

Co-Event Conflation for Compound Verbs in Korean^{*}

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Abstract. Compound verbs in Korean show properties of both syntactic phrases and lexical items. Earlier studies of compound verbs have either assumed two homonymous types, i.e. one as a syntactic phrase and the other as a lexical item, or posited some sort of transformation from a syntactic phrase into a lexical item. In this paper, I show empirical and conceptual problems for earlier studies, and present an alternative account in terms of Talmy's (2000) theory of lexicalization. Unlike Talmy who proposed [Path] conflation into [MOVE] for Korean, I suggest several types of [Co-Event] conflation; e.g. [Co-Event Manner] conflation as in *kwul-e-kata* 'to go by rolling', [Co-Event Concomitance] conflation as in *ttal-a-kata* 'to follow', [Co-Event Concurrent Result] conflation as in *cap-a-kata* 'to catch somebody and go', etc. The present proposal not only places Korean compound verbs in a broader picture of cross-linguistic generalizations, but, when viewed from Jackendoff's (1997) productive vs. semi-productive morphology, provides a natural account for classifying the compounds that allow *-se* intervention from those that do not.

Keywords: Compound verb, Cognitive semantics, Lexicalization, Conflation, Categorical conversion, Semi-productive morphology

1. Introduction

Compound verbs in Korean pose interesting problems for morphosyntax and lexical semantics, in that their distribution is constrained by the interaction between morphology and syntax, which is more or less predictable from meaning. C-H Lee (2006: 129) discusses four types of compound verbs in Korean.

- (1) Compound verbs in Korean:
 - a. VV type: *ttwi-nolta* 'to run and play'
 - b. V-e-V type: *ttut-e-nayta* 'to rip off'
 - c. V-ko-V type: *mil-ko-tangkita* 'to push and pull'
 - d. V-eta-V type: *tol-ata-pota* 'to look back'

Among these four types, the V-e-V type shows certain degree of productivity depending upon kinds of preceding and following verbs, as shown in (2).

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- (2) Elements of V-*e*-V compounds (K-H Kim 1996: 3):
- a. Preceding verbs: *kal-* ‘to grind’, *kennu-* ‘to cross over’, *ket-* ‘to walk’, *kkul-* ‘to drag’, *kwulu-* ‘to roll’, *nal-* ‘to fly’, *nayli-* ‘to go down’, *noh-* ‘to put down’, *tul-* ‘to enter’, *olu-* ‘to go up’, *ttalu-* ‘to follow’, etc.
 - b. Following verbs: *kata* ‘to go’, *nohta* ‘to put down’, *mekta* ‘to eat’, *pota* ‘to try’, *oluta* ‘to go up’, *ota* ‘to come’, *cwuta* ‘to give’, etc.

Among various verbs in (2), *kata* ‘to go’ as the second verb draws our attention in terms of productivity. Some possible compounds with *kata* are listed in (3).

- (3) V-*e-kata* (K-H Kim 1996: 3): *kacyekata* ‘to take (something) and go’, *kechyekata* ‘to pass (through)’, *kwulekata* ‘to go by rolling’, *kkwulyekata* ‘to be dragged to’, *nakata* ‘to go out’, *nalakata* ‘to fly’, *naylyekata* ‘to go down’, *nemekata* ‘to go/jump over’, *takakata* ‘to approach’, *ttalakata* ‘to follow’, *ttekata* ‘to scoop up and go’, *ttwiekata* ‘to run and go’, *molyekata* ‘to go in a group’, *molakata* ‘to drive (something/somebody) into some space or situation’, *ahpsekata* ‘to go forward, to take precedence’, *olakata* ‘to go up’, *capakata* ‘to catch somebody and go’, *caphyekata* ‘to be taken to some place after being caught’, *ccochakata* ‘to follow’, *chacakata* ‘to go by searching’, etc.

These verbs are basic in form, and are very productive compared with other V-*e*-V compounds. Furthermore, these verbs are particularly important from the perspective of lexical semantics, in that they all have the meaning component of MOVE or GO which is the foundation of all motion events in Talmy’s (2000) cognitive theory of lexical semantics.

