Lexical Semantics: lexicon-syntax interface

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Abstract: This chapter deals with the lexicon-syntax interface, which is particularly interesting in Korean and currently attracting much attention in cross-linguistic studies. Theories on the lexicon-syntax interface, linking rules in particular, call for a lexicalist hypothesis such that various syntactic aspects of a sentence be determined by the lexical properties of the predicate, just as in Chomsky’s (1981, 1986) Projection Principle. Thus, this chapter aims to characterize the semantic aspects of argument realization patterns — linking rules in Korean. (Jackendoff 1990; Levin and Rappaport Hovav 1995; Pustejovsky 1995; Croft 2012, etc.) Furthermore, this chapter is devoted to identifying the semantic components of alternating predicates in Korean which are relevant to their ability to realize multiple argument structures. The verb classes dealt with in this chapter include psych predicates, verbs of change of location/state, and several verb classes involving causative alternation in Korean.

Keywords: linking, lexicon-syntax interface, argument alternation, argument structure, event structure, psych verb, locative alternation, causative alternation

1 Introduction

This chapter, rather than attempting to describe all areas of lexical semantics, deals with the lexicon-syntax interface, which is particularly interesting in Korean and currently attracting much attention in cross-linguistic studies. Theories on the lexicon-syntax interface, linking rules in particular, call for a lexicalist hypothesis such that various syntactic aspects of a sentence be determined by the lexical properties of the predicate, just as in Chomsky’s (1981, 1986) Projection Principle. Thus, this chapter aims to characterize the semantic aspects of argument realization patterns — linking rules in Korean (Levin and Rappaport Hovav 1995; Pinker 1989). Recent studies on the interface between syntax and lexical semantics have proposed generalized semantic accounts of argument realization and alternations in natural language (Jackendoff 1990; Rappaport Hovav and Levin 1998; Hale and Keyser 1993, 2002; Pustejovsky 1991, 1995; Croft 1998, 2012). Furthermore, this chapter is devoted to identifying the semantic components of alternating predicates in Korean which are relevant to their ability to realize multiple argument structures. Various alternating constructions of a verb demonstrate different facets of its meaning, and they reveal a semantic contrast between alternating and non-alternating verb classes.

This chapter is organized as follows: Section 2 illustrates some syntactic variations of verbs in Korean, which clearly show that the variation of a verb is not simply idiosyncratic, but indicative of the characteristics of the certain verb class that the verb belongs to. This section further shows that the linking rules should account for the argument realizations of extended VP in terms of event structure which conceptualizes notions like manner, path, and result. The subsequent sections deal with the argument realization patterns of various verb classes in Korean. Thus, in Section 3, we illustrate and account for the argument linking of two classes of psych predicates in Korean. The two classes of psych predicates show various contrastive syntactic and semantic behaviors related to case alternations, and this section identifies the difference in terms of the agentivity of the experiencer in the causing event of a psychological experience.

Section 4 deals with locative alternations in Korean — e.g., Korean counterparts of the transitive *spray/load* alternation and the intransitive *swarm* alternation, and adopts a lexicalist approach to handle the diverse locative alternations. This section also illustrates that the “partitive vs. holistic”
contrast of the locative alternations in Korean is not dependent upon the alternating structures but rather dependent upon the lexical meaning of each individual predicate. Section 5 lays out a variety of "semantic" causative alternations, which are characterized in terms of 'focus' in event structure. Thus, one alternant focuses on its causing sub-event, and the other on its caused sub-event, i.e., its result state.

2 Event structure, linking, and alternations

Compare the following constructions of the verb ssul- 'sweep' in Korean with sweep in English:¹

(1) a. Cini-ka *(matang-ul) ssul-ess-ta
   Jini-NOM (yard-ACC) sweep-PAST-DECL
   'Jini swept (the yard).'

b. Cini-ka menci-lul ssul-ess-ta
   Jini-NOM dust-ACC sweep-PAST-DECL
   'Jini swept dust.'

c. *Cini-ka menci-lul kwusek-ey ssul-ess-ta
   Jini-NOM dust-ACC corner-to sweep-PAST-DECL
   'Jini swept dust into the corner.'

d. Cini-ka menci-lul kwusek-ey ssul.e-neh-ess-ta
   Jini-NOM dust-ACC corner-to sweep-put.in-PAST-DECL
   'Jini swept dust into the corner.'

(1a, b) show that the verb ssul- 'sweep' can take either a location or a locatum argument. The verb is a simple manner verb of activity, and may not take a goal phrase such as kwusek-ey 'into the corner', as shown in (1c), contrasting with its English counterpart. This contrast between Korean and English suggests the typological distinction of Talmy (1985), i.e., "verb framed" vs "satellite framed" languages. Verb framed languages such as Korean tend to put 'path' component of an event into a verbal expression, whereas satellite framed languages take a separate locative phrase to express a path of an event. Thus, Korean, unlike English, uses a verbal compound ssul.e-neh 'sweep into' as in (1d), where the manner verb ssul- 'sweep' combines with a path verb neh- 'put in' to allow a goal phrase.

According to Rappaport Hovav and Levin (1998, 105) the verb sweep in (2) below only signals a simple activity event (process with manner), and the PP off the sidewalk contributes another event referring to the result state, i.e., 'the leaves ended up being off the sidewalk.' Thus the sentence gets a complex event structure of accomplishment – i.e., [process + result-state], and denotes a change of location.

(2) Terry swept (the leaves) *(off the sidewalk).

The same goal PPs in Korean, however, may not introduce another predication, so (1c) is not acceptable.

Syntactic variation of a verb is not simply idiosyncratic, but indicative of the characteristics of the certain class of verbs the verb belongs to. We can easily see that verbs of the same semantic class show the same syntactic realization of arguments. (3) below shows that the verb takk- 'wipe' patterns with ssul- 'sweep' in (1) above, which is a natural consequence of their semantic class, i.e., manner verbs of activity.

(3) a. Cini-ka *(chayksang-ul) takk-ass-ta
   Jini-NOM (desk-ACC) wipe-PAST-DECL
   'Jini wiped the desk.'

b. Cini-ka menci-lul takk-ass-ta
   Jini-NOM dust-ACC wipe-PAST-DECL
   'Jini wiped away the dust.'
c. *Cini-ka menci-lul ssuleykithong-ey takk-ass-ta
   Jini-NOM dust-ACC trash.can-LOC wipe-PAST-DECL
   ‘Jini wiped dust into the trash can.’
d. Cini-ka menci-lul ssuleykithong-ey takk.a-neh-ass-ta
   Jini-NOM dust-ACC trash.can-LOC wipe-put.in-PAST-DECL
   ‘Jini wiped dust into the trash can.’

