

A Semantic Approach to Resultative Constructions

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1. The syntactic accounts for resultatives

Regarding syntactic structure of resultatives in English, two major syntactic analyses have been so far prominent: the unified analysis (Simpson 1983, Hoekstra 1988, Carrier & Randall 1992, Goldberg 1995, Levin & Rappaport 1995 among others) and the hybrid analysis (Kim 1999, Li 1999, Wechsler & Noh 2001, among others). Both the binary Small Clause analysis (Hoekstra 1988) and the ternary analysis (Simpson 1983, Carrier & Randall 1992) can be further grouped into the unitary analysis in that they both assume that (unergative) intransitive resultatives share the same syntactic structure with transitive resultatives, which is illustrated in (1) and (2):

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- (1) The binary SC analysis
 - a. He [_{VP} painted [_{SC} the car yellow]]. (transitive)
 - b. He [_{VP} shouted [_{SC} himself hoarse]]. (intransitive)
- (2) The ternary analysis
 - a. He [_{VP} painted [the car] [yellow]]. (transitive)
 - b. He [_{VP} shouted [himself] [hoarse]]. (intransitive)

Then, one immediate problem for the unified analysis is that it would be in trouble with the fact that the objects in transitive resultatives evidently function as arguments of the main (transitive) verb, as we can see in (3), while the objects in intransitive resultatives appear to function as arguments of the (secondary) result predicate, not the main verb, as in (4). (cf. Carrier & Randall 1992, Goldberg 1995, Kim 1999)

- (3) a. He hammered the *metal* (flat). (optional result phrase)
(Goldberg 1995: 182–183)
- b. *The metal* hammers flat easily. (middle formation)
- c. the hammered-flat *metal* (adjectival passive formation)
- d. the hammering of *the metal* flat (nominalization)
- (4) a. He drove *his tires* *(bald). (obligatory result phrase)
- b. **The tires* drive bald easily. (middle formation)
- c. *the driven-bald *tires* (adjectival passive formation)
- d. *the driving of *the tires* bald (nominalization)

The contrast is eventually in support of the view of the hybrid analysis, according to which the postverbal NPs in intransitive resultatives are analyzed differently in the syntax

from those in unergative intransitive resultatives.

In this paper, I suggest turning our attention from a syntactic approach to a semantic approach – event analysis – with focus on Korean resultative constructions, and propose that the contrast between intransitive and transitive resultatives in the syntax may be a simple reflection of two types of event relation: causation and accomplishment: the former is controllable by the agent's intention while the latter is not. The generalization I put forward is that the thematically unsaturated bare phrasal type of resultatives is not accidental but necessarily required to express an intrinsic relationship between two coexisting events in the course of nature. In contrast, the thematically saturated clausal type of resultatives is necessarily chosen to express an extrinsic causative relation between two independently defined events.¹⁾

1) Li (1999) advances a similar bare phrase analysis for transitive resultatives in English, though he believes that intransitive resultatives are assigned a clausal type of result, as in (i):

(i) a. [_{IP} John_i [_{VP} t_i painted_j [_{VP} the barn t_j [_{AP} red]]]]. (Li 1999: 466)
 b. [_{IP} John_i [_{VP} t_i shouted_j [_{VP} t_j [_{AP} himself hoarse]]]].

For the bare AP analysis in (ia), Li (1999) turns to a more general phenomenon where PRO is generally banned from the Spec of XP which is in the complement position of a lexical head Y, as in (ii):

(ii) a. John believes [_{IP/AP} himself/*PRO to be knowledgeable]. (Li 1999: 466–467)
 b. John considers [_{AP} himself/*PRO smart].
 c. John made [_{VP/AP} himself/*PRO cry/mad].
 d. John shouted [_{AP} himself/*PRO hoarse].

Basically, I adopt Li's (1999) analysis of (in)transitive resultatives and continue to argue that such distinctive structures are necessary to express two different types of event relations, controllable causations and uncontrollable accomplishments.

