

ARGUMENT STRUCTURE ALTERNATIONS IN ENGLISH AND KOREAN

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요 약

이 논문은 영어와 한국어에서 논항구조의 교체를 허용하는 처소격 동사들의 통사구조와 의미를 비교 분석해 보려고 한다. 지금까지 연구가 논항구조의 교체를 허용하는 이런 동사들이 통사적 유사성에만 국한되어 연구가 되었을 뿐 여러 다른 통사적 형식에서 보여지는 차이점이나 논항 교체 동사들의 의미적 차이점과 같은 중요한 현상들에 대한 많은 연구가 되어지지 않았다. 따라서 첫 번째로 이 논문에서는 Pinker (1989)에 제시한 논항 교체 동사들의 의미적 분석을 구체적으로 소개하고, 이런 교체 동사들의 의미적 유사성과 차이점으로 구분한 Pinker의 의미 분류들을 자세히 알아본다. 또한 Pinker가 교체동사들의 의미적 분류를 위해 사용한 통사적 기준인 논항 생략 (PP-omission test)을 소개한다. 두 번째로 영어의 논항 교체 동사들에 해당하는 한국어 동사들의 통사적 형태를 알아봄으로써 영어와 한국어에서의 통사적 유사성과 차이점을 알아본다. 세 번째로 영어와 한국어에서 나타나는 통사적 차이점의 설명을 위해 Pinker가 제시한 의미 분류들을 수정한 새로운 분류를 제시한다. 마지막으로 Jackendoff (1996)에서 제시된 의미적 설명이 영어의 논항 교체 동사에 해당하는 한국어 동사들의 통사적 형태들의 다양성을 설명할 수 있음을 보여준다.

1 Introduction

In this paper I examine the syntax and semantics of verbs that participate in argument structure alternation in English and Korean, focusing specifically on locative verbs which describe the relationship between a moving object (Figure) and a location (Ground).

Locative verbs in English have received considerable interest in the areas of syntax, semantics, and language acquisition (Anderson 1977; Pinker 1989; Dowty 1991; Levin 1993; Pesetsky 1995, etc.). The main characteristic that these verbs have is that they

show various syntactic structures, as shown in (1-4). For instance, some verbs like "pour" and "spill" only allow Figure syntax, where the Figure object is encoded as the direct object and the Ground object is encoded as an indirect object PP, as in (1). In contrast, some verbs like "fill" and "cover" only allow Ground syntax, in which the Ground object is encoded as the direct object and the Figure object is encoded as a PP, as in (2). In addition, some verbs like "spray" and "load" participate in their argument structure alternations in that they allow both Figure and Ground frames, as shown in (3-4).¹

"Pour" -class in English: Non-alternating Figure verbs

- (1) a. John poured water into the glass Figure-frame
 b. *John poured the glass with water. *Ground-frame

Fill" -class in English: Non-alternating Ground verbs

- (2) a. *John filled water into the glass. *Figure-frame
 b. John filled the glass with water. Ground-frame

Alternating verbs in English

- (3) a. John sprayed paint onto the wall. Figure-frame
 b. John sprayed the wall with paint. Ground-frame
- (4) a. John loaded apples onto the truck. Figure-frame
 b. John loaded the truck with apples. Ground-frame

In this paper I mainly focus on locative verbs that participate in their argument structure alternations. In particular, I investigate how these Alternating verbs may be divided into two basic semantic classes, despite the syntactic similarity of these verbs, as shown in (3) and (4). Furthermore, I investigate the syntactic patterns of Korean verbs that correspond to English Alternating verbs and explain why some Korean verbs counterparts to English Alternating verbs show the same syntactic pattern as those in English, and why some Korean verbs counterparts to English Alternating verbs do not.

