The Evolution of Korean Dative Markers: Its Formal and Cognitive Motivations*

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This article examines the grammaticalization process of the Korean dative markers *-eykey*, *-hanthey*, *-tele*, and *-pwokwo* based on the two motivations for grammaticalization. The first motivation, frequency, is explained by providing token frequencies of each marker in the largest historical corpus available in Korean. All four dative markers arose through the highly frequent usages of their source constructions, though several cases cannot be fully accounted for solely based on this frequency effect. The apparent exceptions are explained based on the functional nature of grammaticalization. The second motivation, the semantic-pragmatic motivation, is explained within the cognitive linguistics framework, which views linguistic meaning as a manifestation of conceptual structure. More specifically, we argue that the four dative markers arose through various semantic-pragmatic mechanisms, which stem from the conceptualization of meaning. Although the specific semantic-functional motivations for the four dative markers vary, the driving force of the motivations is deeply rooted in our conceptualization of meaning and our embodied cognition. Our semantic analysis of the grammaticalization of the dative markers is based on these conceptualization theses of cognitive semantics.

Keywords: grammaticalization, frequency, conceptual structures, metaphor, metonymy, reanalysis, image schema

1. Grammaticalization and Case Markers

Grammaticalization is a change whereby lexical items and constructions in a specific linguistic context begin to serve grammatical functions. Through

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grammaticalization, lexical items and constructions become units that carry more grammatical functions. Auxiliaries, case markers, and sentence connectives have undergone grammaticalization over time in many languages. As pointed out by many researchers, grammaticalization is motivated by various factors. It may be caused by frequent use of lexical items (or constructions). It may also be caused by some semantic and discourse-pragmatic functions such as metaphorical extension (Sweetser 1990, Heine et al. 1991), subjectification (Langacker 1999), (inter)subjectification (Traugott & Dasher 2002; Traugott 2003, 2007), analogy (Lehmann 2004), pragmatic-cognitive factors (Heine et al. 1991), and semantic reanalysis (Eckardt 2006). In order to understand the dynamic nature of grammaticalization, these two types of putative considerations should be incorporated in the analysis of grammaticalization. The purpose of this paper is to explain the evolutionary processes of the four Korean Dative Markers (hereafter DMs), *-eykey*, *-hanthey*,*-pwokwo*, and *-tele* from these two perspectives.

Grammaticalization has been observed and analyzed in various languages. The Korean language we deal with in this paper is not an exception. A significant amount of research has been done to analyze the grammaticalization phenomena particular to Korean with emphasis on various grammatical markers, connectives, honorifics, inflectional endings, and quotatives, from both synchronic and diachronic perspectives. Some representative examples include a series of works done by S-O Sohn (2002, 2006, 2007, 2008, among others) on particles/honorifics/quotatives, M-J Kim (2008, forthcoming, to appear) on locatives/the copula/psychological predicates, H-S Lee (1999, 2001, 2002) on particles/adjectives, and C Park (to appear) on honorifics, among others. Despite diverse research interests, the goal of the aforesaid works was to analyze language change observed in Korean within the realm of grammaticalization. Along the same lines as the research listed above, this paper deals with the emergence of the four Korean DMs through grammaticalization. Some of these markers were already discussed by some researchers: *-eykey* (M Kim 2008) and *hanthey* (S Choi 1993). Relatively little attention, however, has been paid to the evolution of all of these markers from their source constructions. As a result, a uniform treatment concerning these markers' emergence has not yet been discussed in depth. This paper attempts to bridge the gap left in the literature. In doing so, our discussion largely pertains to the diachronic view of grammaticalization. The first motivation, frequency, is explained by providing token frequencies of each marker found in the largest historical corpus available in Korean. The second motivation, the semantic-pragmatic motivation, is explained within the cognitive linguistics framework, which views linguistic meaning as a manifestation of conceptual structure (Langacker 1987, 1991, 1999, 2008; Croft 2000; Talmy 2000). More specifically, we propose that the four DMs arose through various semantic-pragmatic

mechanisms, which stem from the conceptualization of meaning. Although the specific semantic-functional motivations for the four DMs vary, the driving force of the motivations is deeply rooted in our conceptualization of meaning and our embodied cognition. Our semantic analysis of the grammaticalization of the DMs is based on these conceptualization theses of cognitive semantics.