Intransitive motion verbs like ket- ‘walk’ and talli- ‘run’ in Korean also pattern with the transitive ‘wipe/sweep’ type verbs. Thus we have,

(4)  a. Cini-ka kel-ess-ta
     Jini-NOM walk-PAST-DECL
     ‘Jini walked.’
b. *Cini-ka hakkyo-ey kel-ess-ta
     Jini-NOM school-to walk-PAST-DECL
     ‘Jini walked to school.’
c. Cini hakkyo-ey kel.e-ka-ess-ta
     Jini-NOM school-to walk-go-PAST-DECL
     ‘Jini went to school walking.’

These argument realization patterns shared by a class of verbs may be characterized as ‘regular/logical polysemy’ (Apresjan 1973; Pustejovskyk 1995, etc.). Thus the verbs ssul- ‘sweep’ and takk- ‘wipe’ belong to a class of manner verbs of “surface contact,” and they denote a change of state event or a removal event. The verbs talli- ‘run’ and ket- ‘walk’ belong to a class of manner verbs of motion, and they combine with a path verb ka-/lo- ‘go/come’ to derive an accomplishment verb denoting a complex event [process of manner + result state].

This chapter is also concerned with the semantic characterization of the differences between alternating and non-alternating verbs in Korean. For instance, location verbs like sit- ‘load’ and tam- ‘put in’ in Korean do not allow locative alternation, whereas verbs like load, smear, and paint in English do allow such an alternation.3

(5) a. Cini-ka cha-ey cim-ul sil-ess-ta
     Jini-NOM car-LOC baggage-ACC load-PAST-DECL
     ‘Jini loaded the baggage into the car.’
b. *Cini-ka cha-lul cim-ul sil-ess-ta
     Jini-NOM car-ACC luggage-INSTR load-PAST-DECL
     ‘Jini loaded the car with baggage.’
c. Cini-ka cha-lul cim-ul katuk sil-ess-ta
     Jini-NOM car-ACC luggage-INSTR full load-PAST-DECL
     ‘Jini loaded the car full with baggage.’

The asymmetry between (5a) and (5b) demonstrates that sit- ‘load’ in Korean does not denote a change of state but a change of location, thus it does not take the location argument cha ‘the car’ as a direct object. Non-alternating verbs, however, can refer to a change of state by combining with a resultative phrase which contributes a secondary predication for the location argument. (5c) allows the location ‘the car’ to undergo a change of state, i.e., from ‘not being filled’ to ‘being filled.’ Under this scenario, the sentence denotes a complex event, which is composed of a change of location and a change of state.4 Notice the different behavior of the resultative phrase in (5c) and the goal phrase PP in (1c) and (3c). That is, a resultative phrase but not a locative PP can contribute a secondary predication to a simple activity event in Korean.

The above alternations and other locative alternations in Korean suggest that Rappaport Hovav and Levin’s (1998) event typology should be extended with a more complex event comprising two kinds of change, i.e., location change and state change. We might revise the template of their “externally
caused state,” so as to analyze the whole event of location change as the causing event, as illustrated in (6).

(6) [[[x ACT_{LOAD} y] CAUSE [BECOME [y <BE-AT z>]]] CAUSE [z BECOME <FULL>]]

This event composition poses a problem for Rappaport Hovav and Levin’s (1998: 105) following claim: “we propose that no additional expansion of their representation is possible as the accomplishment representation is the most complex representation available. Consequently, if the accomplishment verb is one that specifies a change of state, no change of location can be added to the meaning of the verb, and vice versa.” The following are some examples they provide in English to show this constraint on event augmentation.

(7) a. *Kelly broke the dishes off the table.
   b. Kelly wiped the crumbs off the table.
(8) a. *Kelly broke the dishes valueless.
   b. Kelly wiped the table clean.

They claim that (7a) and (8a) are ungrammatical because the event template associated with the verb break cannot be augmented further, i.e., no further result state or location can be added to a sentence with break. Thus, (7a) does not mean ‘Kelly broke the dishes and as a result they went off the table,’ and (8a) does not mean ‘Kelly broke the dishes and as a result they became valueless.’ This constraint does not apply to the verb wipe, since its lexical meaning does not refer to a complex event but a simple process event. Thus (7b) and (8b) allow event augmentation.

Notice that Rappaport Hovav and Levin’s constraint on event augmentation does not account for sentence (5c), where the event of location change (‘loading event’) can be augmented by adding a result phrase ‘full.’ The following illustrate another case of event augmentation by compounding a path verb ‘drop’ onto a manner verb ‘hit.’ Notice that the English counterpart hit, just like wipe and load, allows the alternation between (9a) and (9b) without a path element like down as in (9c).

(9) a. Koni-ka chayksang-ul mangchi-lo chi-ess-ta
   Koni-NOM desk-ACC hammer-INTR hit-PAST-DECL
   ‘Koni hit the desk with a hammer.’
   b. *Koni-ka chayksang-ey mangchi-lul chi-ess-ta
   Koni-NOM deskLOC hammer-ACC hit-PAST-DECL
   ‘Koni hit the hammer against the desk.’
   c. Koni-ka chayksang-ey mangchi-lul nayli-chi-ess-ta
   Koni-NOM deskLOC hammer-ACC drop-hit-PAST-DECL
   ‘Koni hit the hammer down against the desk.’

The manner verb of surface contact chi- ‘hit’ is a non-alternating verb, so we see the asymmetry between (9a) and (9b). But as shown in (9c), when combined with a path verb like nayli- ‘drop’, the manner verb chi- ‘hit’ sanctions the alternation. The event structure of chi- ‘hit’ is augmented by taking an extra result state – the theme argument ‘the hammer’ undergoes a change of location and it ends up being dropped down on the desk. This compound verb nayli-chi- ‘hit down’ promotes the theme argument to be a direct object.

We have seen a few examples from Korean of event augmentation by a verb combining with a result phrase or a path verb. But we note that combining with an extra manner verb does not yield an event augmentation as shown in (10). Compare the following with (1) and (4) above, where an extra path verb neh- ‘put in’ or ka- ‘go’ saves the alternation.

(10) a. Koni-ka kapang-ey os-ul neh-ess-ta
    Koni-NOM bag-LOC clothes-ACC put-in-PAST-DECL
    ‘Koni put the clothes into the bag.’
   Koni-NOM bag-ACC clothes-INST put.in-PAST-DECL 

   Koni-NOM bag-ACC clothes-INST shove-put.in-PAST-DECL  
   (intended) ‘Koni put the clothes into the bag.’