2. Problems for the Direct Object Restriction (DOR)

Ever since Simpson (1983) reported the unique properties of resultative constructions, several syntacticians including Levin & Rappaport (1995) have finally come up with the condition (Direct Object Restriction: DOR) that the predication subject for the result phrase must be the verb's object and that resultative constructions are necessarily involved in the existence of direct objects. It seems to strictly require even unergative intransitive verbs to introduce a fake object (i.e., reflexive object in English) for the formation of resultatives, as shown in (5):

- (5) a. *Maya sang/screamed/talked hoarse.
- b. Maya sang/screamed/talked *himself* hoarse.
- c. *Maya laughed helpless.
- d. Maya laughed *herself* helpless.

However, the DOR has been recently challenged by the following set of counterexamples, where the result phrase (XP) is predicated of the subject, not the object, of a (in)transitive verb:

- (6) a. John ran/walked/danced *into the room*.
(Wechsler 1997: 312)
- b. She danced/swam *free of her captors*.
- c. John moved *closer to the window*.
- d. The tourists loaded *onto the bus*.

- (7) a. The wise man followed the star *out of Bethlehem*.
 (Wechsler 1997: 313)
 b. He followed Lassie *free of his captors*.
- (8) a. John danced mazurkas *across the room*.
 (Verspoor 1997: 151)
 b. Sarah swam laps *to exhaustion*.
 c. The children played leapfrog *across the park*.

Levin & Rappaport (2001: 774) themselves provide a set of similar data, as in (9), and admit that the DOR seems not working after all.

- (9) a. A man grabbed and groped her and tried to ..., but she
kicked free and fled.
 b. She *wiggles free*, but remains seated obediently beside him.
 c. One of his race cars *wiggled loose* inside the transporter
 and caused damage to the cars.

It seems that Korean is not an exception to this recent observation, especially, when an unergative intransitive verb is transformed to an intransitive resultative, as in (10), where Prd indicates predication marker:

- (10) a. John-un *sinpal-i/*-ul* *talh-key*
 John-Top shoes-Nom/-Acc threadbare-Prd
 talliessta.
 ran
 'John ran (his) shoes threadbare/worn out.'

- b. Sara-nun *mok-i/*-ul* *swi-key*
 Sara-Top throat-Nom/-Acc hoarse-Prd
 oychiessta.
 screamed
 'Sara screamed (her) voice hoarse.'

What needs to be pointed out with such data in (10) is that the result phrase followed by the predication marker *-key* is predicated of the logical subject, which is marked with the nominative case *-i* on the surface, not with the accusative case *-ul*. In addition, there are other examples involving transitive verbs, as in (11), where the result phrase is predicated of the subject rather than the object. They also undermine the DOR.

- (11) a. *Yenghi-nun cacenke-lul cichi-key* thassta.
 Yenghi-Top bicycle-Acc tired-Prd rode
 'Yenghi rode a bicycle, and she became tired.'
 b. *Yenghi-nun cacenka-lul aphu-key* chiessta.
 Yenghi-Top bicycle-Acc painful-Prd hit
 'Yenghi hit the bicycle, and she felt painful.'

Taken together, a purely syntactic account of resultatives, such as the DOR, is not enough to provide a complete explanation for the recent observation that the result phrase can be associated with the subject as well as the object. The issue to be wakened up, concerning the formation of resultatives, is under what circumstances the result phrase is predicated of the object argument or sometimes the subject argument of the main verb.

In the next section, after briefly sketching out the main idea of Wechsler's (1997) Canonical Result Restriction (CRR) on resultatives, I suggest that resultatives should be newly classified into two types, cause-oriented resultatives and result-oriented resultatives. Then, the clausal type of result expressions is chosen in the syntax to form a causative relationship between two independently defined events while the bare phrasal type of result expressions²⁾ is chosen to express a typical resultative relationship between two coexisting events in the course of nature.

3. Events and two types of resultatives

Concerning identifying causatives and resultatives, what matters is whether or not Agent argument of the main verb is involved in the result state and hence controls the overall event including the final result. I suggest that cause-oriented resultatives (including the clausal type of resultatives in Korean) should be classified distinctively from result-oriented resultatives: the former give rise to a causative interpretation while the latter gives rise to an accomplishment interpretation.