Lehmann (1985) argues that the relevant question of grammaticalization is what purpose the change serves as opposed to why it exists. Considering that language activity is essentially creative, Lehmann's point is valid. The authors' earlier and shorter versions of this paper (C Park & S-k Lee 2007, 2009) analyzed the same data set that appears in this paper with emphasis mainly on the issue of frequency. The underlying assumption made in our previous proposals was that the DMs emerged through somewhat mechanical processes that account for all four DMs. The shortcomings of the previous versions of this paper are rooted in the lack of functional explanations; we simply relied on the mechanical causal explanations for the evolution of the DMs. It is always tempting to hypothesize language change based on the cause-effect relation. Many researchers (Croft 2000, Maslova 2000, among others) attest, however, that language change is so complex that it may not even be possible to fully explain why a specific change happened. In this sense, a valid approach to language change would be an attempt to identify preferred motivations and enabling factors. The authors' previous works ignored these important considerations in favor of the mechanical cause for the grammaticalization of the DMs, which was a cursory explanation of the given phenomenon. This does not mean we undermine the role of frequency in grammaticalization, but rather that we extend our previous proposal by incorporating the semantic and function changes involved in the formation of the DMs. We claim that the four DMs are evolved from specific types of constructions, and when repeated over time, underwent a series of changes. These resulted in what we currently see as the four DMs. Additionally, we attempt to pinpoint the motivations of variants and changes by closely examining the semantic and pragmatic motivations in the grammaticalization of the DMs, such as metaphorical extension, analogy, and other functional and cognitive motivations. While the role of frequency exhibits a somewhat uniform pattern in the emergence of the DMs, the functional natures behind the formation of the DMs vary. All four DM's arose through the highly frequent usages of their source constructions, though several cases cannot be fully accounted for solely based on this frequency effect. These cases will be explained functionally, different from the authors' previous works. Of course, our approach is not a novelty. Bybee et al. (1994), Sweetser (1990), Heine et al. (1991), and Croft (2000) all emphasize both the formal (structural) and semantic nature of grammaticalization. Our view is congruent with this previous research. Even if the focus of this paper is Korean only, Heine and Kuteva (2002) illustrate similar observations to deal with the formation of DMs in other languages, such

as Tamil and Chinese. In this sense, our analysis can be viewed from a universalist position, not limiting the analysis to one particular language only.

The Korean language, which exhibits salient agglutinative morphological properties, instantiates grammatical functions by function affixes attached to lexical-content morphemes. Some of these function affixes were derived from a phrase. For example, (1), which is found in a 15th century document (*Welinsekpwo*), the phrase *-uy kungey* expresses Dativity, rather than being interpreted as 'Mihwu's place' with its literal usage.[1]

(1) pwuthye-i estey mihwu-**uy** **kungey** kacolpi-si-no-ningiskwo?
Buddha-NOM how Mihwu-**GEN there** compare-HON-CONN-CONN
'How can Buddha compare (me) to Mihwu?'
(1459, Welinsekpwo)

The phrase then underwent grammaticalization, becoming a function affix. Although this phrase originally had a solid content meaning, the meaning of the phrase disintegrated over time to become a function affix. After undergoing grammaticalization, the newly acquired affix followed Korean morphotactics by affixing itself to nominal stems. By examining all available documents from Sejong Balanced Corpus, we reach the conclusion that all of the Korean DMs are formed through this process, which is a combination of phonological and semantic reduction in terms of Bybee et al. (1994). Phonological reduction in this case is easily noticed. The genitive marker *-uy* and *kungey* 'there' are combined, and the phonologically reduced form *-eykey* arose. Semantic reduction is also observed in (1). The original meaning of *kungey* 'there' disappeared.

The question we attempt to answer here is how [*uy kungey*] 'GEN there' became a DM. The first motivation for this grammaticalization is the frequency of the construction [GEN *kungey*], while the other motivation is cognitive-functional. Grammaticalization is motivated by speaker-hearer interactions and can be interpreted as a process that has problem solving as its main goal (Heine et al. 1991: 29). Problem solving is often achieved by conceptualizing one notion in terms of another one, and conceptualization is the result of our cognitive process. In this regard, understanding grammaticalization as problem solving necessarily requires us to understand the process cognitively. Under this assumption, for example, we argue that *-eykey* emerged through metonymic and metaphorical shifts in conjunction with other cognitive processes. The details of our argument for *-eykey* will be provided in section 3.

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[1] The abbreviations of the interlinear glosses are as follows: ACC: Accusative, ADN: Adnominalizer, ADVZ: Adverbializer, AUX: Auxiliary, COMP: Complimentizer, CONJ: Conjunction, CONN: Connetive, COP: Copula, DAT: Dative, DCL: Declarative, FUT: Future, GEN: Genitive, HON: Honorific, IMP: Imperative, LOC: Locative, NML: Nominalizer, NOM: Nominative, PRS: Present, PST: Past, Q: Question, RETR: Restrospective, TOP: Topic.

In the remainder of this paper, we account for the emergence of the four DMs from these two motivations. The organization of this paper is as follows. Section 1 is an introduction to this paper. The scope of the data is explained in section 2. From section 3 to section 5, we illustrate our analysis of the four DMs. Section 6 discusses other remaining issues concerning the grammaticalization of the four DMs. Section 7 summarizes our findings and discusses the implications of these findings.

