the verb, while ECM resultatives lack this type of restriction. The insight of Washio (1997), for the sake of reader's convenience, can be understood in a similar fashion to Wechsler (1997). For instance, Washio's strong and weak resultatives are parallel to Wechsler's ECM and Control resultatives, respectively. Washio claims that English allow both strong and weak resultative whereas Japanese allow only weak resultative.

In Korean, RCs with *Type 1* demonstrate similar semantic restriction patterns to Control or weak resultative:

(27) elum-i tantanha-key/?kut-key/*ttwukep-key el-ess-ta.
ice-NOM soild/hard/hot froze-PAST-DEC

In *Type 1*, the unaccusative main verb should subcategorize a result phrase that is compatible with the event of the main verb. In (27), for instance, the normal result state of *el-* (freeze) must be solid, but not liquid or thermic; thus, *ttwukep-key* (hot) cannot be a resultative phrase of *el-*. *Type 2*, in contrast to *Type 1*, is not subject to semantic restrictions imposed by the verb. Let us turn to *Type 2* in Korean:

(28) Kim-i [mok-i swi-key] oichi-ess-ta.
Kim-NOM throat-NOM hoarse shouted

(29) a. Kim-i sonswuken-i cec-/*malu-key wul-ess-ta.
Kim-NOM handkerchief-NOM wet/dry cried

b. Kim-i pal-/*son-i tahl-key tahli-ess-ta.
Kim-NOM foot/hand-NOM worn ran

c. Kim-i paekkop-i/*kho-ka ppaci-key wus-ess-ta.
Kim-NOM bellybutton-/nose-NOM come out smiled.

The normal result state of *oichi-* (shout) could not be postulated since *oichi-* lexically does not imply the result state but a process to utter a sudden loud cry; nevertheless *mok-i swi-key* is compatible with *oichi-* (shout). *Type 2* is limited to some restricted expressions. The meaning of *Type 2* in the constructions could be considered some kind of frozen expression. They have a tendency not to be substituted by other expression easily, as in (29). With reference to Wechsler (1997) and Washio (1997), Korean RCs allows both strong/ECM and weak/Control resultatives. However, strong/ECM resultatives in Korean is highly restricted, compared to English.

9.3.4 A Further Constraint on *Type 2*

There is a remaining issue related to *Type 2*. The example in (30) has the same syntactic configuration as the typical *Type 2* in (28). Hence, we can predict the causal interpretation.

(30) Kim-i [mok-i theci-key] oichi-essta.
Kim-NOM throat-NOM blown out shouted

However, the predicted interpretation does not occur in the change of the result predicate from *swi*-'hoare' to *theci*- 'be blown out'. Only the durative time adverbial *-tongan* is compatible as in (31), which means there is no result meaning or no causal relation between main clause and embedded clause.

(31) Kim-i ilpun-tongan mok-i theci-key oichi-ess-ta.
Kim-NOM for a minute a throat-NOM blown-out shouted

(32) *Kim-i ilpun-maney mok-i theci-key oichi-ess-ta.
Kim-NOM in a minute a throat-NOM blown-out shouted

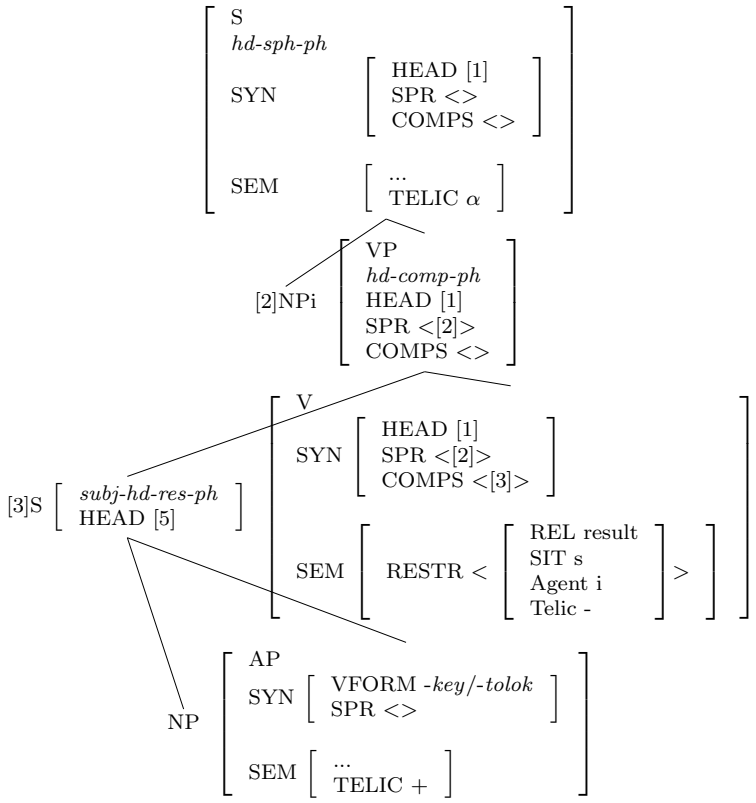
The contrast between *mok-i swui-key* and *mok-i theci-key* appears to be pragmatic constraints. Our world knowledge could allow us to understand a situation where the throat has become hoarse. It is implausible, however, to make out a situation where the throat is blown out, except for a hyperbolic or exaggerated contextual meaning. The constraint in (33) guarantees the case with only an atelic interpretation occurring in *Type 2*.

