

Manner–Result Complementarity and the Serial Verb Construction in Korean*

Sang-Gu Kang
(Hansung University)

Kang, Sang-Gu. (2019). Manner–result complementarity and the serial verb construction in Korean. *The Linguistic Association of Korea Journal*, 27(2), 109–129. The aim of this paper is two-fold. The first is to argue against the proposal that the manner–result complementarity espoused by Levin and Rappaport Hovav (2013) hold in Korean. While Levin and Rappaport Hovav have long been claiming that the two semantic components are not lexicalized by a single verb, Beavers and Koontz–Garboden (2017) object that some verbs, such as *climb*, are found to entail both manner and result information. In line with Beaver and Koontz–Garboden's analysis of *climb*, it is shown that the Korean verb *kwulu* 'roll' has both manner and result components in it. The second aim is to argue against the thesis that the notions 'manner' and 'result' play a crucial role in the Korean serial verb construction, and to provide an alternative to the thesis. To this end, it considers a major subset of serial verb constructions in Korean and seeks to identify the semantic properties of the construction by examining the behavior of its constituent verbs, regardless of whether it describes a motion event or not. It proposes a structural constraint on the relation between the two verbs employed in the construction: namely, that the subevent denoted by the first verb serves as a sufficient condition for a necessary condition for the subevent denoted by the second verb.

Key Words: manner, result, serial verb construction, scale, scalar change, SUIN, causation

1. Introduction

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Many predicates in Korean sentences come in the form of the serial verb construction (SVC), which is composed of two or more verbs whose semantic components are diverse. Let us consider Korean SVCs sampled in the following (Hong, 2018, p. 349):

- (1) a. Manner Component + Directed Motion Component
kel-e ka-ta 'walk go'
talli-e ka-ta 'run go'
ki-e ka-ta 'crawl go'
- b. Manner Component + Result Component
pwul-e kku-ta 'blow extinguish'
palp-a kku-ta 'tread extinguish'
sso-a cwuki-ta 'shoot kill'
ttayli-e cwuki-ta 'hit kill'

The examples in (1a) describe motion events, and those in (1b) are about other events than motion. In (1a), the first constituents are said to encode manner, and the second ones directed motion. For example, given a SVC like *tallyeka* 'run go,' the two constituent verbs lexicalize disparate semantic components. The first verb *talli* 'run' encodes manner, and the second one *ka* 'go' directed motion. In (1b), the first verbs are seen as lexicalizing manner, and the second ones result.

For Hong (2018), the constructions in (1a) and those in (1b) show parallels, on the assumption that directed motion is akin to result. His main claim is that Korean SVCs support the proposal that the manner–result complementarity constraint hold for Korean verbs.

This claim can be examined on two levels. The first issue is whether individual Korean verbs abide by the manner–result complementarity. The second is whether the Korean SVC reflects such dichotomy. In this paper, we argue that the answers to these questions are both in the negative, regardless of whether the individual verbs or SVCs describe motion events or non-motion events. This calls for an alternative account of how the constituent verbs of a Korean SVC are related.

The paper is organized in the following way. Section 2 deals with the first issue: Do individual Korean verbs observe the manner–result complementarity? This section reviews Rappaport Hovav and Levin (2010), Levin and Rappaport Hovav (1991, 1992, 2013), and Beavers and Koontz–Garboden's (2017), and discusses the case of a Korean motion verb.

Section 3 delves into the second issue: Is the Korean SVC structurally sensitive to the distinction of manner and result verbs. In this section, we examine Korean SVCs describing motion events as well as those denoting non-motion ones, and provide a critical review of Hong (2018). Section 4 proposes an alternative view on the relationship between the constituents of the Korean SVC, according to which the construction relates the first verb to the second verb in terms of conditions. Section 5 concludes the paper.

2. Manner–Result Complementarity

2.1. Levin and Rappaport Hovav (1991)

Levin and Rappaport Hovav (1991) look into verbs like *wipe* and *clear*, two verbs which seemingly belong together as verbs of removal. They, however, show contrasting syntactic patterns as in the following: (Levin & Rappaport Hovav, 1991, p. 128)

- (2) a. Doug cleared the table of dishes.
 b. *Kay wiped the counter of fingerprints.

They account for this contrast by taking recourse to two different semantic components of the two verbs: 'means' for *wipe* and 'result' for *clear*. Verbs like *clean* and *empty* behave like *clear*, and *wipe* belongs with verbs such as *brush*, *mop*, *rake*, *rub*, and so on.

In another study, Levin and Rappaport Hovav (1992), they discuss two classes of verbs: *run/roll* class and *arrive* class. The former specifies 'manner of motion' and includes *run*, *walk*, *gallop*, *jump*, *swim*, *roll*, *slide*, *move*, *swing*, etc. The latter encodes 'directed motion' and includes *arrive*, *come*, *go*, *depart*, *fall*, *return*, etc.