This paper is organized as follows. In section 2, I introduce Pinker's (1989) two broad-semantic classes for Alternating locative verbs in English. In section 3, I examine the syntactic patterns of Korean verbs that correspond to English Alternating verbs and discuss some remaining problems that a cross-linguistic survey shows. In section 4, I re-examine Pinker's classification of semantic classes for English Alternating verbs

¹ It has been widely noticed in the literature that there is a subtle semantic difference between Figure frames in (3a) and (4a) and Ground frames in (3b) and (4b) (see Anderson 1971). For example, Ground frames always describe a completed/filled end-state, whereas Figure frames do not.

and revise his classification by the PP omission test Pinker used, in order to provide an answer for cross-linguistic variation in the syntax of Alternating verbs. In addition, I review Jackendoff's (1996) account, which highlights the asymmetry of some English Alternating verbs, to see whether his fine-grained semantic distinction may explain the remaining puzzles in Korean.

2 Semantic Classes of Alternating verbs in English

According to Pinker (1989), in English locative verbs fall into two basic semantic classes: One is a basic Figure verb class which has a manner-of-motion meaning as a primary meaning component, the other is a basic Ground verb class which has a change-of-state meaning as a primary meaning component. For example, verbs with the same syntax as "pour", such as "spill" and "dribble", also have semantic properties in common with the verb "pour" in that they semantically describe a manner of motion and they are syntactically Non-Alternating Figure verbs. In contrast, what verbs with the same syntax as "fill", such as "decorate" and "cover", all have in common is that they semantically describe a change-of-state and they syntactically Non-Alternating Ground verbs.

Following Pinker's (1989) broad-range semantic classes, Alternating locative verbs that participate in their argument structure alternations should be divided into Figure-Alternating verbs (basic Figure verbs) and Ground-Alternating verbs (basic Ground verbs), based on which semantic component is basic. In other words, Alternating verbs all should have one meaning component (either a manner of motion or a change-of-state) as a primary meaning and the other meaning component as a secondary meaning, independent of the fact that they have both manner of motion and change of motion meaning components.

Now we need to find out how Pinker (1989) defines the primary meaning and the secondary meaning of an Alternating verb. Pinker's criterion of whether Alternating verbs have either a primary manner of motion meaning or a primary change-of-state meaning is determined by which argument is obligatory in both syntactic frames, which I will call "sole argument effects" or "a PP omission test" (see Pinker 1989: 125). For example, the Alternator "pile" is acceptable without the into/onto phrase (the Ground argument), but it is unacceptable without the with phrase (the Figure argument), as shown in (5):

"Pile"-class: Figure-Alternating verbs in English

- (5) a. John piled books (onto the shelves). Figure-frame
 b. John piled the shelves *(with books). Ground-frame

If the Ground argument is optional in a syntactic frame of an Alternator, then the syntactic Ground-frame would be derived from the syntactic Figure-frame. In other words, optionality of the Ground argument implies that an Alternator has the manner of motion as a primary meaning component. Therefore, verbs with similar syntactic behaviors to the verb "pile" are Figure-Alternating verbs which denote basic manner-of-motion meanings. There are four subclasses of Alternating verbs that denote basic manner-of-motion meanings: "smear"-class (smear, dab, plaster, rub, and spread), "pile"-class (pile, heap, and stack), "spray"-class (inject, spray, splash, and sprinkle), and "scatter"-class (scatter, sow, and bestrew).

In contrast, the Alternator "stuff" is acceptable without the with phrase (the Figure argument), but it is unacceptable without the into/onto phrase (the Ground argument), as shown in (6):

Stuff -class: *Ground-Alternating verbs in English*

- (6) a. John stuffed feathers *(into the pillow). Figure-frame
 b. John stuffed the pillow (with feathers). Ground-frame

If the Figure argument is optional in a syntactic frame of an Alternator, then the syntactic Figure-frame would be derived from the syntactic Ground-frame. In other words, optionality of the Figure argument implies that an Alternator has the change of state as a primary meaning component. Therefore, verbs with the same syntactic possibilities as the verb "stuff" are Ground-Alternating verbs which denote basic change-of-state meanings. There are two subclasses of Alternating verbs that denote basic change-of-state meanings: One is a "stuff"-class (paint, wrap, cram, stuff, and jam), the other is a "load"-class (load, pack, and stock).