2) Thematic saturation can be said to take place when a verb's thematic requirements are fully satisfied by the presence of the subject (and the object). Then, thematically saturated clauses are the clauses where a verb's thematic role is fully discharged owing to the presence of the subject while thematically unsaturated phrases are the bare phrases where a verb's thematic role remains undischarged owing to the absence of the subject.

3.1 The Canonical Result Restriction (CRR)

Wechsler (1997: 309) suggests distinguishing the control type of resultatives from the ECM type of resultatives, which are defined as follows:

- (12) a. control resultatives: result phrase whose predication subject is a semantic argument of the matrix verb (e.g., *John hammered the metal flat*).
 b. ECM resultatives: result phrase whose predication subject is not a semantic argument of the matrix verb (e.g., *John shouted himself hoarse*).

Control type is subject to semantic sortal restrictions imposed by the main verb while ECM type is generally free from such semantic restrictions, as illustrated in (13) and (14):

- (13) a. Sally painted the door [*red*/**beautiful*/**noticeable*].
 (Wechsler & Noh 2001: 395–396)
 b. John *hammered* the metal [*flat/smooth*/**beautiful*/**safe*].
 c. Robert *ran* [*clear of the fire/free of the car/to the store*/**exhausted*].
 d. The puddle *froze* [*solid*/**slippery*/**dangerous*].
 (14) a. Sarah *ran* [*herself exhausted*].
 b. Sarah *ran* [*her Nikes threadbare*].
 c. Sarah *ran* [*the soles off her shoes*].

The data in (13) with control resultatives show that they are very picky about the semantic class of the result phrase. To

borrow Wechsler's (1997: 310) term, control resultatives in (13), unlike the ECM-type resultatives in (14), must represent a canonical result of the event denoted by the main verb, i.e., Canonical Result Restriction (CRR). For example, in (13a), painting something usually changes its objective to become visible (*red*), however, subjective states (**beautiful*, **noticeable*) are not inherent consequences of painting. In contrast, ECM-type resultatives lack this kind of restriction, which is pointed out in (14). On Wechsler's (1997) point of view, running is not canonically or inherently associated with attaining exhaustion (14a) nor with threadbare shoes (14b) nor with off the shoes (14c). In other words, such endpoints of the result phrases in what Wechsler called ECM-type resultatives are all *extrinsic*, not *intrinsic*, to the main event. There is no such canonical or inherent association between the result event and the main event in the ECM-type.

Though I generally agree to Wechsler's (1997) observation, and yet I suggest using the term, controllability, in a different manner in this paper. That is, I will limit my usage of the term 'control' only to the agent's intention (or reasoning) of causation. In this view, transitive verb resultatives like *John pounded metal flat* are grouped into uncontrollable result-oriented resultatives, while intransitive verb resultatives like *John shouted him hoarse* are into cause-oriented resultatives. I will later argue that controllable cause-oriented resultatives are not typical accomplishment resultatives, but causatives.

By running a couple of tests (i.e., semantic constraints) for the typical class of resultative constructions, which are reported by Goldberg (1995), I will show that cause-oriented resultatives including the clausal type of intransitive resultatives (i.e., Wechsler's ECM type) are less prone to semantic restrictions imposed by the lexical content of the main verb. In contrast, result-oriented resultatives including some transitive resultatives (i.e., Wechsler's control type) are more prone to semantic restrictions imposed by the lexical content of the main verb. It suggests that the result phrase, XP, in the cause-oriented resultative construction should be defined independently of the matrix event, while the result phrase, XP, in the result-oriented resultative construction should be defined as coexistent in sequence with the matrix event. It leads to a claim that the result state of the cause-oriented resultative can be controlled by the agent's intention (i.e., agentivity) to give rise to a causative interpretation, while the result state of the result-oriented resultative cannot be controlled by the agent's intention, to give rise to an accomplishment interpretation.

3.2 The aspectual constraint

When we take Goldberg's (1995: 193) aspectual constraint on resultatives as it is, according to which the event denoted by the main verb must be interpreted in a typical resultative construction as directly causing the change of state, we expect

that no intermediary time intervals are possible in such typical resultatives.