For Levin and Rappaport Hovav, the way verbs of removal are divided is parallel to the division of verbs of motion: 'means' is analogous to 'manner,' and both 'resultant state' and 'direction' can be seen as a kind of 'goal.' Hence, they have two classes of verbs, manner verbs and result verbs, and this classification is extended to various kinds of verbs, not just verbs of removal and motion.

- (3) a. manner verbs: *nibble*, *rub*, *scribble*, *sweep*, *flutter*, *laugh*, *run*, *swim*,
 b. result verbs: *clean*, *cover*, *empty*, *fill*, *freeze*, *kill*, *melt*, *open*, *arrive*, *die*,

enter, faint.

This leads them to posit a lexical constraint dictating that, as semantic components, manner and result not be lexicalized by the same verb.

It is widely accepted that both result and manner verbs denote events involving change. Rappaport Hovav and Levin (2010) reason the crucial difference between the two groups of verbs hinges on the distinction of scalar and nonscalar change. Scalar change means a shift along a scale, which Kennedy defines as "a set of objects under a total ordering, where each object represents a measure" (Kennedy, 2001, p. 34). Verbs denoting change of state or directed motion, such as *cool* and *go*, specify scalar change and are deemed as result verbs. Nonscalar change is any change which cannot be characterized in this manner, as illustrated by manner verbs like *flap* and *jog*.

This two-way distinction plays a crucial part in Rappaport Hovav and Levin's formulation of "canonical realization rules." These rules govern how a verb root's structural component representing an event type is integrated into an event schema. The following illustrates some of the event schemas (Rappaport Hovav & Levin, 2000, p. 24).

- (4) a. manner \rightarrow [x ACT_{<MANNER>}]
 (e.g., *jog, run, creak, whistle...*)
 b. externally caused, i.e. result, state \rightarrow
 [[x ACT] CAUSE [y BECOME <RESULT-STATE>]]
 (e.g., *break, dry, harden, melt, open...*)

For manner verbs, the roots are integrated as modifiers of the predicate ACT as in (10a), and for result verbs, as arguments of the predicate BECOME as in (10b). These rules observe the lexicalization constraint as explicated in the following (Rappaport Hovav & Levin, 2000, p. 25):

- (5) A root can only be associated with one primitive predicate in an event schema, as either an argument or a modifier.

In this way, Rappaport Hovav and Levin forbid a root from expressing both manner and result.

2.2. Beavers & Koontz-Garboden (2013)

As mentioned above, Levin and Rappaport Hovav define 'result' in terms of scalar change. According to this definition, manner verbs do not entail scalar change. This point is scrutinized by Beavers and Koontz-Garboden (2017), who maintain that certain manner verbs actually entail scalar change. One such verb is *climb*, which has been frequently classified as a manner verb in the literature, including Levin and Rappaport Hovav (2013).

Beavers and Koontz-Garboden do not disagree that *climb* has a manner component to it. The issue is whether it also has a result component as part of its meaning. They point out that previous tests to diagnose result verbs have actually picked out verbs describing events involving change along a scale regardless of whether the events end up with a new final state. In other words, so-called result verbs can be thought to encompass both 'scalar change verbs,' which describe events involving transitions along a scale without specifying a new outcome, and 'scalar result verbs,' which entail a new outcome.

They use two tests for picking out scalar change verbs. One is to see if the verb can be followed by the clause *but s/he never budged* without yielding anomaly (Beavers & Koontz-Garboden, 2017, p. 852).

- (6) #Kim moved but she never budged from her spot

The fact that (6) is unacceptable shows that *move* is a scalar change verb. The reasoning is that any change along a scale necessitates a transition, and the expression *never budged* contradicts the transition indicated by the verb *move*.

The second test is to see whether the progressive form of the verb is allowed immediately after the final moment of the event elapsed. The rationale behind this test is that any event involving a scalar change must be delimited by the final phase of the transition. In other words, a scalar change event necessarily ends with the ultimate transition on the scale, and once it ends, there is no more transition on the scale. Thus, in the context where the temperature of a particular soup reaches 100 degrees, it is not felicitous to utter (7) (Beavers & Koontz-Garboden, 2017, p. 852).

- (7) #The soup is (still) being warmed to 100 degrees

The verb *warm* in (7) denotes causing something to reach a higher degree of temperature

and hence is not appropriate in the progressive form in this context.

While the two tests pick out scalar change verbs, there is also a test for identifying scalar result verbs. Since they are characterized by a new state at the end of the event, distinct from the state at the beginning, the test observes whether denying the attainment of a new state leads to anomaly (Beavers & Koontz-Garboden, 2017, p. 853).

- (8) #The soup just cooled/warmed and is still the same temperature it was before

The infelicity of (8) can be taken as evidence that *cool* and *warm* are scalar result verbs.