Up to now we have seen how PP omission can be used to test the basic meanings of Alternating verbs. We might, however, wonder why PP omission can be used to test these basic meanings. I assume that if a verb is a basic Figure verb, then the Figure argument should be represented in its syntactic structure. In contrast, if a verb is a basic Ground verb, then the Ground argument should be represented in its syntactic structure. Therefore, Figure-Alternating verbs only allow the omission of the Ground argument, whereas Ground-Alternating verbs only allow the omission of the Figure argument. Table 1 summarizes semantic classes for Alternating verbs in English.²

² Note that I used the name "pile"-class to represent all subclasses of Figure-Alternating verbs in English (e.g., "spray", "scatter", "smear", and "pile"-classes), and I used the name "stuff"-class to represent all subclasses of Ground-Alternating verbs in English (e.g., "stuff" and "load"-classes).

Table 1: Two Semantic Classes for Alternating verbs in English

Syntactic Classes	Semantic Classes in English
"pile"-class (Figure-Alternating verbs)	basic manner of motion verb classes
"stuff"-class (Ground-Alternating verbs)	basic change-of-state verb classes

So far we have seen that verbs that participate in an argument alternation may be divided into two different semantic classes in English, due to the syntactic criterion, a PP-omission test. In section 3, I will show the syntactic patterns of Korean verbs that correspond to English Alternating verbs.

3 Semantic Classes for Korean Verbs counterparts to English Alternators

3.1 Korean Verbs counterparts to English Alternators

In this section, let us examine the syntactic pattern of Korean verbs that correspond to English Alternating verbs.

Interestingly, Korean counterparts to English Alternating verbs are divided into two syntactic subclasses: One subclass of Alternating verbs in English corresponds to Non-alternating Figure verbs in Korean, whereas the other subclass of Alternating verbs in English corresponds to Alternating verbs in Korean. More specifically, Korean counterparts to the "stuff" subclass of English Alternating verbs are syntactic Alternators in Korean, as shown in (7) and (8). Verbs in this class include *myewuta* 'cram/pack', *chaewuta* 'stuff', *kamta* 'wrap', *chilhata* 'paint/brush', *paluta* 'spread/smear', and *munciluta* 'rub'.³

"Stuff" -class in Korean: Alternating verbs

- (7) a. Yumi-ka ccem-ul ppang-ey pal-lass-ta.
 Nom jam-Acc bread-Loc smear-Past-Dec
 'Yumi smeared/spread jam on the bread.'
- b. Yumi-ka ppang-ul ccem-elo pal-lass-ta.
 Nom bread-Acc jam-with smear-Past-Dec
 'Yumi smeared/spread the bread with jam.'
- (8) a. Yumi-ka peinte-lul pyek-ey chilha-yess-ta.
 Nom paint-Acc wall-Loc paint-Past-Dec
 'Yumi painted paint on the wall.'
- b. Yumi-ka pyek-ul peinte-lo chilha-yess-ta.
 Nom wall-Acc paint-with paint-Past-Dec

³ I examined grammatical judgments by native speakers of English and Korean for 20 locative verbs selected from Levin's (1993) list of locative verbs (see Kim & Landau 1997).

'Yumi painted the wall with paint.'

Second, Korean counterparts to the "pile" subclass of English Alternating verbs are syntactically Non-alternating Figure verbs, as shown in (9-10). Verbs in the "pile"-class, which are Alternating verbs in English but Non-alternating Figure verbs in Korean, include *ppulita* 'spray/sow', *cuiphata* 'inject', *thwikita* 'spatter/splash', *ssahta* 'pile/heap', *sitta* 'load', *ceocanghata* 'stock', and *ssata* 'pack'.