This paper aims to answer interesting questions about V-*e-kata* compounds under the framework of cognitive semantics. Is a V-*e-kata* compound a syntactic phrase or a lexical item? Does it show any properties of a phrase? Does it show any properties of a lexical item? How can we understand V-*e-kata* compounds from a general perspective of grammar? To answer these questions, I present syntactic and lexical properties of V-*e-kata* compounds in section 2, problems for C-H Lee’s (2006) categorial conversion analysis in section 3, and then my alternative proposal based on Talmy’s (2000) theory of lexicalization and Goldberg’s (1995) construction grammar in section 4. Section 5 is the conclusion of this paper, and suggests a way of applying the proposed analyses to ontology-building.

2. Syntactic and Lexical Properties of V-*e-kata* Compounds

V-*e-kata* compounds have dual faces. They show properties of both syntactic phrases and lexical items. A well-known syntactic property of V-*e-kata* compounds is the intervention of other morpho-syntactic elements. That is, such elements as a topic marker, delimiters like *-man* ‘only’ and *-to* ‘also’, plural/manner markers, and even a case marker can intervene between the V-*e* and *-kata* (K-H Kim 1996, C-S Suh 1996, C-H Lee 2006).

- (4) a. *salamtul-i kicha-eyse naylyeka-ss-ta*
 people-NOM train-from take.off-Pst-Dec
 ‘People took off the train.’
- b. *salamtul-i kicha-eyse naylye-nun-ka-ss-ta*
 TOP
- c. *salamtul-i kicha-eyse naylye-man-ka-ss-ta*
 only
- d. *salamtul-i kicha-eyse naylye-to-ka-ss-ta*
 also
- e. *salamtul-i kicha-eyse naylye-tul-ka-ss-ta*

- Plural
- f. salamtul-i kicha-eyse naylye-se-ka-ss-ta
Manner
- g. salamtul-i kicha-eyse naylye-lul-ka-ss-ta
ACC

Interestingly, *-se* intervention as shown in (4f) is not always possible. Compare the data in (4) with (5).

- (5) a. *olakata* ‘to go up’:
ola-nun-ka-ss-ta, ola-man-ka-ss-ta, ola-to-ka-ss-ta, ?ola-se-ka-ss-ta, ola-lul-ka-ss-ta
- b. *tulekata* ‘to enter’:
tule-nun-ka-ss-ta, tule-man-ka-ss-ta, tule-to-ka-ss-ta, *tule-se-ka-ss-ta, tule-lul-ka-ss-ta
- c. *kacyekata* ‘to take (something) and go’:
kacye-nun-ka-ss-ta, kacye-man-ka-ss-ta, kacye-to-ka-ss-ta, *kacye-se-ka-ss-ta, kacye-lul-ka-ss-ta

Noticing the difference between (4) and (5), K-H Kim (1996) claims that *V-e-kata* compounds that allow the intervention of *-se* are not (real) lexical compounds. To him, the possibility of *-se* intervention is a good test to show whether a *V-e-kata* compound is a syntactic phrase or a word. Kim’s analysis, however, cannot explain that the intervention of *-nun*, *-man*, *-to*, *-lul* is generally allowed for all *V-e-kata* compounds whether they allow *-se* intervention or not.

A second syntactic property of *V-e-kata* compounds is the *-ki* repetition construction (cf. C-H Lee 2006: 134).

- (6) a. salamtul-i kicha-eyse naylyeka-ss-ta
people-NOM train-from take.off-Pst-Dec
‘People took off the train.’
- b. salamtul-i kicha-eyse naylyeka-kinun nalyeka-ss-ta
- c. salamtul-i kicha-eyse naylyeka-kinun ka-ss-ta

The *-ki* repetition construction copies the entire *V-e-ka* complex to focus the verb phrase as in (6b). Crucially, the construction copies only part of the *V-e-ka* complex as shown in (6c), which clearly indicates a syntactic phrasal property of the *V-e-ka* complex

V-e-kata compounds also display properties of lexical items. First, *do-so* substitution for part of the complex is not possible, which suggests lexical integrity.

- (7) a. Inho-ka pang-ey tule-ka-ca, Mina-to pang-ey tule-ka-ss-ta
I-NOM room-into enter.then M-also room-into enter-Pst-Dec
‘Inho entered the room, and Mina also entered the room.’
- b. *Inho-ka pang-ey tule-ka-ca, Mina-to (pang-ey) tule-kulay-ss-ta
- c. Inho-ka pang-ey tule-ka-ca, Mina-to kulay-ss-ta
‘Inho entered the room, and so does Mina.’

(7c) shows that *do-so* substitution is possible only with the entire *V-e-kata* complex.