Beavers and Koontz-Garboden run the three tests on the verb *climb*, which Rappaport Hovav and Levin classify as a manner verb, specifying nonscalar change. The tests reveal that *climb* is actually a scalar change verb (Beavers & Koontz-Garboden, 2017, p. 853).

- (9) a. #The captain climbed the wall around and around, never budging from her initial location
b. #The captain, having made it to the top of the mast, was still climbing the ladder up

The unacceptability of (9a) shows that the motion event denoted by *climb* is such that it is impossible to remain at the initial state once the event takes place. The fact that (9b) is infelicitous is a further indication that *climb* is a scalar change verb.

Whether the same verb is also a scalar result verb is a separate matter. The following is what the test shows (Beavers & Koontz-Garboden, 2017, p. 853):

- (10) a. #The captain climbed the ladder up into the crew quarters and was in the same place she was before
b. John climbed the wall around and around, stopping right where he began

When the verb phrase headed by *climb* is followed by the prepositional phrase headed by *into*, as in (10a), it is untenable to assert in the same sentence that a new state, i.e., a new location, does not obtain by the end of the motion event. When a phrase like *around and around* accompanies the verb phrase, it is possible to state that the ultimate state the figure, namely *John*, is in coincides with the initial state. This is possible because the scale in question is a spatial one, not one involving temperature as in the case of *cool* or *warm*.

Given (10b), Beavers and Koontz-Garboden conclude that *climb* does not specify a new final state.

The three tests show that *climb* is a scalar change verb, albeit not a scalar result verb. This means that *climb* has a result component to it as well as a manner component, and this violates the manner-result complementarity constraint.

2.3. The Case of Korean Verbs of Motion

Having introduced the notions 'scalar change' and 'scalar result' and Beavers and Koontz-Garboden's analysis of *climb*, we can debate whether the manner-result complementarity constraint holds for Korean verbs. Here, we will tackle the issue of whether certain Korean manner-of-motion verbs specify scalar change or scalar result at the lexical level. If they do, they are not merely manner verbs but also result verbs. For many of them, it is obvious that they encode neither scalar change nor scalar result.

- (11) a. cwuno-nun wuntongcang-eyse kel/ttwi/ki-ess-ta
Juno-Top playground-Loc walk/run/crawl-Past-Dec
 'Juno walked/jumped/ran/crawled in the playground.'
- b. cwuno-nun wuntongcang-eyse kel/ttwi/ki-ess-ciman ku cali-eyse
Juno-Top playground-Loc walk/run/crawl-Past-but that spot-Loc
 kkomccakha-ci anh-ass-ta
 budge-Con not-Past-Dec
 'Juno walked/ran/crawled in the playground but didn't budge
 from her spot.'

As independent verbs, *ket* 'walk,' *ttwi* 'run,' and *ki* 'crawl' denote motion events on their own. In the absence of an expression like *ceycalieyse* 'in the original place,' as in (11a), the verbs are highly likely to be interpreted in such a way that the figure actually changed location through the motion. However, sometimes the motion can be self-contained, as (11b) attests. Given the full acceptability of (11b), we have to conclude that these verbs do not specify scalar change. Given the nature of the spatial scale, this means that they do not specify scalar result, either: In cases like (11b), the figure does not end up at a new location at the end of the motion event.

Let us examine the behavior of *kwulu* 'roll,' another verb typically classified as a

manner verb.

- (12) a. #cwuno-nun hancham kwul-less-ciman ku cali-eyse kkomccakha-ci
Juno-Top for.long roll-Past-but that spot-Loc budge-Con
 anh-ass-ta
 not-Past-Dec
 'Juno rolled for long but didn't budge from her spot.'
- b. #cwuno-nun pang kkut-kkaci kwul-less-nuntey yecenhi
Juno-Top room end-up.to roll-Past-and still
 kwulu-koiss-ess-ta
 roll-Prog-Past-Dec
 'Juno rolled up.to the end of the room, and still was rolling.'
- c. cwuno-nun hancham kwul-un hwu wenlay iss-ten cali-eyse
Juno-Top for.long roll-Rel after originally be-Rec spot-Loc
 memchwu-ess-ta
 stop-Past-Dec
 'After rolling for long, Juno stopped at the original position.'

(12a) is judged as infelicitous, quite unlike the case of (12b). In the motion event described by (12), the figure is a human being, and rolling typically requires lowering the head, bending the back, and then making contact with the ground starting with the back of the head and maintaining the contact until the figure is on her feet again. Throughout the phase of the body making contact with the ground, the body makes a progressive movement over the surface, which is indeed transition along a spatial scale. Therefore, by the very nature of the motion denoted by *kwulu* 'roll,' it is impossible to stay in place while being engaged in the motion. (12b) shows the result of testing the acceptability of the progressive form of the verb right after the last moment of the event denoted by the predicate of the first clause. Considering that the infelicity of (12b) arises out of the inappropriateness of the progressive form of the verb, (12b) lends weight to the conclusion that *kwulu* 'roll' involves scalar change. (12c), on the other hand, shows that *kwulu* 'roll' is similar to *climb* in English in not specifying scalar result. In conclusion, since *kwulu* 'roll' specifies scalar change, it is classifiable as a result verb.