(33) Pragmatic Constraint of *Type 2*
In *Type 2*, the telicity of a resultative clause should not be inherited if a resultative clause has a hyperbolic meaning.

9.4 Toward Formalization

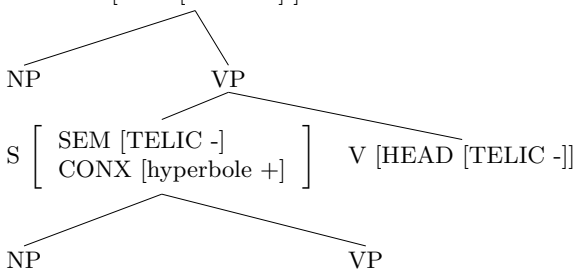
In this final section, we propose some formalization of Korean RCs based on the previous observations. With respect to *Type 2*, we argue that both telic and atelic interpretations arises. The possibility of telic/atelic interpretation in *Type 2* construction is represented by [TELIC α]. Within a HPSG framework, *Type 2* roughly has the following feature structures:

(34)



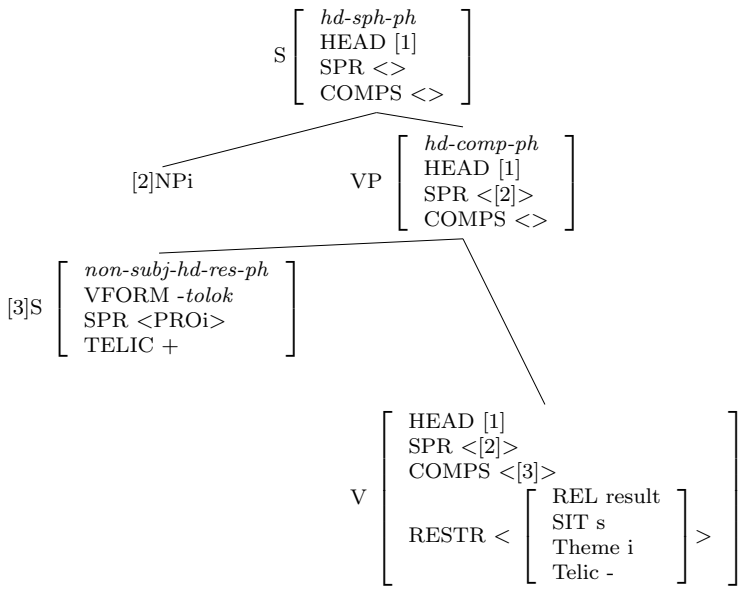
A constraint on *Type 2* in (33) is added to provide the explanation for the case where only hyperbolic or figurative meaning arises.

(35)



Type 1 provides a further specification of the achieved state since unaccusatives are lexically delimited. [SEM TELIC +] means RC with *Type 1* has only telic or resultative reading.

(36)



9.5 Conclusion

The complexity of resultative construction cannot be explained by purely syntactic or purely semantic approaches. We propose that there are two kinds of result phrases in Korean and each type has its own constraints. Also, we claim that highly restricted constraints should be taken into consideration to provide adequate explanations for RCs. The interaction of RCs with constraints concerned leads to reasonable result or causal interpretations. In a nutshell, Korean RCs can be explained by type-specific but cross-linguistically plausible properties of the constructions and their relevant constraints.

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