"Pile"-class in Korean: Non-alternating Figure verbs

- (9) a. Yumi-ka chaek-ul chaeksang-ey ssa-ass-ta.
 Nom book-Acc table-Loc pile-Past-Dec
 'Yumi piled books on the table.'
- b. *Yumi-ka chaeksang-ul chaek-elo ssa-ass-ta.
 Nom table-Acc books-with pile-Past-Dec
 'Yumi piled the table with books.'
- (10) a. Yumi-ka mwul-ul pyek-ey ppuli-ess-ta.
 Nom water-Acc wall-Loc spray-Past-Dec
 'Yumi sprayed water on the wall.'
- b. *Yumi-ka pyek-ul mwul-lo ppuli-ess-ta.
 Nom wall-Acc water-with spray-Past-Dec
 'Yumi sprayed the wall with water.'

I have shown that Korean counterparts to English Alternating verbs are divided into two syntactic subclasses, Non-alternating Figure verb and Alternating verb classes. Recall that, under Pinker's (1989) classification, Alternating locative verbs in English may be divided into two syntactic subclasses, the Figure-Alternating verb class ("pile"-class) which has a primary manner of motion meaning, and the Ground-Alternating verb class ("stuff"-class) which has a primary change-of-state meaning. An important point to notice is that Korean counterparts to the class of Figure-Alternating verbs ("pile"-class) in English appear to be Non-alternating Figure verbs, whereas Korean counterparts to the class of Ground-Alternating verbs ("stuff"-class) in English appear to be Alternating verbs.

Therefore, we can make the following generalizations for Korean verbs that correspond to English Alternating verbs:

- (11) a. English Alternating verbs which have a primary manner of motion meaning are limited to Figure syntax in Korean
- b. English Alternating verbs which have a primary of change-of-state meaning allow Ground-frames as well as Figure-frames in Korean.

In the following section, I will examine whether all Korean verbs that correspond to English Alternators follow the generalizations given in (11).

3.2 Remaining Puzzles

Assuming that Pinker's classification of basic Figure verbs and basic Ground verbs is essentially accurate, let us consider the question of whether in Korean verbs that correspond to English Alternators follow the proposed generalizations in (11). Pinker (1989: 126-127) suggests six narrowly defined classes of Alternating verbs: four classes of Figure-Alternating verbs, which include the "smear"-class, the "spray"-class, the "scatter"-class, and the "pile"-class, and two classes of Ground-Alternating verbs, which include the "stuff"-class and the "load"-class, as repeated in Table 2:

Table 2: Summary of Pinker's (1989: 126-127) Classification in English

Figure-Alternating verb classes	Ground-Alternating verb classes
(1) "pile"-class: pile, stack, heap	(1) "stuff"-class: stuff, cram, jam, wrap
(2) "spray"-class: spray, sprinkle, splash	(2) "load"-class: load, stock, pack
(3) "scatter"-class: scatter, sow	
(4) "smear"-class: spread, smear, paint, rub	

Let us first consider the classes of Figure-Alternating verbs in Korean. The first class of Figure-Alternating verbs is the "pile"-class. Since the Korean verb *ssahta* can correspond to all of *pile*, *heap*, and *stack* in English, the "pile"-class in Korean includes only the verb *ssahta*. According, the "pile"-class in English corresponds to a Non-alternating Figure verb in Korean. The second class of Figure-Alternating verbs is the "spray"-class. Verbs of the "spray"-class in Korean include *ppulita* 'spray/sprinkle', *cuiphata* 'inject', and *thwikita* 'splash/spatter', and they are also Non-alternating Figure verbs in Korean. The third class of Figure-Alternating verbs is the "scatter"-class. Note that since the single Korean verb *ppulita* corresponds to all of *spray*, *sprinkle*, *scatter*, and *sow* in English, Korean does not seem to have specific verbs corresponding to the "scatter"-class in English. The fourth class of Figure-Alternating verbs is the "smear"-class. Verbs of the "smear"-class include *paluta* 'smear/spread/dab', *chilhata* 'paint/brush', and *munciluta* 'rub'. They are Figure-Alternating verbs in English and are also syntactic Alternators in Korean.