In summary, just like *climb* in English, the Korean verb *kwulu* 'roll' manifests scalar change, which constitutes result in Rappaport Hovav and Levin's sense, while it also

encodes manner. This undermines the claim that Korean verbs encode either manner or result, but not both, at the lexical level. It turns out that at least in the domain of motion verbs, the manner vs. path/result divide is not as clear-cut as presumed in previous studies.

3. Manner Vs. Result in Korean SVCs

3.1. The SVC in Korean

How to define the SVC is a thorny issue, since it often appears to subsume diverse constructions in it. This is exacerbated when one studies similar-looking constructions across languages. Here, we adopt Haspelmath's definition of the construction based on cross-linguistic data and research (Haspelmath, 2016, p.296).

- (13) A serial verb construction is a monoclausal construction consisting of multiple independent verbs with no element linking them and with no predicate-argument relation between the verbs.

What is notable about (13) is that it does not require the construction in question to describe a single event. According to Haspelmath, with the requirement that the construction be monoclausal, additional stipulations about the number of events is unnecessary. He adds that deciding how many events are involved in a particular expression is often impossible to pinpoint.

Zubizarreta and Oh (2007) take a similar position on what counts as a Korean SVC. They delineate the following grammatical properties for the construction (Zubizarreta & Oh, 2007, p. 57):

- (14) a. Both verbs share the same tense, aspect, mood, and polarity.
b. There can be no more than one overtly expressed syntactic subject.
c. There can be no more than one overtly expressed syntactic object.

These properties indicate that the SVC constitutes a single clause. More specifically, (14b) and (14c) mean that the two verbs share the subject and, in case both are transitive, the

object.

One of the most important components of Haspelmath's definition is "independent verbs": The verbs making up a SVC can themselves stand alone. This rules out any construction having grammaticalized elements or auxiliary verbs in it. This requirement also makes it clear that the meaning of the whole construction derives from the meanings of the individual verbs participating in it, plus the meaning of the construction itself.

For our purposes, it is also crucial to make distinctions between SVCs and verbal compounds. Intuitively, compounds are lexical items the meanings of whose constituents do not contribute directly to the meaning of the whole. As a diagnostic, however, intuition alone is not transparent enough. Many studies, including Zubizarreta and Oh (2007) and Chung and Kim (2008), regard inserting focus particles, like *-man*, *-to*, *-nun*, between the two roots as a test to help make the judgment on whether the expression counts as a SVC, rather than a compound: If the insertion is successful, then the construction is not a compound (Zubizarreta & Oh, 2007, p. 66).

- (15) a. Apeci-kkeyse tol-a ka-si-ess-ta
 father-Nom turn-Con go-Hon-Past-Dec
 'The father died.'
- b. Apeci-kkeyse tol-a-*to/*man/*nun ka-si-ess-ta.
 father-Nom turn-Con-even/only/Contr go-Hon-Past-Dec

In (15), *tolaka* 'die' is not a phrase consisting of two verbs, but a compound whose meaning is not calculable from the meanings of the two roots *tol* 'turn' and *ka* 'go.' Unacceptability of the particles in (15b) fits well with the status of *tolaka* 'die' as a compound.

This test, however, is not reliable enough, as the following shows (Kim, 2010, p. 11).

- (16) ?Mia-ka kang-ul heyemchi-e-man kenne-ss-ta
 Mia-Nom river-Acc swim-Con-only cross-Past-Dec
 'Mia crossed the river, only swimming.'

Undoubtedly, *heyemchikenne* 'cross by swimming' is a SVC denoting a single event, but the intervening *-man* renders the sentence infelicitous. The same goes with the often-cited SVC *sswacwuki* 'shoot and kill.'

- (17) cwuno-nun pemin-ul sso-a-(?man) cwuki-ess-ta
Juno-Top criminal-Acc shoot-Con-(only) kill-Past-Dec
 'Juno shot and killed the criminal.'

It is precisely the presence of *-man* 'only' which makes the whole sentence less than acceptable.

Furthermore, *man*-insertion also works with verb phrases which we do not intend to address, such as *nophacye kata* 'keep getting higher.' Here, the second element *ka* is an auxiliary verb with an aspectual meaning, quite distinct from the motion verb *ka* 'go.'