Secondly, coordinating parts of *V-e-kata* complexes is not allowed as shown in (8b).

- (8) a. Inho-nun satali-lul ola-ka-ss-ko, Mina-nun naylye-ka-ss-ta
I-TOP ladder-ACC go.up-Pst-Dec M-TOP go.down-Pst-Dec
‘Inho went up the ladder, and Mina went down the ladder.’
- b. *Inho-nun satali-lul ola-(se), (kuliko) Mina-nun naylye-(se)-ka-ss-ta
and

Finally, *-si* honorification also suggests that *V-e-kata* compounds are lexical units. According to K-H Kim (1996: 11-12), in a typical syntactic phrase of compound verbs, *-si* honorification is possible with both the preceding and the following verbs.

- (9) *sensayngnim-kkeyse emeni-lul osie mannasi-ess-ta* (syntactic phrase)
 teacher-NOM(Hon) mother-ACC come(Hon) meet(Hon)-Pst-Dec
 ‘The teacher came and met my mother.’

Unlike typical compound verb phrases, *V-e-kata* compounds allow *-si* honorification only for the second verb as shown in (10).

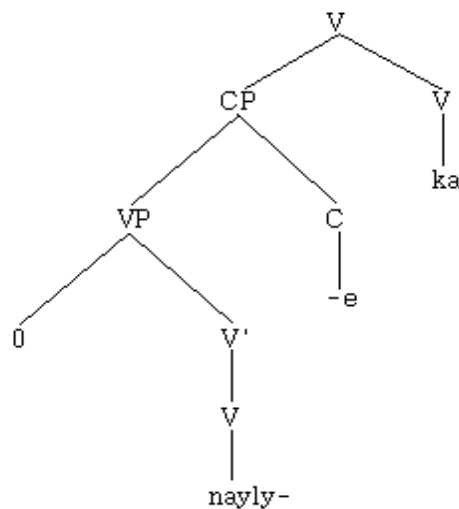
- (10) a. *sensayngnim-i chayk-ul kacieka-ss-ta*
 teacher-NOM book-ACC take.go-Pst-Dec
 ‘The teacher took the book (and was gone).’
 b. **sensayngnim-kkeyse chayk-ul kaci-si-eka-ss-ta*
 teacher-NOM(Hon) take(Hon).go-Pst-Dec
 c. *sensayngnim-kkeyse chayk-ul kacieka-si-ess-ta*
 teacher-NOM(Hon) take.go(Hon)-Pst-Dec
 d. **sensayngnim-kkeyse chayk-ul kaci-si-eka-si-ess-ta*
 teacher-NOM(Hon) take(Hon).go(Hon)-Pst-Dec

As we have discussed so far, *V-e-kata* compounds have both syntactic and lexical properties. K-H Kim (1996) analyzed *V-e-kata* compounds sometimes as syntactic phrases and other times as lexical entries based on the *-se* intervention test; but we have already seen that his analysis faces empirical problems. In the next section, we will see another important approach to *V-e-kata* compounds, i.e. categorial conversion.

3. Categorial Conversion

To explain the dual properties of *V-e-kata* compounds, C-H Lee (2006) proposes an interesting word formation rule based on categorial conversion. According to his proposal, the *V-e* part in

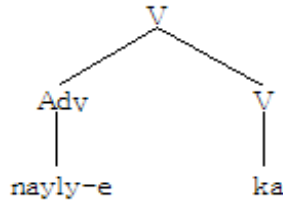
(11)



the *V-e-kata* complex begins as a CP complement to *kata* in syntax. For instance, *naylyekata* ‘to go down’ has the deep structure in (11).

Lee's word formation rule is the lexical operation that refers to the syntactic structure. Hence, the CP in (11) is categorially converted to Adv, and lexicalizes into the *V-e-kata* compound verb. (12) is the result of his categorial conversion and word formation.

(12)



Lee's proposal explains many syntactic and lexical properties of *V-e-kata* compounds, since it allows two different stages, i.e. syntactic and lexical, in the theory. But it is not clear how a lexical operation can look forward at the syntactic structure that is not available in the lexical stage. A possible solution is some sort of backward operation from syntax to the lexicon. This does not provide a natural account, either. We do not know the motivation for this dramatic operation, nor do we understand how one syntactic structure is changed into an inherently different structure after having moved back and forth from syntax to the lexicon, and from the lexicon to syntax.