According to the generalization in (11a), we expect that verbs of all Figure-Alternating verb classes in English should correspond to Non-alternating Figure verbs in Korean, because they have a basic manner of motion meaning. Among four subclasses of Figure-Alternating verbs, verbs of the three classes, such as the "pile", the "spray", and the "scatter"-classes, follow the generalizations in that they are Non-alternating Figure verbs in Korean. Nevertheless, verbs of the "smear"-class do not follow the generalizations in that they are syntactic Alternators in Korean.

Let us next consider the classes of Ground-Alternating verbs. The first class of Ground-Alternating verbs is the "stuff"-class. Verbs of the "stuff"-class, which are Ground-Alternating verbs in English, correspond to Alternators in Korean. Verbs of this class in Korean include *meywuta* 'cram/pack', *chaywuta* 'stuff', and *makta* 'wad/stuff'. The second class of Ground-Alternating verbs is the 'load'-class. Verbs of the 'load'-class, which are Ground-Alternating verbs in English, correspond to Non-alternating Figure verbs in Korean. Verbs of this class in Korean include *sitta* 'load', *ceocanghata* 'stock', and *ssata* 'pack'.

According to the generalization in (11b), we expect that both verbs of the "stuff"-class and the "load"-class should correspond to Alternators in Korean, because they have a basic change-of-state meaning. Nevertheless, verbs of the "load"-class do not fit into the generalizations in that they are Non-alternating Figure verbs in Korean.

In sum, there are two classes that do not follow the two generalizations I proposed. The "smear"-class, which is defined as one of subclasses of Figure-Alternating verbs in English, corresponds to syntactic Alternators in Korean. The "load"-class, which is defined as one of subclasses of Ground-Alternating verbs in English, corresponds to Non-alternating Figure verbs in Korean. Therefore, we are now left with the problem of explaining why verbs of the "smear"-class and the "load"-class do not fit into the proposed generalizations in (11).

In the next section, I will re-examine Pinker's PP-omission and revise his classifications, in order to explain these remaining problems. In addition, I will introduce Jackendoff's (1993) account for Alternating verbs in English.

4 Accounting for Remaining Puzzles

4.1 Revising Pinker's Classification for Korean Verbs

In the previous section, we found that there are two subclasses of verbs that do not fit the generalizations in (11): One is the "smear"-class, and the other is the "load"-class. To find a possible solution to these remaining puzzles, I re-examine Pinker's classification of basic Figure verbs and basic Ground verbs in this section.

Let us first consider verbs of the "load"-class. According to Pinker's classification, verbs of the "load"-class are Ground-Alternating verbs in English, based on evidence from PP omission plus his own intuition. For example, Pinker (1989: 125) notes that "he loaded the gun sounds like a complete thought, whereas *he loaded the bullets* is grammatical but feels like a truncated version of *he loaded the bullets into the gun*".

In contrast, Jones & Radhakrishnan (1994), Tenny (1994: 219), and a grammaticality judgment study I conducted show that the Alternating verb "load" in English is

equally acceptable without both *into/onto* and with phrases, as shown in (12):

- (12) a. John loaded the hay (into the wagon).
 b. John loaded the wagon (with hay).

As shown in (12), the Alternating verb "load" shows optionality of both the Figure and Ground arguments in both syntactic frames. The question we might raise is whether we should follow more subtle intuition, in the case of verbs where both arguments are optional. If so, how can this intuition be justified? Pinker has provided no theoretical or experimental basis for anyone to prefer his intuitions in particular.

In addition, the Alternating verb "pack" shows the same syntactic possibilities as the Alternator "load", as in (13).

- (13) a. John packed books (into the box).
 b. John packed the box (with books). (Pinker 1989: 38)

To take another example, the Alternating verb "spray" in English shows the same syntactic possibility as the Alternating verb load in that both Figure and Ground arguments are optional, as shown in (14):

- (14) a. John sprayed the paint (onto the wall).
 b. John sprayed the wall (with paint).