- (18) phayn-tul-ey hamseng-un nophaci-e-man ka-ss-ta
 fan-Pl-of shouting-Top get.high-Con-only keep-Past-Dec
 'The fans' shouting kept getting louder.'

Since the grammatical element *ka* in (18) is not considered an independent verb, *nophacye kata* does not qualify as a SVC we want to address, but the diagnostic fails to exclude this expression.

It appears that there is no ideal diagnostic capable of detecting all and only Korean SVCs. Hence, we will settle for the diagnostic test of substituting the bi-clausal connective *-ese* for the dummy connective *-e*.¹⁾ This test at least serves us better than the focus-particle insertion.

- (19) a. Mia-ka kang-ul heyemchi-e/ese kenne-ss-ta
 Mia-Nom river-Acc swim-Con/Con cross-Past-Dec
 'Mia swam across the river.'
- b. cwuno-nun pemin-ul sso-a/ase cwuki-ess-ta
Juno-Top criminal-Acc shoot-Con/Con kill-Past-Dec
 'Juno shot and killed the criminal.'
- c. Apeci-kkeyse tol-a/*ase ka-si-ess-ta
 father-Nom turn-Con go-Hon-Past-Dec
 'The father died.'

1) This is not to imply that the dummy connective *-e* we find in SVCs is syntactically equivalent to *-ese*, which serves more diverse purposes (Lee 1993).

In (19a) and (19b), the substitution of *-ese* for *-e* does not affect the acceptability of the whole sentences, while in (19c), where the expression *tolaka* 'die' is a compound, it does. This accords with our intuition about the status of *heyemchiekenne*, *capamek*, and *tolaka*.

Unfortunately, this test excludes from the Korean SVCs a group of expressions which some of previous studies have taken as SVCs. Among them are expressions beginning with the root *nayli* 'descend.'

- (20) cwuno-nun san-ul nayli-e/*ese-ka-ss-ta
Juno-Top mountain-Acc descend-Con-go-Past-Dec
 'Juno went down the mountain.'

This means from now on we will consider a subset of Korean SVCs which passes the *ese*-substitution test. While this is not ideal, at least the test yields those constructions where the participating verbs are independent verbs whose meanings contribute to the meaning of the whole transparently. Having narrowed down the range of SVCs for our discussion, we discuss in the following subsections whether the classification of manner and result verbs plays an important role in Korean SVCs of motion events and non-motion events, respectively.

3.2. Cases of Korean SVCs of Motion Events

As was mentioned in Section 1, Hong (2018) claims that Korean SVCs employing motion verbs support the proposal that the manner-result complementarity constraint hold for Korean verbs. To back up his claim, Hong notes that the first verb of the serial verb phrase *kelleka* 'walk go', when used on its own, is compatible with the phrase *hakkyoeyse* 'at school,' which indicates the location in which the motion event occurs. In contrast, the same verb is not compatible with a phrase expressing path/direction (Hong, 2018, p. 349).²⁾

- (21) a. cwuno-nun hakkyo-eyse kel-ess-ta
Juno-Top school-Loc walk-Past-Dec
 'Juno walked at the school.'

2) The data (21a) and (21b) are modified from Hong's for ease of comparison.

- b. *cwuno-nun hakkyo-ey kel-ess-ta
Juno-Top school-Loc walk-Past-Dec
 'Juno walked to school.'
- c. cwuno-nun hakkyo-ey ka-ess-ta
Juno-Top school-Loc go-Past-Dec
 'Juno went to school.'

The contrast between the sentences is clear: for the path/direction phrase *hakkyoey* 'to school' to be allowed in the description of the motion event, the sentence needs a verb encoding path information, such as *ka* 'go.' This leads Hong to assert that manner-of-motion verbs like *ket* 'walk' do not entail information about path of motion. Assuming, along with Rappaport Hovav and Levin, that path/direction is akin to resultant state, Hong concludes that Korean SVCs do not argue against the claim about the manner-result complementarity constraint.

There is a problem, however, in the way the data in (21) are argued to support the assertion that *ket* 'walk' does not entail path information.³⁾ It is fair to gather from the data in (21) that the particle *-ey* selects particular kinds of verbs, but they do not warrant lack of path entailment on the part of *ket* 'walk.' If we were to accept Hong's reasoning, it would be hard to account for the following data:

- (22) a. cwuno-nun hakkyo-lo kel-ess-ta
Juno-Top school-Dir walk-Past-Dec
 'Juno walked to school.'
- b. cwuno-nun hakkyo-lo kel-e-ka-ss-ta
Juno-Top school-Dir walk-Con-go-Past-Dec
 'Juno walked to school.'
- c. cwuno-nun hakkyo-lo ka-ess-ta
Juno-Top school-Dir go-Past-Dec
 'Juno went to school.'