The verb *neh- ‘put in’ itself is not an alternating verb, so its theme argument *os ‘clothes’ shows up as a direct object and its goal argument as a locative PP, but not vice versa. (10c) above shows that a compound verb consisting of *sswusi- ‘shove’ and *neh- ‘put in’ does not allow the promotion of the goal argument to a direct object, since the manner verb *sswusi ‘shove’ may not augment the event ‘putting in.’ This again shows a structural distinction between the ‘manner’ component and the ‘result/path’ component of an event.

3 Agentivity of Experiencer in psych predicate alternations

3.1 Two classes of intransitive psych predicates

Previous studies on English psych predicates have mainly focused on transitive verbs, and they have given much less attention to intransitive psych verbs or adjectives – e.g., care type intransitives (care about/for, marvel at, suffer from, rejoice in, etc.), and appeal type intransitives (appeal to, niggle at, grate on, matter to, etc.) (see Levin 1993; Levin and Rappaport Hovav 2005; Jackendoff 1990; Pustejovsky 1995, among others). In Korean, however, many transitive psych verbs are derived from intransitive verbs and adjectives. This section is devoted to dealing with the argument linking of intransitive psych predicates in Korean. Specifically, we will focus on two classes of intransitive psych predicates which involve intriguing case alternations.

3.1.2 Agentive experiencer predicates [AEP], whose Experiencer plays the role of Agent in the experiential sub-event, and

Patientive experiencer predicates [PEP], whose Experiencer does not play the role of Agent but plays the role of Patient or Theme in the causing sub-event.

A representative example of AEPs is cilwuha- ‘be bored/boring’, whereas a representative example of PEPs is komap- ‘be thankful to.’ The two classes of psych predicates share the same case-frames, but show apparent contrast in their event structure and argument structure. The verbs and adjectives belonging to these classes are often dubbed “emotion predicates,” since they express an emotional state rather than a cognitive process/state.

AEPs and PEPs in Korean share the “double nominative” case frame as illustrated in (12), that is, both experiencer and stimulus take nominative case. As shown in (13), however, the two predicates show apparently similar but clearly distinct case-alternations.

(11) (i) Agentive experiencer predicates [AEP], whose Experiencer plays the role of Agent in the experiential sub-event, and

(ii) Patientive experiencer predicates [PEP], whose Experiencer does not play the role of Agent but plays the role of Patient or Theme in the causing sub-event.

(12) a. nay-ka ku yenghwa-ka cilwuha-ess-ta  
   I-NOM that movie-NOM bored-PAST-DECL  
   ‘I was bored with that movie.’

b. nay-ka Koni-ka komaw-ess-ta  
   I-NOM Koni-NOM be.thankful-PAST-DECL  
   ‘I was thankful to Koni.’

(13) a. ku yenghwa-ka na-hanthey cilwuha-ess-ta  
   that movie-NOM I-DAT bored-PAST  
   ‘That movie was boring to me.’

b. nay-ka Koni-hanthey komaw-ess-ta  
   I-NOM Koni-DAT be.thankful-PAST  
   ‘I was thankful to Koni.’
In (12a) and (13a) with an AEP cilwuha- ‘be boring/bored’, the stimulus argument takes nominative case, whereas the experiencer argument (EXP, henceforth) can take either nominative case as in (12a) or dative case as in (13a). Let us call the alternation between (12a) and (13a) ‘EXP-alternation.’ Now, as illustrated in (12b) and (13b), the experiencer of the PEP komap- ‘be thankful’ is always realized as a subject, but the stimulus argument Koni can take either nominative case or dative case (-hanter). Let us call the alternation between (12b) and (13b) ‘STM-alternation.’

The two adjectives also show a contrast in argument structure, so the AEP cilwuha- ‘be boring/bored’ may pick up only one argument denoting the other.

(14) a. na-nun cikum mopsi cilwuha-ta
    I-TOP now very bored-PAST-DECL
    ‘I am very bored now.’

b. ku yenghwa-nun mopsi cilwuha-ta
    that movie-TOP very boring-DECL
    ‘The movie is very boring.’

Unlike cilwuha-, the PEP komap- ‘be thankful’ does not allow deletion of an argument, experiencer or stimulus. Furthermore, cilwuha- in (14b) may derive an individual level predication, whereas komap- may not. Thus, (14b) can be interpreted as claiming that ‘the movie was produced to be boring for viewers.’

In order to account for the contrast between the two classes – AEPs and PEPs, we extend the previous approaches based on event structure (e.g., Jackendoff 1990; Pustejovsky 1995; DiDesidero 1999, etc.), and propose a semantic typology of intransitive psych verbs in Korean. The typology to be proposed is crucially based on the agentivity of experiencer, i.e., the way an experiencer argument participates in the causing event of the psych predicates. Pustejovsky (1995) employs a causative analysis for the lexical semantics of psych predicates. He claims that ‘experiencer predicates’ like anger select for an event function in subject position, and they can be properly interpreted as denoting a causative event, i.e., causation which involves a causing sub-event and a caused sub-event. Thus he analyzes the following sentence (15) as involving a metonymic reconstruction of the subject into an event, i.e., an experiential event of ‘John reading the newspaper.’

(15) The newspaper angered John.

Pustejovsky proposed a causative event template for psych predicates, which is dubbed “experienced causation.” Pustejovsky (1995, 208-211) illustrates three types of causative templates, i.e., “direct causation,” “indirect causation,” and the “experienced causation.” We will see shortly, however, that the difference between AEPs and PEPs can be accounted for by a new event template wherein an experiencer argument plays an agent/patient role in the causing sub-event.

3.2 Agentivity of Experiencer

There have been various proposals on the typology of psych verbs: e.g., Belletti and Rizzi (1988), Grimshaw (1990), Pesetsky (1995), Levin (1993), DiDesidero (1999), Levin and Rappaport Hovav (2005), among others. Most of them classify transitive psych verbs like frighten and amuse according to the syntactic and semantic properties of their stimulus argument, particularly focusing on the ‘agentivity of stimulus.’ As we mentioned in 3.1, however, intransitive psych predicates in Korean can be classified into AEPs and PEPs, whose semantic/syntactic asymmetry will be accounted for in terms of ‘agentivity of experiencer.’ AEPs and PEPs defined in (11) are illustrated below with their exemplars.