Note a contrast in intermediary time intervals between the clausal resultative in (15) and the bare phrasal resultative in (16), which is reported by Levin & Rappaport (2001: 775):

- (15) a. I've *shouted* [myself *hoarse*]. (clausal resultative)
 b. I *shouted* hysterically during the basketball game, and I
 woke up *hoarse* the next day.
- (16) a. Bill has *hammered* the car [flat].
 (bare phrasal resultatives)
 b. #Bill *hammered* the car enthusiastically yesterday, and it
 became *flat* today.

In (15), the two events denoted by the main verb and the result phrase need not be temporally coextensive, nor need they unfold at the same rate. That is, the result state 'hoarseness' in (15a) may be achieved some time after the main event 'shouting' is over. So, it makes sense to assume such a situation as in (15b). In contrast, the progress of the main event and the progress towards the result event in (16a) with an unsaturated result phrase are temporally dependent (or coextensive) and unfold at the same rate. Thus, when we rephrase the example in (16a) as in (16b), it sounds pragmatically absurd.

The temporal (in)dependence of result states suggests that the clausal type of resultatives, which belongs to cause-oriented resultatives, is understood as expressing two independently

defined events. The bare phrasal type of resultatives, which belongs to result-oriented resultatives, is understood as expressing two temporally coexisting subevents.

3.3 The end-of-scale constraint

For the legitimate formation of typical resultatives, Goldberg (1995: 193) includes another semantic constraint, the end-of-scale constraint, according to which gradable expressions or adjectives are banned to serve as results. It accounts for the reason why types of adjectives that can occur as result phrases are fairly limited, which is illustrated in (17):

- (17) a. *He drank himself *funny/happy*. (Goldberg 1995: 195)
 b. *He wiped it *damp/dirty*.
 c. *The bear growled us *afraid*.
 d. *He encouraged her *confident*.
 e. *He hammered the metal *beautiful/safe/tubular*.

All of the adjectives used in (17) are the ones typically classified as gradable, suggesting that the main verb in the resultative construction cannot take a gradable adjective but take only a nongradable adjective as a result phrase that indicates the endpoint of a scale, according to Goldberg (1995). Since gradable adjectives in general do not indicate a delimited lower bound in scale, they are not allowed in the typical resultative construction.

Given this constraint of end-of-scale, what is interesting with Korean data is that the clausal type of resultatives are compatible with gradable expressions, though the bare phrasal type of resultatives are compatible with nongradable expressions. The contrast between the two types of resultatives in gradability is revealing in (18), where the quantifying expression *cokumssik* 'little by little/bit by bit' is assumed to modify only gradable expressions, but not non-gradable expressions:³⁾

- (18) a. John-i kkangthong-ul [(**cokumssik*) *napcakh*-key]
 John-Nom can-Acc (little by little) flat-Pred
 twutulkiessta.
 pounded
 'John pounded the can flat (little by little). (Lit.)
- b. John-i [*mok-i* (*cokumssik*) *swi*-key]
 John-Nom throat-Nom (little by little) hoarse-Pred
 oychiessta.
 shouted
 'John shouted his voice hoarse (little by little).' (Lit.)

The contrast in gradability is also demonstrable in (19) and (20), where the degree modifier *-tolok* 'to the extent' can replace the so-called predication marker *-key* on a gradable expression, however it cannot replace the same marker on a

3) For the time being, I simply mark the morpheme *-key* on the result phrase with Pred to indicate predication marker (Jang 1997, Sells 1997), but I eventually suggest that it should be analyzed in two ways, as a causative morpheme for cause-oriented resultatives and as a predication marker for result-oriented resultatives.