Here, unlike in (21), the noun *hakkyo* 'to school' is followed by *-lo* 'to,' a particle usually construed as indicating direction. As a marker of direction in the scheme of motion event,

3) This is not to suggest that the current paper assumes that *ket* 'walk' entails path information.

-lo can be understood as conveying a kind of path information, just like *-ey*. However, the *lo*-phrase is compatible with the manner verb *ket* 'walk,' the SVC *keleka* 'go by walking,' and the simple path verb *ka* 'go.' This should be unexpected from Hong's account.

Furthermore, the three predicates are also compatible with a phrase consisting of a noun and *-ul ttala* 'alongside,' which provides path information.

- (23) a. *cwuno-nun kangpyen-ul ttala kel-ess-ta*
Juno-Top riverside-Acc following walk-Past-Dec
'Juno walked along the riverside.'
- b. *cwuno-nun kangpyen-ul ttala kel-e-ka-ss-ta*
Juno-Top riverside-Acc following walk-Con-go-Past-Dec
'Juno walked along the riverside.'
- c. *cwuno-nun kangpyen-ul ttala ka-ess-ta*
Juno-Top riverside-Acc following go-Past-Dec
'Juno went along the riverside.'

Given that many expressions indicating path or direction are compatible with the verb *ket* 'walk,' it does not seem sound to argue that the verb does not entail path information on the mere ground that it is not compatible with an *ey*-phrase. Hence, Hong's claim that Korean SVCs of motion events support the manner-result complementarity thesis turns out not very plausible.

3.3. Cases of Korean SVCs of Non-Motion Events

In this subsection, we continue to discuss whether notions like manner or result play vital structural roles in Korean SVCs. Suppose the construction is a template of two slots which are filled by particular types of verbs. The question is whether the construction requires the first slot to be filled by a manner verb and the second by a result verb. Section 3.2 provided a negative answer to this question, pointing out flaws in Hong's claim that the manner-result configuration holds of SVCs describing motion events. Furthermore, analyzing a SVC of motion events such as *kwulleka* 'roll go' as the combination of manner and result verb is at odds with the fact that *kwulu* 'roll' encodes result as well as manner, as the discussion in Section 2.3 made clear. How about SVCs describing non-motion

events?

For ease of discussion, let us put the form of the Korean SVC as V_1-V_2 .⁴⁾ If there is a structural requirement that V_1 be a manner verb and V_2 a result verb, we would not expect a certain verb to occur as both V_1 and V_2 across different constructions. However, we can indeed find verbs filling both positions:

- (24) a. cwuno-nun chinkwu-lul cip an-ulo cap-a-kkul-ess-ta
Juno-Top friend-Acc house inside-Dir grab-Con-drag-Past-Dec
 'Juno dragged her friend into the house.'
 b. cwuno-nun wuntonghwa-lul pal-lo kkul-e-tangki-ess-ta
Juno-Top sneaker-Acc foot-Inst drag-Con-pull-Past-Dec
 'Juno pulled her shoe with his foot toward her.'

There is a common verb in the two SVCs *capakkul* 'grab drag' and *kkuletangki* 'drag pull': *kkul* 'drag.' As an activity verb (Vendler, 1957), its core meaning stays the same, but the verb has different positions in the two constructions.

This is not an isolated case. Consider (25).

- (25) a. theynth-lul nel-e-malli-ess-ta
 tent-Acc hang-Con-dry-Past-Dec
 'The tent was dried by hanging.'
 b. sayngsen-ul malli-e-mek-ess-ta
 fish-Acc dry-e-eat-Past-Dec
 'The fish was dried and eaten.'

The verb in question is *malli* 'dry.' It is V_2 in the SVC of (25a), and V_1 in that of (25b). In (26), we have *twicip* 'flip' filling the two different positions.

- (26) a. cwuno-nun nwun-ul kka-twicip-ess-ta
Juno-Top eye-Acc peel-flip-Past-Dec
 'Juno flipped his eyelid inside out.'
 b. cwuno-nun pwulssi-lul hanahana twicip-e-kk-ess-ta

4) In the remainder of the paper, we will treat the Korean SVC as if it consisted of two verbs, without considering other possibilities.

Juno-Top ember-Acc one.by.one flip-Con-extinguish-Past-Dec
 'Juno put out the embers by flipping them one by one.'

Data like (24), (25), and (26) argue against the idea that the SVC in Korean imposes a structural constraint hinging on semantic components like manner or result.

4. Structural Properties of the Korean SVC

In Section 3, we have seen that it is hard to maintain that the Korean SVC imposes a structural requirement on V_1 and V_2 such that V_1 is a manner verb, and V_2 a result verb. If we assume that the meaning of the SVC is determined by the meanings of V_1 and V_2 and the construction meaning, then, the question remains as to what the content of the construction meaning in the Korean SVC is. In this section, we attempt to identify the semantic properties of the construction.