(16) (i) Agentive Experiencer Predicates [AEP], whose Experiencer plays the role of Agent in the experiential causing sub-event:
    E.g., koylo- ‘be distressed; painful, distressing,’ kepukha- ‘feel awkward; uncomfortable,’ musep-
‘scared of; fearful, dreadful,’ taptapha- ‘irritated; irritating,’ changphiha- ‘shameful,’ anlakha- ‘comfortable,’ culkep- ‘pleased; pleasant,’ phyenaha- ‘feel comfortable; comfortable,’ cilwuha- ‘bored; boring,’ pulkhwayha- ‘displeased with; displeasing, unpleasant,’ etc.

(ii) Patientive Experiencer Predicates [PEP], whose Experiencer cannot play the role of Agent but can play the role of Patient or Theme in the causing sub-event:

E.g., komap-ikansuha- ‘thankful to,’ mosmattangha- ‘displeased with,’ kokkap- ‘regrettable, spiteful,’ hwangsong.sulep- ‘awed at, afraid of,’ sepsepha- ‘disappointed; disappointing,’ saym-i-na- ‘feel envy of,’ swum-i-mukhi- ‘choked,’ sinkyeng.ssui- ‘sensitive to,’ etc.

We will see shortly that AEPs and PEPs employ similar but systematically different event structures, wherein AEPs, unlike PEPs, take an experiencer which participates in the causing sub-event as an agent. We will also show that the causing sub-event may be realized on the surface as a CP/VP complement, and the defaultness of the causing event induces the intransitive structure in syntax.

Now let us consider the asymmetry between AEP and PEP in more detail. In (17) below, the AEP cilwuha- ‘bored/boring’ interprets its experiencer ‘I’ as the agent of an implicit ‘movie-watching event,’ and this causing event occurs concurrently with the caused event ‘my feeling bored.’ (17a) does not overtly express the experiential verb po- ‘see/watch,’ but we can reconstruct an experiential event ‘I watch the movie’ from the simple DP ‘the movie’, so as to get the same event structure as (17b). We never end up with a causing event from (17a) whose agent is not ‘I’, the experiencer of ‘bored.’?

(17) a. nay-ka ku yenghwa-ka cilwuha-ess-ta
    I-NOM that movie-NOM bored-PAST
    ‘I was bored with that movie.’

b. nay-ka [ku yenghwa-lul po.ki]-ka cilwuha-ess-ta
    I-NOM that movie-ACC watching-NOM bored-PAST
    ‘I was bored with watching that movie.’

In (18), however, the PEP komap- ‘thankful’ interprets the experiencer ‘I’ as the patient of the causing sub-event. (18b) reveals how the stimulus Koni in (18a) can be coerced into an event type, i.e., ‘Koni helping me.’ Notice that the stimulus takes the agent role, and the experiencer the patient role in the causing sub-event.

(18) a. nay-ka Koni-ka komaw-ess-ta
    I-NOM Koni-NOM be.thankful-PAST-DECL
    ‘I was thankful to Koni.’

b. nay-ka [Koni-ka na-lul towacwun.kes]-i komaw-ess-ta
    I-NOM Koni-NOM I-ACC helping-NOM thankful-PAST
    ‘I was thankful to Koni in that she helped me.’

Here, we note that the causing sub-event temporally precedes the resultant sub-event ‘I am thankful to Koni.’ Thus, it is natural for the event structure of PEPs to require the temporal precedence restriction between the two sub-events, and the PEPs to also employ an event template which is similar to but distinct from the causative templates proposed by Pustejovsky (1995) and Rappaport Hovav and Levin (1998).

Now let us look at another syntactic contrast which identifies the agentivity of an experiencer. Korean has two types of eventive complements: one headed by ‘V-ki’ and the other headed by ‘V-nun.kes’. The complementizer -ki is similar to the English gerundive ‘V-ing’ or to-infinitive, and the other complementizer -nun.kes heads a full clausal complement. As shown below, AEPs may take either of the complements.

(19) a. na-nun [ji yenghwa-lul po-ki]-ka cilwuha-ta
    I-TOP this movie-ACC watching-NOM bored
    ‘I am bored with watching that movie.’
b. na-nun [i yenghwa-lul po-nun.kes]-i cilwuha-ta
   I-TOP this movie-ACC watch-COMP-NOM bored
   ‘I am bored with watching this movie.’

PEPs can take a full clausal complement with ‘V-nun.kes’ which denotes a causing event, but unlike AEPs, they do not take a VP complement headed by the complementizer -ki. The Experiencer Cini in (20a) can bind the anaphor caki in the complement clause headed by -nun.kes, but this is not the case for (20b) where the VP complement is headed by -ki.

(20) a. Cini-nun [Koni-ka caki-lul towacwu-nun.kes]-i komaw-ess-ta
   Jini-TOP Koni-NOM self-ACC help-COMP-NOM thankful-PAST-DECL
   ‘Jini, was thankful that [Koni helped her].’
   Jini-TOP Koni-NOM self-ACC help-COMP-NOM thankful-PAST-DECL
   ‘Jini, was thankful to [Koni’s helping her].’

The following contrast also shows that PEPs do not interpret the experiencer as the agent of the causing/stimulus event. Thus, the experiencer Cini in (21b) cannot bind the anaphor caki (see CHAPTER 8 ANAPHORA AND BINDING) in that it is not interpreted as the agent of the stimulus event. In (21c), the pro cannot be bound by the experiencer Cini, which again confirms that the experiencer cannot be the agent of the causing event.

(21) a. Cini-nun [Koni-uy mal]-i komaw-ess-ta
   Jini-TOP Koni-GEN words-NOM thankful-PAST
   ‘Jini was thankful to Koni for his words.’
b. *Cini-nun [caki-uy mal]-i komaw-ess-ta
   Jini-TOP self-GEN words-NOM thankful-PAST
   ‘*Jini, was thankful for her, words.’
   Jini-TOP Koni-ACC helping-NOM thankful-PAST-DECL
   ‘Jini, was thankful for her, helping Koni.’

We have so far seen that AEPs but not PEPs interpret the Experiencer as the agent of the (overt or covert) causing sub-event. Thus we call the Experiencer of AEPs “Agentive Experiencer”, and that of PEPs “Patientive Experiencer.”

Now let us see how to account for the case alternations of the two classes of psych predicates: An AEP allows ‘EXP-Alternation’, i.e., an experiencer can be realized either as a subject or as a dative adjunct, so we have (22a, b). In contrast, a PEP allows ‘STM-Alternation’, i.e., a stimulus can take either nominative or dative/oblique case as in (23a, b).