4. Alternative Proposal: Co-Event Conflation for *V-e-kata* Compounds

My proposed analysis is couched on Talmy's (2000) theory of lexicalization patterns. Talmy has developed an influential lexical semantic theory under a larger framework of cognitive semantics. In his theory, the human cognitive faculty mentally reconstructs a motion event in the external world in terms of primitive notions like [Figure], [MOVE], [Path], [Ground], [Co-Event], etc. In other words, we perceive a motion event as [Figure]'s [MOVE]-ment over (= [Path]) a [Ground] with some [Co-Event].

This cognitive schema provides bases of lexicalization patterns of world languages. For instance, some languages conflate [Path] elements into [MOVE]; another group of languages show the conflation of [Co-Event] into [MOVE], and so on. In Talmy's theory, [Co-Event] is a sub-event that modifies a main event, and includes such semantic fields as Manner, Cause, Precursion, Enablement, Concomitance, Subsequence, etc. The data in (13) show [Co-Event Manner] conflation into [MOVE], and the data in (14) show famous cases of [Path] conflation into [MOVE] in Spanish.

(13) [Co-Event Manner] conflation into [MOVE]

- a. The rock rolled down the hill.
- b. I ran down the stairs.
- c. I kicked the keg into the storeroom.

(14) [Path] conflation into [MOVE] (☞ See Talmy's (2000) pp. 49-50 for details.)

- a. La botella entró a la cueva (flotando)
the bottle MOVED-in to the cave (floating)
'The bottle floated into the cave.'
- b. La botella salió de la cueva (flotando)
the bottle MOVED-out from the cave (floating)
'The bottle floated out of the cave.'
- c. La botella pasó por la piedra (flotando)
the bottle MOVED-by past the rock (floating)
'The bottle floated past the rock.'

- d. La botella pasó por el tubo (flotando)
 the bottle MOVED-through through the pipe (floating)
 'The bottle floated through the pipe.'

Now, what I propose for Korean *V-e-kata* compounds is the [Co-Event] conflation into [MOVE]. At least three types of [Co-Event] conflation can be found for *V-e-kata* compounds. The first type is the [Co-Event Manner] conflation into [MOVE], where the preceding verb denotes the manner of the main event, as shown in (15).

- (15) [Co-Event Manner] conflation into [MOVE]: *kwulekata* 'to go by rolling', *kkwulyekata* 'to be dragged to', *nalakata* 'to fly', *naylyekata* 'to go down', *nemekata* 'to go/jump over', *ttekata* 'to scoop up and go', *ttwiekata* 'to run and go', *molakata* 'to drive (something/somebody) into some space or situation', *olakata* 'to go up', etc.

Another pattern of lexicalization is the [Co-Event Concomitance] conflation into [MOVE]. Here, the two verbs in the complex denote concomitant events; i.e. they co-occur at an approximately same point of time.

- (16) [Co-Event Concomitance] conflation into [MOVE]: *kacyekata* 'to take (something) and go', *nakata* 'to go out', *ttalakata* 'to follow', *molyekata* 'to go in a group', *ahpsekata* 'to go forward, to take precedence', *ccochakata* 'to follow', *chacakata* 'to go by searching', etc.

A third possible lexicalization pattern is the [Co-Event Concurrent Result] conflation into [MOVE], where the following verb denotes an event that occurs immediately after the event denoted by the preceding verb.

- (17) [Co-Event Concurrent Result] conflation into [MOVE]: *capakata* 'to catch somebody and go', *caphyekata* 'to be taken to some place after being caught'

K-H Kim (1996) also expresses the intuition underlying the second and third generalizations by saying that the event denoted by the first verb is either a co-occurrence or an initiation of the event denoted by the second verb (K-H Kim 1996). Notice that my proposal is different from Talmy's (2000) original suggestion that assumes [Path] conflation for Korean motion verbs.