- 4) Lee & Lee (2003) assume that there are two main morphemes, *-key* and *-tolok*, employed in result expressions in Korean. The first, *-key*, is combined not only with a predicate, but also with a clause, while the second, *-tolok* is combined only with a clause. Furthermore, they provide the following data in (i) for the claim that the morphological alternation between *-key* and *-tolok* is allowed only in the combination of result morpheme with sentential argument:

- Though the contrast in Lee & Lee (2003) clearly suggests that the result morpheme *-tolok* 'so that' is sensitive to a structural configuration (i.e., sentential argument), nevertheless, it does not seem to imply that semantic properties like gradability have nothing to do with the morpheme *-tolok*, which is by the way interpreted ambiguously as 'to the extent' as well as 'so that' in Korean. That is, the contrast between (iia) and (iib), both of which contain a phrasal complement, tells that the morpheme *-tolok* 'so that/to the extent' is sensitive not only to a structural configuration, but also to a semantic property, gradability: the result morpheme *-tolok* is compatible semantically only with gradable expressions like 'tired', but not with nongradable expressions like 'flat'.

- (ii) a. Kim-i cacenke-lul [*cichi-key/-tolok*] thassta.
Kim-Nom bicycle-Acc tired-Prd/-to the extent rode
'Kim rode a bicycle to the extent that he became tired.'
b. Kim-i cha-lul [*napcakha-key/*-tolok*] twutulkiessta.
Kim-Nom car-Acc flat-Prd/-to the extent pounded
'Kim pounded the car to the extent that it became flat.'

resultatives including the clausal type of resultatives is in fact causatives, not typical resultatives, in the sense that they connect two independently defined events through the agent's intention or reasoning, agentivity.

4. An event analysis

4.1 The semantics of causatives and resultatives in English

It has been generally assumed by several researchers (Dowty 1979, Jackendoff 1990, among others) that both causatives and resultatives express the same kind of causation. If we take this assumption as it stands, then we expect that both causatives and resultatives are necessarily led to the same entailments. However, this is not true. Again, consider the well known pair of sentences in (20), where the causative *flatten* does not necessarily entail its resultative counterpart though the resultative *hammer-flat* does entail its causative counterpart:

- (20) a. John *hammered* the metal *flat*. (resultative)
 b. John *flattened* the metal. (causative)

In (20a), the resultative 'hammering the metal flat' entails that someone flattened the metal, which corresponds to the causative counterpart in (20b). But, the causative 'flattening the metal' in (20b) does not necessarily entail that someone hammered the

metal flat, which is the resultative counterpart in (20a). This is because (s)he could stamp, not hammer, the metal flat.

In fact, Wunderlich (1997: 35) claims that causatives are different from resultatives in that the latter describes situations (or events in my terms) that are a subset of those described by the former. In view of this, the two sentences in (20) can be rephrased, respectively, as in (21), where *x* indicates a variable for Agent:

- (21) a. *x*'s hammering (of the metal) caused the metal to become flat. (resultative)
 b. *x*'s (hammering/stamping/... of the metal) caused the metal to become flat. (causative)

This difference eventually leads Wunderlich (1997) to propose the following representations in (22):

- (22) a. (resultative) *hammer flat*:
 {Hammer(*x*, *z*) AND BECOME(Flat(*y*))}(s)
 b. (causative) *flatten* : CAUSE (*x*, BECOME(Flat (*y*)))(s)

In (22), the resultative, which describes a necessary relation between two events (strictly speaking, two subevents) in the course of nature, is distinctively captured by the sentential connective *AND*. On the other hand, the causative, which describes a relation between two independently defined events, is captured by the sentential connective *CAUSE*, which corresponds to a subordinator, because, in English.

In this view, what really matters is that Agent associated

with the causatives (e.g., *flatten*) controls the overall event including the final result, whereas Agent involving the resultatives (e.g., *hammer* - *flat*) controls only the input (or initiative) event but not the final result. Adopting this view of the distinction between causatives and resultatives, in the next section, I claim that cause-oriented resultatives including the clausal type of resultatives, in fact, express a causative relationship between two independently defined events through the agent's intention or reasoning. And thus, they should be analyzed differently from result-oriented resultatives including transitive verb resultatives that express a necessary aspectual relationship between two coexisting subevents.