(22) a. nay-ka ku yenghwa-ka cilwuha-ess-ta
   I-NOM that movie-NOM bored-PAST-DECL
   ‘I was very bored with that movie.’
b. ku yenghwa-ka na-hanthey cilwuha-ess-ta
   that movie-NOM I-DAT bored-PAST-DECL
   ‘That movie was boring to me.’
c. na-nun [yenghwa-lul po-ki]-ka cilwuha-ess-ta
   I-TOP movie-ACC watching-NOM bored-PAST-DECL
   ‘I was bored with watching the movie.’

(23) a. nay-ka Koni-ka komaw-ess-ta
   I-NOM Koni-NOM be.thankful-PAST-DECL
   ‘I was thankful to Koni.’
b. nay-ka Koni-hanthey komaw-ess-ta
   I-NOM Koni-DAT be.thankful-PAST-DECL
   ‘I was thankful to Koni.’

c. Cini-nun [Koni-ka caki-lul towacwu-nun.kes]-i komaw-ess-ta
   Jini-TOP Koni-NOM self-ACC help-NOM thankful-PAST-DECL
   ‘Jini, was thankful that [Koni helped her].’

Nam (2009) accounts for these alternations in terms of “HEAD” feature of event structure: That is, every event is specified with a HEAD feature, and the HEAD value refers to a sub-event (or the whole event) which is salient and the core part of the event structure. Nam (2009) suggests that the EXP/STM-alternation of psych predicates comes from different construals of the underspecified head value of the same event. He proposes that AEPs and PEPs denote a causative event composed of a causing sub-event [e1] and a caused sub-event [e2], and the HEAD value of the event is not specified, so to be construed as either [e1] or [e2] depending on the context. If the HEAD value is construed as [e1], the stimulus argument surfaces as the subject; and if the HEAD value is construed as [e2], the experiencer argument shows up as the subject.

Thus, for example, the event structure of AEPs like cihwuha- ‘be bored/boring’ has an underspecified HEAD value, and the alternant (22a) with an experiencer subject interprets the HEAD value as [e2] – i.e., the resultant event is the HEAD and (22b) with a stimulus subject interprets the HEAD value as [e1] – i.e., the causing event is the HEAD. The other class of PEPs like komap- ‘be thankful to’ always takes the experiencer as a subject, i.e., the resultant event is salient, and the STM-alternation depends on the possible headedness of the causing event: Thus, (23a) gets the HEAD value of [e1+e2], while (23b) gets the HEAD value of [e2].

Nam (2009) also notes that there is an intriguing constraint on STM-alternations of PEP. Consider the following:

(24) a. Cini-nun Koni-ka/-hanthuey komaw-ess-ta
   Jini-TOP Koni-NOM/DAT thankful-PAST-DECL
   ‘Jini was thankful to Koni.’

b. Cini-nun [Koni-ka caki-lul towacwu-nun.kes]-i*/ey komaw-ess-ta
   J.-TOP K.-NOM self-ACC help-COMP-NOM/DAT thankful-PAST-DECL
   ‘Jini, was thankful that [Koni helped her].’

The PEP komap- in (24a) allows STM-alternation, but (24b) does not. That is, in (24b), the clausal stimulus ‘the event of Koni helping Jini’ only takes nominative case. The clausal complement denotes a causing sub-event PEP. According to Nam’s (2009) proposal, a PEP assigns dative case to stimulus when its resultant sub-event is a head of the whole event. Thus, if we take the full clausal stimulus as “head” of the causing sub-event, then the clausal stimulus should be realized as a subject with nominative case.

4 Scalarity in locative alternation

Levin and Rappaport Hovav (2005, ch7) introduces diverse accounts of the syntactic, semantic, and pragmatic theories on why alternating verbs realize argument structure in more than one way. Levin (1993: 49-55) illustrates various alternation patterns dubbed “locative alternations,” e.g., spray/load alternation, clear alternation (transitive and intransitive), wipe alternation, swarm alternation.

Locative alternation has attracted more attention than any other, since the alternation raises many intriguing issues on the semantics of relevant verb classes as well as the problems of mapping lexical semantic structures onto syntax. Locative alternation involves two internal arguments – Theme (the object or substance whose location changes) and Location (the goal or source argument). We will illustrate and give an account of the locative alternations in Korean, and it will be claimed that the transitive spray/load alternation and the intransitive swarm alternation should be handled in a unified
It has been well-described in the literature that both the spray/load alternation and swarm alternation show a contrast called the “partitive vs. holistic effect” (Anderson 1971; Salkoff 1983; Rappaport and Levin 1988; Levin 1993; Beavers 2006; among others).

(25) a. John loaded the truck with hay.
   b. John loaded hay onto the truck.

(26) a. The garden is swarming with bees.
   b. Bees are swarming in the garden.

Most of the previous studies on this contrast are based on the constructional approach, so the alternating structure bears its own interpretation: i.e., the with variant (25a) entails the total affectedness of the locative argument – ‘the truck becomes full of hay,’ whereas the locative variant (25b) does not. Furthermore, their account is based on the intuition that (25a) entails (25b), but not vice versa. Thus, Rappaport and Levin (1988) gave the following lexical semantic representations of the verb load, where (27a) is for the locative variant and (27b) is for the with variant. Notice that the representation of the with variant encompasses that of the locative variant.

(27) a. Load1: [x CAUSE [y TO COME TO BE AT z] /LOAD]
   b. Load2: [x CAUSE [z TO COME TO BE IN STATE] BY MEANS OF [x CAUSE [y TO COME TO BE AT z] /LOAD]

Levin and Rappaport Hovav (2005, 206) note that English has two relevant classes of non-alternating verbs, which share some common semantic features with the alternating ones like spray and load: One of the verb classes prefers the locative variant (e.g., drip, pour, put) and the other class only approves the with variant (e.g., cover, fill). However, they leave it an “open question” why some verbs are found in both variants and others are not. Korean has the same alternations as shown below, where we can easily see a contrast between English cover and Korean counterpart teph-.

   Koni-NOM white paint-ACC wall-LOC paint-PAST-DECL
   ‘Koni smeared white paint on the wall.’
   Koni-NOM wall-ACC white paint-INSTR paint-PAST-DECL
   ‘Koni smeared the wall with white paint.’

   Koni-NOM paper-ACC table-LOC cover-PAST-DECL
   ‘Koni covered paper on the table.’
   Koni-NOM paper-INSTR table-ACC cover-PAST-DECL
   ‘Koni covered the table with paper.’