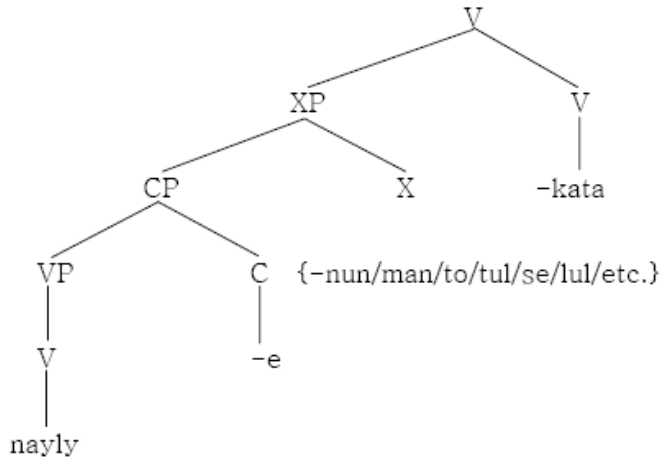
Manner conflation places the phenomena in a broader picture of cross-linguistic lexicalization patterns. But we still do not understand how to explain all the peculiar phrasal properties of *V-e-kata* compounds. In my proposal, *V-e-kata* compounds are just lexicalized items. They are in some sense the outputs of universal principles that lexicalize concepts into words. Then, how can all the phrasal properties occur? For instance, how is it possible that such elements as a topic marker, delimiters, plural/manner markers, a case marker, etc. intervene between the *V-e* and *-kata*, as discussed in section 2? We also want to know how parts of the entire complex can be repeated in the *-ki* repetition construction.

These questions are taken care of by the idea of the construction grammar (Goldberg 1995). Crucially, Jackendoff (1997), J. S. Jun (2003), and Culicover and Jackendoff (2005) have made an attractive proposal that the basic unit of lexical entries can be anything; i.e. some lexical entries are as big as words, and others are smaller or bigger than words. In this proposal, affixes, inflectional morphemes, derivational morphemes, phrases, sentences, etc. can become legitimate lexical entries. Adopting this innovative view of the lexicon, we can posit a *V-e-kata* construction in (18) as a legitimate lexical entry.

- (18) *V-e-kata* construction as a lexical entry:
 [v [CP [VP [v ____]] [C -e]] [v -kata]]

What (18) amounts to say is two things: (i) the *V-e-kata* construction is a lexical item; and (ii) this lexical item allows phrasal syntax. The lexical integrity matters only when the lexical item in question is a word. In case the lexical item in question is a construction as in our proposed theory, the lexical integrity does not matter at all, thereby allowing all sorts of phrasal syntax as shown in (19).

(19)



One remaining question is why some verbs allow *-se* intervention while others do not. As we already discussed in section 2, the acceptability of *-se* intervention varies from verb to verb; e.g. *nalye-se-kata* ‘to go down’, *?ola-se-ka-tata* ‘to go up’, **tule-se-ka-ta* ‘to enter’, **kacye-se-ka-ta* ‘to take (something) and go’. Here, my working hypothesis is that of all the [Co-Event] conflation types, [Manner] conflation is more basic, and is the target of productive morphology, whereas [Other] conflations are the target of semi-productive morphology suggested by Jackendoff (1997). Since [Manner] conflation is productive, its lexicalized output is a sure compound, thereby allowing *-se* intervention. Since [Other] conflations are not as productive as [Manner] conflation, its lexicalized output has an unclear compound status, thereby disallowing *-se* intervention in general. This hypothesis is supported by the fact that most *V-e-kata* verbs that allow *-se* intervention have the meaning component of [Manner].

5. Concluding Remarks

So far, we have studied the dual nature of *V-e-kata* compounds and some earlier proposals for the problem. My alternative proposal is based on Talmy’s (2000) theory of lexicalization patterns and Goldberg’s (1995) construction grammar. In my theory, I claim that the lexical properties of a *V-e-kata* complex are due to the fact that it is a lexicalized item that shows [Co-Event] conflation patterns, and that its phrasal properties are due to the fact that it is a construction in the lexicon that allows all sorts of phrasal syntax.

A study of lexicalization patterns is important not only for the theoretical understanding of natural language semantics, but for ontology building as well. Suppose we build a verb ontology for Spanish motion verbs as in (14). Suppose we build a verb ontology for Korean motion verbs. In the initial stage of ontology building, two separate ontologies for two languages are sufficient. But in a more elaborate stage of ontology building, we need to build some sort of general ontology to cover the two languages. One advantage of this approach is that we can include hundreds of other languages in a maximally economical way. My present study opens a direction for such study. That is, instead of building as many ontologies as the languages we study, we build a general ontology that has conceptual primitives like [Figure], [MOVE], [Path], [Ground], [Co-Event], etc. Then, cross-linguistic differences are handled by different

lexicalization patterns. This is a promising way of research, and I hope my study of Korean compound verbs guides us to a fruitful inquiry of ontological semantics in the future.

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