4.2 Cause-oriented resultatives as causatives

In fact, sentential connectives like *-nikka* 'because' and *-(e)se* 'and then/and thus' in Korean are relevant to the distinction between causatives and resultative: the former is used to typically express a personal reasoning through discovery while the latter is to express a sequence of an event in the course of nature. This is illustrated in (23):

- (23) a. onul hay-ka ttu-ess-*nikka*, nayil-to
 today sun-Nom rise-Pst-because, tomorrow-also
 hay-ka ttu-l-kes-i-ta.
 sun-Nom rise-Fut-Nomzer-be-Dec
 'Since the sun rose today, it will rise tomorrow, too.'

- b. #onul hay-ka ttu-se, nayil-to
 today sun-Nom rise-and then/thus, tomorrow-also
 hay-ka ttu-l-kes-i-ta.
 sun-Nom rise-Fut-Nomizer-be-Dec
 'The sun rose today, and thus it will rise tomorrow, too.'

Imagining that today's event of the sun rising is not necessarily led to tomorrow's event of the sun rising, the contrast in (23) justifies that the sentential connective *-nikka* 'because' in Korean is the one signifying a personal reasoning and hence a causative relation in the sense of Wunderlich (1997). It turns out that the other sentential connective *-(e)se* 'and then/and thus', which is not compatible with the situation described in (23b), is not the one expressing a causative relation. Rather, it signifies two coexisting events in the course of nature and hence a typical resultative relation in the sense of Wunderlich (1997). This is further confirmed in (24), where only the sentential connective *-se* 'and then/and thus', but not the causative connective *-nikka* 'because', is allowed to express the natural situation where the event of the sun rising in the east is necessarily followed by the subsequent event of the sun setting in the west:

- (24) hay-nun tong ccok-eyse ttu-se/#-nikka,
 sun-Top east side-from rise-and then/-because,
 se ccok-ulo cinta.
 west side-to set
 'The sun rises in the east and sets in the west.'

The two types of sentential connectives in Korean are then

relevant to the distinction between cause-oriented resultatives (like clausal type of resultatives) and cause-oriented resultatives (like transitive verb resultatives).

Note the contrast in the following pair of examples, where sentence (a) is rephrased to the one in (b) with *-(e)se* 'and then/and thus' and *-nikka* 'because':

- (25) a. John-i kkangthong-ul [*napcakha*-key] twutulkiesssta
 John-Nom can-Acc flat-Pred pounded
 'John pounded the can flat.'
- b. John-i kkangthong-ul twutulki-*ese/#-nikka*,
 'John-Nom can-Acc pound-and thus/-because,
 (kkangthong-i) *napcakha*-key-toyessta.
 (can-Nom) flat-Pred-became
 'John pounded the can, and thus it became flat.'
- (26) a. John-i [mok-i *swi*-key] oychiessta.
 John-Nom throat-Nom hoarse-Pred shouted
 'John shouted himself hoarse.'
- b. John-i oychi#-*ese/-nikka*,
 John-Nom shout-and thus/-because
 [mok-i *swi*-key-toyessta].
 throat-Nom hoarse-Pred-became
 'John shouted, and thus he/his voice became hoarse.'

The data in (25b) show that only the resultative connective *-(e)se*, but not the causative connective *-nikka* 'because', is available with transitive verb resultatives. And, the data in (26) show that only the causative connective *-nikka* 'because', but not the resultative connective *-(e)se*, is available with the clausal type of resultatives. I contribute the contrast to claiming that cause-

oriented resultatives are in fact causatives connecting two independently defined events through the agent's intention or reasoning. On the other hand, result-oriented resultatives are typical resultatives in the sense that they express an inherent relationship between two coexisting subevents denoted by the lexical content or aspectual properties of the verb.