Let us begin by seeking whatever patterns we can discern in the subset of Korean SVCs which passes the *-ese* substitution test. Zubizarreta and Oh (2007) make a broad classification of Korean SVCs in terms of temporal relationship between the subevents denoted by V_1 and V_2 : Simultaneous and Consequential SVCs. The idea is that the Simultaneous SVC describes an event where a subevent denoted by V_1 happens at the same time as the subevent denoted by V_2 , whereas in Consequential SVCs, the two subevents are sequentially ordered.

Table 1. Examples of Korean SVCs

kinds of event	examples
Simultaneous SVC	kel-e ka 'walk go'
	twi-e olu 'jump ascend'
	kwul-e o 'roll come'
Consequential SVC	heyemchi-e kenne 'swim cross'
	cap-a tangki 'grab pull'
	kwu-we mek 'broil eat'
	palp-a kku 'tread extinguish'
	sso-a cwuki 'shoot kill'

Incidentally, we have in the table four Simultaneous SVCs describing events involving

spontaneous locomotion of the figure denoted by the subject noun phrase. On the other hand, the Consequential SVCs exemplified above are about caused motion, e.g., *capatangki* 'grab pull,' or non-motion events.

This division suggests that we are dealing with two distinct groups of SVCs with no structural properties in common. Zubizarreta and Oh offer some ideas about non-temporal semantic relation between the subevents denoted by V_1 and V_2 for each group of SVCs. For Simultaneous SVCs, V_1 indicates manner, and for Consequential SVCs, the subevent denoted by V_1 enables what is described by V_2 . While the notion of 'enablement' contains certain insight, it is nonetheless vague. Moreover, we have no clear solution as to how to conflate the two notions, enablement and manner, into a single meaning the Korean SVC carries.

In order to get at the construction meaning for the Korean SVCs in question, let us compare two SVCs describing caused motion, *capatangki* 'grab pull' and *kkuletangki* 'drag pull,' which share V_2 . While V_1 for the former, *cap* 'grab,' is inherently telic, V_1 for the latter, *kkul* 'drag,' is atelic in itself. The two SVCs differ in terms of temporal relation as well, such that the former is a Consequential SVC, while the latter is a Simultaneous SVC. Consider the following:

- (27) a. cwuno-nun cwul-ul cap-a tangki-ess-ta
Juno-Top string-Acc grab-Con pull-Past-Dec
 'Juno grabbed and pulled the string.'
 b. cwuno-nun cwul-ul kkul-e tangki-ess-ta
Juno-Top string-Acc drag-Con pull-Past-Dec
 'Juno pulled the string by dragging.'

Even though for *capatangki* two subevents are sequentially ordered, and for *kkuletangki* they are simultaneous, there seems to be a common role *cap* 'grab' and *kkul* 'drag' are playing in the (27a) and (27b).

Imagine a situation where you see a rope lying on the ground. In order to make it move toward yourself, you can typically use either your hand or your foot. However you go about it, you cannot make it move without making contact with it. When you make the contact using your hand, you end up grabbing it; when you achieve the same effect with your foot, the rope will be placed between your foot and the ground, and that is how dragging is done. Viewed this way, either grabbing or dragging can be taken as

serving the purpose of achieving and maintaining contact with the rope, which is the requisite condition for successfully moving the rope. This relationship between either grabbing or dragging the rope, maintaining contact with it, and moving it can be recast in terms of conditions.

Let p stand for the event of the rope moving toward the agent, q the event of the agent achieving and maintaining the contact between her and the rope, r_1 the event of the agent grabbing the rope by hand, and r_2 the event of the agent dragging the rope by foot. The relationship between the events can be represented in the following fashion:

- (28) a. $p \rightarrow q$
 b. $(r_1 \vee r_2) \rightarrow q$

If p is the desired outcome of moving the rope, you can say there is a necessary condition q for it. To fulfill the necessary condition q —i.e., achieving and maintaining contact between the agent and the rope—it suffices to realize either r_1 or r_2 —that is, either grabbing or dragging the rope, in our example. Note that neither the mere event of the agent grabbing the rope nor that of the agent dragging it is itself a necessary condition for the event of the rope moving toward the agent.

We can extend this idea to other cases exemplified on Table 1. Take *keleka* 'walk go' for instance. In order to move to somewhere, what is crucially necessary is to activate our motor function and engage our limbs. Otherwise, translational movement cannot occur. This is actualized by any member of a set of modes of movement, such as walking, running, crawling, swimming, and so on. Thus, walking is one of the sufficient conditions for the necessary condition, i.e., activating our motor function and engaging our limbs, for translational movement. However, walking itself is not a necessary condition for the outcome.