Dowty (2000) also gives an extensive description of the alternation with intransitive verbs like swarm, dribble, glimmer, buzz and smell, and he claims that only a small class of verbs that are “semantically well-defined” can appear in the with variant, namely those that denote “low level’ perception of movement, light, sound, or smell.” Dowty supports a lexicalist position and his proposal suggests a possible answer to the “open” question, why some verbs are found in both variants and others are not. Here, we stand by the lexicalist position rather than the constructionist one. Thus, we suggest that the locative alternations in Korean should be available only to a well-defined semantic class of verbs as proposed by Kim (2012). She claims that, unlike English locative alternations, their Korean counterparts in (30-31) do not show the holistic vs. partitive contrast. Hong (1987), Yeon (1993), and Yang (1995) among others approve the holistic/partitive contrast in (30-31), but we will see that the contrast is not dependent upon the alternating structures but rather dependent upon the lexical meaning of each individual predicate.
(30) a. Cengwen-ey pel-i tulkkulh-nun-ta
    garden-LOC bee-NOM swarm-PRES-DECL
    ‘Bees swarm in the garden.’

b. Cengwen-i pel-lo tulkkulh-nun-ta
    garden-LOC bee-NOM swarm-PRES-DECL
    ‘The garden swarms with bees.’

    Yuna-NOM bottle-LOC water-ACC fill-PAST-DECL
    (lit.) Yuna filled water in the bottle.’

    Yuna-NOM bottle-ACC water-INST fill-PAST-DECL
    ‘Yuna filled the bottle with water.’

Unlike in English, neither of the alternating variants of tulkkulh- ‘swarm’ and chaywu- ‘fill’ entail ‘the entire garden/bottle is occupied by bees/water.’ Furthermore, Kim (2012) illustrates the following which enhance the claim that the locative alternation in Korean does not induce the “partitive/holistic” effect. Let us just note that neither sentence in (32) and (33) gives a reading with a holistic effect, so both (32a) and (32b) are fine even when just a single or a few drops of ink are on the dress, and both (33a) and (33b) when a few roses are put up on a large wall.

    dress-LOC ink-NOM stained-PAST-DECL
    [loc variant]

    dress-NOM ink-LOC stained-PAST-DECL
    [with variant]
    Both: ‘The dress is stained with ink.’

(33) a. Yuna-ka pyek-ey kkoch-ul cangskikha-ess-ta
    Yuna-Nom wall-LOC flower-ACC decorate-PAST-DECL
    b. Yuna-ka pyek-ul kkoch-ulo cangskikha-ess-ta
    Yuna-Nom wall-LOC flower-ACC decorate-PAST-DECL
    Both: ‘Yuna decorated the wall with flowers.’

Given that the two alternating structures do not show the contrast, then what determines the alternation? That is, what semantic characteristics of a verb determine whether the verb involves the locative alternation or not? Kim (2012) argues that the alternation is only available to a restricted class of verbs that require so called “locative scalarity.” She defines it as follows:

(34) Definition of l(ocative)-scalarity:
    A predicate P is said to have a [l-scalar] feature if and only if,
    (i) the location argument of P is interpreted as a scale which maps homomorphically onto the event denoted by P, and
    (ii) P requires the location to be affected above a certain value of the scale.

In the first clause (i), the “incrementality” requirement of Krifka (1989) is applied to the locative argument instead of a theme. Notably, the second clause (ii) requires the existence of a specific scale value for the verb to be properly interpreted. Kim shows that in Korean some verbs like chaywu- ‘fill’ do have the [l-scalar] feature, but others like sit- ‘load’ do not. Thus both (31a) and (32b) require the bottle to be filled more than a certain proportion of its volume.

The following sentences (35a-c) clearly show that the scalar interpretation of locative arguments is not induced by the construction but by the lexical verb. The verb chaywu- ‘fill’ in (35a, b) lexically specifies a certain proportion for its location argument to be assessed “filled,” thus the adverbs wancenhi/keuy ‘completely/almost’ in the sentences refer to the proportion of the bottle. The verb sit-
‘load,’ however, does not have \(l\)-scalarity, so the adverbs refer to the amount of the theme argument, i.e., luggage.

Mina-NOM bottle-LOC water-ACC completely/almost filled
‘(lit.) Mina completely/almost filled water into the bottle.’
Mina-NOM bottle-ACC water-INSTR almost filled
‘(lit.) Mina almost filled the bottle with water.’
Mina-NOM truck-LOC luggage-ACC completely/almost loaded
‘Mina completely/already loaded the luggage onto the truck.’

Let us note other evidence supporting the lexicalist approach to the locative alternations. The verb \(sit\)-‘load’ in Korean as in (36a) does not allow a locative alternation, but the resultative phrase \(katuk\) ‘full’ as in (36b) can save the alternation.

Mina-NOM truck-ACC luggage-INST load-PAST-DECL
‘Mina loaded the truck with luggage.’
Mina-NOM truck-ACC luggage-INST fully load-PAST-DECL
‘Mina loaded the truck full with luggage.’

Other resultative phrases like \(panccum\) ‘about half’, \(wancenhi\) ‘completely’, and \(pinthum-epsi\) ‘with no room, compactly’ can be used to get the same result. We can see here that the locative alternation should be constrained by the meaning of the predicate: That is, the non-alternating verb \(sit\) ‘load,’ combining with a resultative phrase like \(katuk\) ‘full,’ now obtains \(l\)-scalarity, so to require the locative argument to be filled ‘to the max.’ There are more non-alternating verbs which may not show up in a \(with\) variant without an extra resultative phrase such as \(neh\) ‘pack in,’ \(puthi\) ‘paste,’ \(tam\) ‘put in,’ etc. But other verbs like \(noh\) ‘put’ and \(twu\) ‘place’ never induce \(l\)-scalarity; thus, they do not occur in a \(with\) variant as shown in (37).

‘Jini put the books on the table.’
‘(intended) *Jini put the table full with books.’

The contrast between the verbs \(sit\)- ‘load’ and \(noh\)- ‘put’ suggests that the locative alternation be accounted for by the lexical meaning of the verb/predicate. Then what is the difference between the ‘loading/packing’ event and the ‘putting/placing’ event? We propose that the former implies that its location argument undergoes some change of state, while the latter does not. So this ‘implicit’ change of the location argument of \(sit/neh\)- ‘load/pack in’ is realized with the support of an extra resultative phrase in \(with\) variants.