4.3 An event analysis

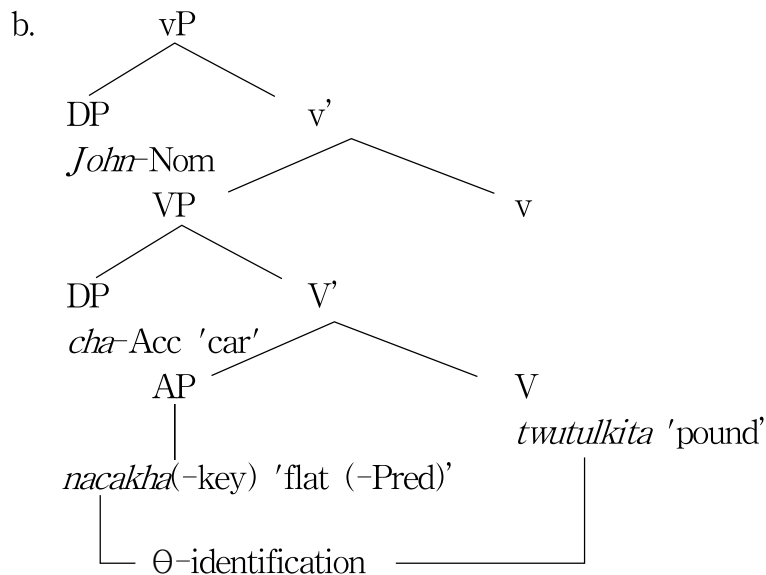
Considering that genuine result-oriented resultatives including transitive verb resultatives express an inherent relationship between two coexisting events in aspectuality, I propose that their structure in Korean is analyzed as in (27b):

(27) a. John-i cha-lul [*napcakha*-key] twutul kiessta.

(result-oriented resultative)

John-Nom car-Acc flat-Pred pounded

'John pounded the car [flat].'



In (27b), where the morpheme *-key* is assumed to mark predication of the result phrase, AP, Higginbotham's (1985) Θ -identification⁵⁾ can take place through Functional Composition (cf. Williams 1994, Yoon 1997) by which the open constituent, *twutulkita* 'pound' takes the unsaturated bare AP *nacakha* 'flat' as its complement. Schematically, by Functional Composition, I mean that two functors, V/AP and AP/z (z=internal argument of AP), are composed to yield a complex functor V/z.⁶⁾ I also assume that the distinctive type of thematic discharge i.e., Higginbotham's (1985) Θ -identification, can be interpreted as a process of combining two coexisting events denoted by the main verb and the result phrase. It is then necessary for the result phrase AP to be analyzed as unsaturated bare phrase, so as to meet the requirement for Higginbotham's (1985) Θ -identification that in turn needs a complement to have one open (or unsaturated) position.

In contrast, considering that cause-oriented resultatives

5) According to Higginbotham (1985: 564), even the noun word (as well as adjective) has a single open position since it occurs as a predicate. So, the analysis of 'big butterfly' can be interpreted as in (i):

(i) a. [_{N'} [_A big] [_N butterfly]]

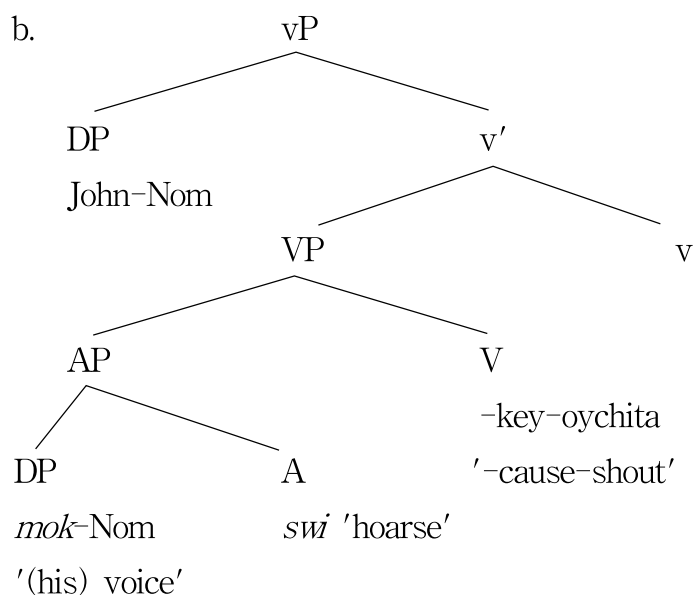
In (i), the whole N' is eventually left with one open position, which is the result of identifying the open position <1> of the adjective *big* with the open position <1> of the noun *butterfly* under the configuration of government. Higginbotham (1985) names this kind of Θ -role discharge Θ -identification and suggests adding it as a mode of thematic discharge to the inventory of Θ -marking. In this paper, I further extend this process of Θ -identification to the effect that two events (or E-roles in Higginbotham's (1985) terms) are identified with to yield a complex event.