Underlying this proposal is a conceptualization of how we use the SVC. Given a particular verb denoting an intended outcome, we can easily come up with a set of potential events any of which can fulfill a crucial prerequisite for the intended outcome. Here, one of the potential events will be expressed by V_1 and the intended outcome by V_2 . By "crucial prerequisite" we mean the necessary condition, which serves as the mediator between the subevents denoted by V_1 and V_2 . Those potential events are prototypically associated with the outcome through learning and cultural acquisition on the part of language users. Consider the case of *kwuwemek* 'broil eat.' To be able to eat some meat,

it is culturally required or recommended to have it undergo some process rendering it safe for human consumption, e.g., cooking, drying, and so on. Then, the crucial necessary condition for the desired outcome of eating the meat will be to render it consumable. In this scenario, any of the events involving cooking or drying it is sufficient for satisfying the necessary condition of making the meat consumable. Therefore, a verb denoting any such event—e.g., *kwup* 'broil,' *salm* 'boil,' *thwiki* 'fry,' *malli* 'dry,' etc.,—can readily appear as V_1 in the SVC.

In this section, we have sought to find some construction meaning of the Korean SVC. Downplaying the roles of the manner–result dichotomy resorted to in the literature on the SVC, we proposed that the Korean SVC structurally demands that the subevents denoted by V_1 and V_2 be related in terms of conditions. Specifically, the subevent denoted by V_1 is a sufficient condition for the necessary condition for the subevent denoted by V_2 .

5. Conclusion

This paper looked into two issues regarding the notions of manner and result as they bear on Korean predicates. First, it argued against the proposal that the manner–result complementarity constraint hold of verbs in Korean. Secondly, it dealt with the issue of whether these notions play a significant role in Korean SVCs, and concluded that the Korean SVC can hardly be thought of as a sequence of a manner verb and a result verb, in that order. Regardless of the event type encoded by the individual verb, the SVC requires that the subevent denoted by V_1 function as a sufficient condition for a necessary condition for the subevent denoted by V_2 .

It should be pointed out that the representation of the relationship between the subevents in (28) is a grossly simplified one. In particular, the necessary condition, as represented by q can be a source of controversy, since for any p , there is bound to be an infinite number of necessary conditions. Despite this oversimplification, we can also say that our cognition, physical conditions, and cultural knowledge as human beings will conspire to reduce the number of necessary conditions for a certain p to a manageable size by eliminating trivial conditions and prioritizing highly relevant ones. The same goes for r_1 and r_2 .

References

- Beavers, J., & Koontz-Garboden, A. (2017). Result verbs, scalar change and the typology of motion verbs. *Language*, 93, 842–876.
- Chung, C., & Kim, J-B. (2008). Korean serial verb constructions: A construction-base approach. *Studies in Generative Grammar*, 18, 559–582.
- Haspelmath, M. (2016). The serial verb construction: Comparative and cross-linguistic generalizations. *Language and Linguistics*, 17(3), 291–319.
- Hong, S-M. (2018). Manner/result complementarity in Korean motion events. *Journal of Language Sciences*, 25(3), 341–361.
- Lee, K. (1993). *A Korean grammar on semantic-pragmatic principles*. Hankook Munhwasa.
- Levin, B. & Rappaport Hovav, M. (1991). Wiping the slate clean: A lexical semantic exploration. *Cognition*, 41, 123–151.
- Levin, B. & Rappaport Hovav, M. (1992) The lexical semantics of verbs of motion: The perspective from unaccusativity. In I. Roca (Ed.), *Thematic structure: Its role in grammar* (pp. 247–269). Berlin: Foris.
- Levin, B., & Rappaport Hovav, M. (2013). Lexicalized meaning and manner/result complementarity. In B. Arsejevic, B. Gehrke, & R. Marin (Eds.), *Subatomic semantics of event predicates* (pp. 49–70). Springer: Dordrecht.
- Kennedy, C. (2001). Polar opposition and the ontology of ‘degrees.’ *Linguistics and Philosophy*, 24, 33–70.
- Kim, J-B. (2010). Argument composition in Korean serial verb constructions. *Studies in Modern Grammar*, 61, 1–24.
- Rappaport Hovav, M. & Levin, B. (2010). Reflections on manner/result complementarity. In M. Rappaport Hovav, & I. Sichel (Eds.), *Syntax, lexical semantics, and event structure* (pp. 21–38). Oxford: Oxford University Press.
- Vendler, Z. (1957). Verbs and times. *Philosophical Review*, 56, 143–160.
- Zubizarreta, M., & Oh, E. (2007). On the syntactic composition of manner and motion. *Linguistic Inquiry Monograph* 48. Cambridge, Massachusetts: The MIT Press.

Sang-Gu Kang

Assistant Professor

Division of English Language and Literature

College of Humanities, Hansung University

116 Samseongyoro-16gil, Seongbuk-gu,

Seoul 02876, Korea

Phone: +82-2-760-4022

Email: rockroach@hansung.ac.kr

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