5 “Semantic” causative alternations

Now let us consider another type of locative alternation which involves a created theme (or product) as well as a location argument. The following pairs illustrate the “location/product” alternation, whereby we get ‘location’ or ‘created theme’ as a direct object.
(38) a. Cini-ka pyek-ul ttwulh-ess-ta  
   Jini-NOM wall-ACC drill-PAST-DECL  
   ‘Jini drilled the wall.’  
   b. Cini-ka pyek-ey kwumeng-ul ttwulh-ess-ta  
   Jini-NOM wall-LOC hole-ACC drill-PAST-DECL  
   ‘Jini drilled a hole through the wall.’  

(39) a. Cini-ka tong-ul pha-ass-ta  
   Jini-NOM ground-ACC dig-PAST-DECL  
   ‘Jini dug in the ground.’  
   b. Cini-ka tong-ey wumul-ul pha-ass-ta  
   Jini-NOM ground-LOC well-ACC dig-PAST-DECL  
   ‘Jini dug a well into the ground.’

In (38a) and (39a), the location arguments *pyek* ‘wall’ and *ttang* ‘ground’ show up as direct objects, but in (38b) and (39b) direct object positions are occupied by the created theme (product) arguments *kwumeng* ‘hole’ and *wumul* ‘well.’ The location/product alternation is similar to Levin’s (1993) “material/product alternation” and “image impression alternation.” This alternation of (38-39), however, has nothing to do with the notion of *locative scalarity*, in terms of which we characterized verbs like *smear* and *cover* in the previous section. The verbs *ttwulh* ‘drill’ and *pha* ‘dig’ themselves do not have [l-scalarity], i.e., the verbs induce no scalar interpretation for their location arguments.

Here the product argument refers to an object created by the event of drilling or digging, so the object does not exist until the event is completed. We want to analyze this alternation as a type of “causative alternation.” Causative alternations, in the literature, refer to verbs which allow both transitive and intransitive uses, so the transitive alternant denotes a causative event as a whole, while the intransitive alternant denotes a caused sub-event. Such syntactic definition takes the causative alternation as a subtype of transitivity alternation. Levin (1993, 26-32) gives two subclasses of causative alternations: “causative/inchoative alternation” and “induced action alternation.” The former involves a variety of verbs including *roll, break, bend, etc.*, and the latter some causative verbs like *jump, run, walk, etc.*, all of which fit into such a syntactic definition. Korean, unlike English, has a quite restricted set of verbs which fit into such a syntactic definition. Korean has a highly restricted class of verbs which involve the transitivity alternation: E.g., *memchwu* ‘stop’, *wumciki* ‘move’, *panccaki* ‘twinkle’, *welli* ‘resound’, *nalli* ‘fly’, etc. There have been many studies on the verb class under the name of “ergative verbs”, or “neutral verbs” such as *ko* (1986) and *Yeon* (1989). *Ko* (2001), among others.

A variety of alternations in Korean, however, can be identified as “semantic” causative alternations between a causing event and a caused event. That is, one alternant focuses on its causing sub-event, and the other on its caused sub-event, i.e., its result state. Thus defined, semantic causative alternations should cover the location/product alternation illustrated above. So (38a) and (39a) denote a causing event — ‘drilling the wall’ and ‘digging the ground’, whereas (38b) and (39b) focus on the caused event — ‘a drilling event results in a hole’ and ‘a digging event results in a well.’ Notice that the location/product alternation does not belong to the transitivity alternation in Korean.

“Material/product” alternations given below can be characterized as a semantic causative alternation, too. (40a) denotes an event where the theme argument *pyektol* ‘bricks’ undergoes change of location, and (40b) denotes the creation event of a wall. In (41), (a) denotes a change of state, whereas (b) a creation event. Thus, the verbs in (40a) and (41a) focus on the causing event, and those in (40b) and (41b) focus on the caused event with a created object, *tam* ‘wall’ or *kwuk* ‘soup’.

(40) a. inpu-tul-i pyektol-ul ssah-ass-ta  
   worker-PI-NOM bricks-ACC pile.up-PAST-DECL  
   ‘Workers piled up bricks.’  
   b. inpu-tul-i pyektol-lo tam-ul ssah-ass-ta  
   worker-PI-NOM bricks-INSTR wall-ACC pile.up-PAST-DECL  
   ‘Workers built a wall with bricks.’
The verb, unlike the sound/light emission verbs, takes two core arguments place predicates, and the caused/result substructures on the left in (i) schematize the above alternations as the following:

\[
\text{Cause-NOM (Location-LOC) V/A ↔ Location-NOM (Cause-INSTR) V/A}
\]

The first pattern of “sound/light emission” is identified as an alternation of one-place predicates; that is, the subject of each alternant refers to either location or cause, and the other remaining argument surfaces as an adjunct. The second pattern of “full occupancy” is characterized as an alternation between two-place predicates, which require both location and cause arguments. We suggest that the structures on the left in (i-ii) highlight the causing sub-event, while the structures on the right focus on the caused/result sub-event by demoting the cause argument. Being similar to the sound/light emission verbs, the ‘smell emission’ verb \( \text{phungk}- \) ‘give off (a smell)’ allows a transitivity alternation. The verb, unlike the sound/light emission verbs, takes two core arguments – source and
We note here that the above alternating predicates are all of the stage-level variety, and they refer to a temporary change of state of the location. Individual-level predicates like the following, however, denote a permanent state/property of a location, and do not take a cause as a subject by demoting a location: nelp-/cop- ‘wide/narrow’, khu-/cak- ‘big/small’, hayah-/kkamah- ‘white/black’, etc. We count the alternations in (42-44) among the semantic causative alternations, and we account for the meaning difference between the alternants in terms of focal structure of the event; in other words, (a) sentences with a cause subject focus on the causing event, whereas (b) sentences highlight the result state with a location subject.

We have so far seen a variety of “semantic” causative alternations in Korean which do not belong to transitivity alternation but reveal the internal structures of a generalized causative event. Thus, just like the various causative/inchoative alternations in English, the semantic causative alternations in Korean can be accounted for in terms of the focus/head construal of a causative event.

6 Concluding remarks

This chapter has presented a lexical semantic account of the syntactic/semantic behavior of predicates in Korean. Lexical meaning of a predicate is described in terms of event structure, and the lexicon-syntax interface is revealed by the internal substructures of events denoted by the predicate. We have described the event types of predicates – e.g., simple activity of manner verbs, static event, change of state/location, and illustrated the ways they combine with other meaning components like manner, result, path, etc. It is argued that Korean has semantic constraints on the composition of event types and path/result components, which is not attested in English. We further argued that every argument/case alternation in Korean should be available only to a well-defined semantic class of verbs. Thus, we claimed that locative alternations in Korean, unlike those in English, do not show the contrast between holistic vs. partitive affectedness, and further that the contrast is not dependent upon the alternating structures but rather dependent upon the lexical meaning of each individual predicate – i.e., the semantic feature of ‘locative scalarity.’