6) That is, V/AP+AP/z \rightarrow V/z.

including the clausal type of resultatives in Korean are understood as describing two independently defined events over which the agent's intention controls, I propose that they should be analyzed distinctively as in (28b), where the morpheme *-key* is newly analyzed as a causative morpheme, contra Jang (1997) and Sells (1997) both of whom claim that it is a simple predication marker with no semantic content:

- (28) a. John-i [mok-i swi]-key-oychiessta.
(cause-oriented resultative)

John-Nom throat-Nom hoarse-Cause-shouted
'John shouted [himself hoarse].'



What the structure in (28b), which I assign to cause-oriented resultatives, represents is that the main verb *-key-oychita* '-cause-shout' is introduced in the syntax as a complex causative expression, as the typical Korean causative verb

-keyhata 'make' can be actually divided into -*key*-*hata* '-cause-do'. Then, the morpheme -*key* in this case is not just a predication marker but plays a crucial role of delivering the agent's intention or causation by which the event independently defined by the result phrase (or predication) is controlled.

5. Conclusion

In exploring the formation of resultative constructions, this paper takes the side of semantic approaches by showing that types of result predicates (or adjectives) function as crucial in predicting specific types of resultative constructions, cause-oriented and result-oriented resultative constructions. My proposal with a special focus on Korean data as well as English data can be summarized as follows:

Type 1 (cause-oriented resultatives): The main verb denotes an activity or process; the result predicate is a gradable adjective (or open-scale adjective in Wechsler (2005)).

Type 2 (result-oriented resultatives): The main verb denotes an activity or process; the result predicate is a non-gradable adjective (or closed-scale adjective in Wechsler (2005)).

These two types of association, in turn, are realized in two types of interpretation, causation and accomplishment.

Type 1 (cause-oriented resultatives): The gradable adjective as result predicate can form a predication with its logical subject, to give rise to an independently defined event in forming a causation with the main event.

Type 2 (result-oriented resultatives): The non-gradable adjective as result predicate cannot form a predication with any logical subject, to remain as a subevent in forming an accomplishment with the main event.

With a special focus on Korean resultatives, I have also proposed that the mysterious morpheme *-key* on the result phrase should be reconsidered to reflect two types of resultative constructions, cause-oriented and result-oriented resultative constructions. In Korean, it amounts to suggesting that the clausal type of resultatives should be analyzed differently from the bare phrasal type of resultatives, contra the claim that the morpheme *-key* on the Korean resultative construction is defined solely as a predication marker.

I have made no attempt to be comprehensive in my coverage of resultatives. Nor is it my goal to argue against syntactic approaches to resultative constructions. Rather, I have focused on such data that shed light on the interaction between the

main event and the secondary event. Nevertheless, I believe that if this exploration into types of resultatives is to progress further, it will lead to a better understanding on the distinction between two types of event-relation, causation and accomplishment, that are structurally reflected on the surface in some languages.

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<Abstract>

In this paper, I suggest that we need to reconsider resultatives from a semantic point of view for a better understanding on the interaction between the matrix event and the secondary event. With a special focus on Korean resultative constructions as well as English counterparts, I specifically propose that resultatives should be newly classified into two types, cause-oriented and result-oriented resultatives. Cause-oriented resultatives are characterized with gradable result predicates (or adjectives) while result-oriented resultatives are with non-gradable result predicates in the sense of Goldberg (1995). Gradable predicates are allowed to form a predication with their own logical subject, to give rise to a causation between two independently defined events. In contrast, Non-gradable predicates are not allowed to form a predication with any logical subject, to give rise to an accomplishment relationship between two temporally coexisting events. It correctly predicts that the clausal type of resultatives in Korean all contain a gradable expression. This view eventually leads to a reanalysis of the mysterious Korean morpheme -key on the result phrase in two ways, that is, as a causative morpheme in the cause-oriented resultative construction and a simple predication marker in the result-oriented resultative construction.

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