The example in (14) shows that both Figure and Ground arguments are optional in both syntactic frames of the Alternating verb spray. However, Pinker classifies the Alternating verb spray as a Figure-Alternating verb based on evidence from PP omission and his own intuition.

An important point is that, although the Alternating verbs "load" and "pack" show the same syntactic patterns as the Alternating verb spray in that both Figure and Ground arguments are optional, Pinker (1989) classifies the Alternating verbs "load" and "pack" as Ground-Alternating verbs, and the Alternating verb "spray" as a Figure-Alternating verb. If we strictly follow the PP omission test for distinguishing basic Figure verbs from basic Ground verbs, then we would expect that verbs like "load", "pack", and "spray" all should belong to the same basic class.

Let us turn our attention now to verbs of the "smear"-class, which do not follow the generalizations in (11). Under Pinker's classification, Alternating verbs like "smear", "paint", "brush", "rub", "spread", "plaster", or "dab", belong to the same narrow-range subclass in that they all describe a simultaneous contact and motion meaning, and they are Figure-Alternating verbs. If they are Figure-Alternating verbs, according

to the generalizations for Korean locative verbs, then we expect that they should correspond to Non-alternating Figure verbs in Korean. But they are syntactic Alternators in Korean.

In contrast to Pinker's classification, Jones & Radhakrishnan (1994) and the grammaticality judgement study I conducted show that there is a clear syntactic difference between Alternating verbs like "spread", "smear", and "dab" and other Alternating verbs like "rub", "paint", and "plaster": The Ground argument is optional in a syntactic frame of the Alternating verb "spread" in (15), whereas the Figure argument is optional in a syntactic frame of Alternating verbs like "rub", "paint", or "plaster", as in (16-17).

- (15) a. John spread the carpet (on the floor). Figure-frame
 b. John spread the floor *(with carpet). Ground-frame
- (16) a. John rubbed the water *(on the kittens). Figure-frame
 b. John rubbed the kittens (with water). Ground-frame
- (17) a. John painted the oil *(onto the table). Figure-frame
 b. John painted the table (with oil). Ground-frame

Pinker classifies all of the "smear"-class verbs as Figure-Alternating verbs, based on PP omission. In contrast, I suggest that some verbs like "spread", "smear", and "dab" can be defined as Figure-Alternating verbs, whereas the other verbs like "rub" and "paint" can be defined as distinguishing Ground-Alternating verbs in English, if PP omission is assumed to be the only way of telling basic meaning components from secondary meaning components.

What I have found so far is as following. First, not all of the "smear"-class listed in Pinker show exactly the same sole argument effect. For example, verbs like "spread" and "smear" show optionality of a Ground PP argument, whereas the other verbs like "paint" and "rub" show optionality of a Figure PP argument. Therefore, I classify verbs like "spread" and "smear" into a Figure-Alternating verb class, whereas I classify the other verbs like "paint" and "rub" into a Ground-Alternating verb class.

Second, verbs of both the "spray"-class and the "load"-class do not show sole argument effects at all. Jones and Radhakrishnan (1994) also claim that not all of the Alternating verbs listed in Levin (1993) show the same syntactic possibilities, in terms of PP omission or adjectival passives. For example, verbs like "load" and "spray" do not show sole argument effects (e.g., John loaded the hay/ John loaded the wagon) and allow adjectival passives with both Figure and Ground arguments (e.g., loaded hay/a loaded wagon). In contrast, other verbs like "pile", "scatter", and "spread" show sole

argument effects (e.g., John piled the books/*John piled the shelf) and show the restrictions on the adjectival passive (e.g., piled books/*a piled shelf and the scattered seeds/*scattered land).

I suggest that Alternating verbs in English can be classified into three classes: a Figure-Alternating verb class, a Ground-Alternating verb class, and a pure Alternating verb class which show no preference for one argument over another, as shown in Table 3. The pure Alternators actually project into the syntax in two ways, whereas the other two classes have a basic order and a transformationally derived order.