This chapter has also analyzed the internal structure of events so as to account for the case alternations of psych predicates. Thus the psych predicates are characterized as referring to a causative event, whose arguments (experiencer and stimulus) may be realized in more than one way depending on the focus structure and the argument binding between two sub-events – i.e., the causing event and the caused/result event. Here we noted that the ‘agentivity of experiencer’ is the crucial semantic component which determines the case alternations. We have also claimed that a variety of argument alternations in Korean call for a unified semantic account based on causative event templates, so they should be classified under the rubric of “semantic causative alternation.” This account reveals a cross-linguistic difference in causative alternations. English employs “syntactic transitivity alternations” whereas Korean makes extensive use of semantic causative alternations between a causing event and a result state.

We can easily find a multitude of case/argument alternations in Korean (see Yang 1995 and Nam2007 among others), most of which indicate polysemous behavior of lexical predicates. Each alternation is further restricted to a specific semantic class of verbs, and so requires us to delve into more fine-grained analysis of internal event structures. This research orientation of lexical semantics...
in Korean will make a good contribution to typological studies on the lexicon-syntax interface in natural language.

References


The sentences in (ii) also illustrate the transitive verb of the verb ‘cover’, and COP for the locative PPs to yield a legitimate predication. Unlike English, Korean does not use INSTR of the verb ‘load’, as well as intransitive verbs like ‘fill’, as well as intransitive verbs like ‘swarm.’

This event composition involves two different kinds of argument realizations: one is a change of location attributed to the root meaning of the verb sít- ‘load’ and the other is a change of state attributed by the adverb kätik ‘fully’.

For instance, as shown in (i) below, the transitive verb kipp.e-ha- ‘rejoice at’ derives from the adjective kippu- ‘joyful.’ The sentences in (ii) also illustrate the transitive verbs kóylońc.e-ha- ‘suffer from’ and a causative verb kóyloph-hi- ‘torment, distress’, which are derived from the adjective kóyloph- ‘stressed/stressful.’

(i) a. Cíni-ká kippu-ta
   "Jini is happy.

b. Cíni-ka Kóni-uy sengkong-ul kippu.e-ha-ta
   "Jini is happy with Koni’s success.

(ii) a. Cíni-ka kóyloph-ta
   "Jini is happy with Koni’s success.

1 List of Abbreviations: ACC (accusative), COMP (complementizer), DAT (dative), DECL (declarative), GEN (genitive), INSTR (instrument), LOC (locative), NOM (nominative), PAST (past tense), PRES (present), TOP (topic)

2 PPs in Korean may not serve as an independent predication, so the goal PP in (1c) cannot derive a secondary predication. Unlike English, Korean does not use PPs in copula (COP) constructions. The lexical verb iss- ‘exist’ has to be used instead of COP for the locative PPs to yield a legitimate predication.

3 Section 4 of this chapter deals with the semantics of alternating transitive verbs in Korean such as chítbla- ‘paint’, tepbh-’cover’, and chaywu- ‘fill’, as well as intransitive verbs like tulkul- ‘swarm.’

4 This event composition involves two different kinds of change: One is a change of location attributed to the root meaning of the verb sít- ‘load’ and the other is a change of state attributed by the adverb kätik ‘fully’.

5 For instance, as shown in (i) below, the transitive verb kipp.e-ha- ‘rejoice at’ derives from the adjective kippu- ‘joyful.’ The sentences in (ii) also illustrate the transitive verbs kóylońc.e-ha- ‘suffer from’ and a causative verb kóyloph-hi- ‘torment, distress’, which are derived from the adjective kóyloph- ‘stressed/stressful.’

(i) a. Cíni-ka kippu-ta
   "Jini is happy with Koni’s success.

b. Cíni-ka Kóni-uy sengkong-ul kippu.e-ha-ta
   "Jini is happy with Koni’s success.”

(ii) a. Cíni-ka kóyloph-ta
   "Jini is happy with Koni’s success.”
Jini-NOM stressed-DECL
‘Jini is stressed.’
b. Cini-ka casin-uy silphay-lul koylop.e-ha-n-ta
   Jini-NOM self-GEN failure-ACC stressful-HA-PRES-DECL
   ‘Jini suffers from her failure.’
c. Casin-uy silphay-ka Cini-lul koylop.hi-n-ta
   self-GEN failure-NOM Jini-ACC torment-PRES-DECL
   ‘Her failure torments Jini.’

6 In (13a), the experiencer with a dative case (-hanthey) is not a subject anymore. The subject-hood of the experiencer argument in (12a, b) and (13b) can be shown by its behavior in honorific agreement, relativization, and scrambling in Korean.

7 In English, the surface subject of the transitive psych verb *bore* is the logical object of the experiential ‘watching’ event, i.e., [watch_act(e1, I, the_movie)].
   (i) The movie bored me.

8 Pustejovsky (1995) uses the “head” feature to represent different aspectual characters of events, and further he exploits “underspecified head” in order to account for argument alternations like causative/inchoative alternations in English.

9 Nam (2009) proposes two new causative event templates, which represent the event of cilwuha- ‘bored/boring’ and komap- ‘thankful’. The former is called “agentive experienced causation” and the latter “patientive experienced causation.” The two event templates have different temporal restrictions and event-HEAD values.

10 Levin gives the following examples of the four alternation patterns:
   (i) a. Devon smeared butter on the toast.
      b. Devon smeared the toast with butter.
   (ii) a. Helen cleared dishes from the table.
        b. Helen cleared the table of dishes.
   (iii) a. Helen wiped her fingerprints off the wall.
         b. Helen wiped the wall (‘of her fingerprints).
   (iv) a. Bees are swarming in the garden.
        b. The garden is swarming with bees.

11 The verb *fill* in English does not allow the alternation: it only appears in *with* variants. There are a lot of verbs in Korean and English that share a very similar meaning but do not follow the same alternation pattern. We will see some of them shortly in the following, e.g., cangsikha- ‘decorate’, *sit- ‘load’, ellwukci- ‘stain’, etc. According to Kim (2012), the locative variant is an unmarked form of the two variants in Korean. While there are a number of predicates that can appear in locative variants but not in a with variant, opposite cases are only rarely attested.