Table 3: Revision of Pinker's semantic classification

Alternating Verbs in English	Subclasses
Figure-Alternating Verb Classes	(1) "pile"-class (2) "scatter"-class (3) "spread"-class
Ground-Alternating Verb Classes	(1) "stuff"-class (2) "paint"-class
Pure-Alternating Verb Classes	(1) "spray"-class (2) "load"-class

We now turn to the question of whether the revised classification in Table 3 may explain remaining problems that do not fit into the generalizations given in (11). Let us first consider verbs of the "load"-class. Classifying verbs of the "load"-class as Ground-Alternating verbs, according to Pinker, poses a problem for the generalizations for Korean locative verbs. Instead, I have suggested that verbs of both the "load"-class and the "spray"-class are classified into pure Alternators, which do not show sole argument effects. If we assume that these verbs are basic Figure verbs in Korean, then it would not be surprising that verbs of the load -class correspond to Non-alternating Figure verbs in Korean.

Second, Pinker classifies verbs of the "smear"-class (e.g., smear, paint, brush, rub, spread, etc.) as Figure-Alternating verbs in English. In contrast with his classification, I have suggested that they can be divided into the "spread"-class, which can be defined as a Figure-Alternating verb class, and the "paint"-class, which can be defined as a Ground-Alternating verb class. According to the revised classification, therefore, we expect that Korean counterparts to the "spread" subclass in English should be Non-alternating Figure verbs in Korean, whereas Korean counterparts to the "paint" subclass in English should be Alternators. As expected, verbs in the "paint"-class, like *chilhata* 'paint' and *munchiluta* 'rub', correspond to Alternators in Korean. Therefore, the revised classification can explain why these verbs are Alternators in Korean.

However, the "spread"-class does not seem to follow the proposed generalizations. Since the "spread"-class, which is a Figure-Alternating verb class in English by the revised classification, should correspond to a Non-alternating Figure verb, but this is

not true. The verb "spread/smear" is an Alternator in Korean. Nevertheless, there is an interesting semantic contrast between the verb "spread" in (18) and the verb "spread" in (19). The English verb spread in (18) and (19) corresponds to two different verbs in Korean, depending on the context. For example, the verb "spread" in (18) corresponds to the verb *paluta* in Korean, which can also correspond to "smear" in English, as shown in (20). In contrast, the verb "spread" in (19) corresponds to the verb *phyelchita* in Korean, as shown in (21).

- (18) a. John spread/smear butter on the bread.
 b. John spread/smear the bread with butter.
- (19) a. John spread the carpet on the floor.
 b. John spread the floor with carpet.
- (20) a. Yumi-ka peotheo-lul ppang-ey palu-ess-ta.
 Nom butter-Acc bread-Loc spread-Past-Dec
 'Yumi spread butter on the bread.'
 b. Yumi-ka ppang-ul peotheo-lo palu-ess-ta.
 Nom bread-Acc butter-with spread-Past-Dec
 'Yumi spread the bread with butter.'
- (21) a. Yumi-ka khaphete-lul patak-ey phyelchi-ess-ta.
 Nom carpet-Acc floor-Loc spread-Past-Dec
 Yumi spread the carpet on the floor.
 b. *Yumi-ka patak-ul khaphete-lo phyelchi-ess-ta.
 Nom floor-Acc carpet-with spread-Past-Dec
 'Yumi spread the floor with carpet.'

An interesting point is that a semantic contrast between the verb *paluta* in (20) and the verb *phyelchita* in (21) leads to different syntactic possibilities in Korean. For example, the Korean verb *paluta* in (20), which describes a change of shape or distribution of a moving object, allows Ground syntax as well as Figure syntax. In contrast, the Korean verb *phyelchita* in (21), which does not describe any change of shape or distribution of a moving object, is exclusively restricted to Figure syntax.

Therefore, this semantic contrast between two verbs may explain why the Korean verb *paluta* corresponding to the English 'spread/smear' allows both Figure and Ground frames, but the Korean verb *phyelchita* corresponding to the English 'spread' allows only Figure frames.

4.2 Jackendoff's (1996) Account

In the previous section, we found that there are two classes that do not follow the generalizations for Korean locative verbs: One class is the "smear"-class and the other is the "load"-class. In this section, I focus on the question of why verbs of the "smear"-class allow Ground syntax as well as Figure syntax in Korean, whereas verbs of the other Figure-Alternating verb classes are restricted to Figure syntax in Korean.

Jackendoff (1996) provides an interesting account for the asymmetry between the spray-class and the smear-class in English. Following Pinker's (1989) Figure-Alternating verb and Ground-Alternating verb classifications, he divides Figure-Alternating verbs into two subclasses, the "spray"-class and the "smear"-class, based on more subtle semantic properties of these verbs. Jackendoff suggests that although verbs of the "spray"-class and verbs of the "smear"-class, which are syntactic Alternating verbs in English, share the basic event type, process, they differ according to how the Figure argument (the moving object) is spatially distributed and the finer-grained subevent structure. For example, while verbs of the "smear"-class like "smear" and "spread" describe the spatial distribution of the Figure argument over its final location, verbs of the "spray"-class like "spray" and "splash" express the spatial distribution of the Figure argument during its travel. Accordingly, Jackendoff refers to the "smear"-class as final-distributive verbs, and the "spray"-class as path-distributive verbs. For final-distributive verbs like "smear", the agents action is continuous through the event. These verbs denote processes requiring the direct initiation and continuous participation of a causing agent, whereas path-distributive verbs like "spray" do not. In fact, water can spray or splash without landing on anything. Spraying events can continue on their own after they have been initiated by an agent, even take place entirely without an initiating agent (i.e., Water is splashing onto the wall.). The agents acting on and projecting the Figure argument, and the Figure arguments moving along the path are independent and separate events. The semantic distinction in the entailment of whether or not the Figure argument always ends up over the location, is expressed in the structural property of subevent structure of sentences.

The main point is that for path-distributive verbs like "spray", the process embedded in the event might convey more semantic salience than the property of the final state. They appear to be lexically more process-oriented in meaning than other locative verbs. In contrast, for final-distributive verbs like "smear" or "spread", the property of the final state embedded in the event might carry more semantic salience than that of the process. They appear to be lexically more change-of-state-oriented in meaning than other locative verbs. Therefore, this explains why path-distributive

verbs like "spray" and "splash" are all restricted to Figure-frames in Korean, whereas final-distributive verbs like spread and smear allow Ground frames in Korean. Furthermore, we expect that final-distributive verbs will be more likely to allow Ground frames than path-distributive verbs will across languages.

Similarly, I pointed out that a semantic contrast between the verb *paluta* and the verb *phyelchita*, which correspond to the English 'spread', leads to different syntactic possibilities in Korean. For example, since the Korean verb *paluta* 'spread/smear' describes a change of shape of a moving object, it allows Ground syntax, whereas since the verb *phyelchita* 'spread' does not entail any change of shape, it does not allow Ground syntax.

In sum, Jackendoff's (1996) distinction between path-distributive verbs and final-distributive verbs based on different semantic weight may affect syntactic possibilities in some languages like Korean, but not others like English. Therefore, this account may explain why verbs of the "spray"-class in English correspond to Non-alternating Figure verbs in Korean, and verbs of the "smear"-class in English correspond to Alternating verbs in Korean.

5 Summary

In this paper, I examined semantic classes for English verbs that participate in their argument structure alternations. In addition, I investigated the syntax and semantics of Korean verbs that correspond to English Alternators. In order to explain why some verbs counterparts to English Alternating verbs allow an argument alternation, but other verbs counterparts to English Alternating verbs do not, I revised the previous suggestion by Pinker (1989) and introduced another suggestion by Jackendoff (1996). In conclusion, in this paper I showed that two generalizations that hold for English Alternating verbs still hold for Korean verbs.

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