2. The Scope of the Data

All of the data for this paper were extracted from Sejong Balanced Corpus (SBC), which was originally built as part of the 21st century Sejong Project funded by the Korean government. SBC contains documents from the 15th century through the 20th century. The corpus is open to the public for educational purposes. Unfortunately, the size of the corpus is relatively small with only 16.5 million syllables (6,987,235 words). The corpus we used contains fully normalized texts despite its lack of morpho-syntactic information. The method we employed is straightforward. We followed four steps. First, after text-normalization, every possible allo-form (morph) for each DM was manually listed. Next, the forms were searched with the help of a search engine to find their collocations. Then the searched forms were categorized based on constructional difference. Finally, text and type frequencies were checked using the tools available for corpus users.

In Modern Korean, the four forms are all used as nominal affixes to express Dativity. (2) and (3) illustrate some typical uses of *-eykey* and *hanthey*. (4) and (5) show the examples of *-tele* and *-pwoko*. All of the DMs are bound nominal affixes in Modern Korean as illustrated in (2-5). All of them are also compatible with animate nominals. However, *-eykey* and *hanthey* behave differently than *-tele* and *-pwoko* in their selectional restrictions. While *-eykey* and *hanthey* can be used with a large set of verbs such as intransitive motion verbs, ditransitive verbs, and some transitive verbs, *-tele* and *pwoko* are used with a very limited set of verbs such as *mal-ha-ta* 'say' or verbs with a similar meaning.

(2) emma-ka na-**eykey** senmwul-ul cwu-ess-ta.
mother-NOM I-**DAT** gift-ACC give-PST-DCL
'Mother gave me a gift.'

(3) emma-ka na-**hanthey** senmwul-ul cwu-ess-ta.
mother-NOM I-**DAT** gift-ACC give-PST-DCL
'Mother gave me a gift.'

(4) ku-ka na-**tele** malha-ess-ta.
he-NOM I-**DAT** say-PST-DCL
'He talked to me.'

(5) ku-ka na-**pwokwo** malha-ess-ta.
he-NOM I-**DAT** say-PST-DCL
'He talked to me.'

In Middle Korean, the fully grammaticalized form *-eykey* is already attested, though the source construction for *-eykey*, [*oy kungey*] 'GEN there' was being used at the same time. The source construction was still used as a phrase without semantic bleaching to mean 'somebody's place' as in (6). The old form of *hanthey* was *hontuy* 'same.place', and it was used as a free morpheme (word) as in (7). The source construction for *-tele* was [*lol toli-e*] 'ACC accompany-Affix',as illustrated in (8). (9) illustrates the source construction of *-pwokwo* in the 15th century: [*-olpwo-kwo*] 'ACC see-Affix'.

(6) nay homa cwungsayng-**oy kungey** culkep-un kes-ul pwosiho-toy
I already people-**GEN** **there** pleasant-AND thing-ACC offer-CONN
'I already offered good things to the people.'
(1447, Sekposangcel)

(7) nay … canay **hontuy** ka-kwocye ho-ni
I you **same.place** go-DCL do-CONN
'I want to go to you.'
(1568, Letter of Lee, Ungtay)

(8) senin-i ku kaksi-**lol** **toli-e**
Senin-NOM that lady-**ACC** **accompany-CONN**
selpepho-te-si-ni
preaching-RETR-HON-CONN
'Senin taught the lady.'
(1459, Welinsekpwo)

(9) nay … kil nye-l hon salom-**ol** **pwo-kwo** mwul-wotoy
I road pass-CONN one man-**ACC** **see-COMP** ask-CONN
'I saw one man walking and asked him.'
(1459, Welinsekpwo)

In order to compare the 15th century usages of Dativity with modern usages, representative samples of data are shown below in (10-13). As illustrated in

(10a), Dativity was originally (15th century) represented as [Genitive + *there*]. During this period, a fused form (10b) concomitantly came into existence. By morpho-syntactically combining the two independent lexical categories, the results yielded the new function affix, *-oykey*, which was slightly different phonologically from the modern form *-eykey*. (10c) is its Modern Korean outcome. (11a) and (11b) show a similar process, where *hontoy* (an old form of *-hanthey*) was used as a morphologically free content morpheme in the 15th century, but underwent a change to become a bound function morpheme. Different from *-eykey* and *-hanthey*, both *-pwokwo* and *-tele* emerged from verbal bases. As shown in (12a) and (12b), *-tele* emerged from the verb *tolita* 'accompany'. The source for the DM *-pwokwo* is traced back to the verb *pota* 'see' as illustrated in (13a) and (13b).

(10) *-eykey*

a. yong-**oy** **kungey**-n is-yo-li-la.
dragon-**GEN** **there**-CONN COP-CONN-FUT-DCL
'There is something for the dragon.'
(15C, Welinsekpwo)

b. yele yong-**oykey** nunghi koho-no-nila.
several dragon-**DAT** well inform-PRS-DCL
'(We) are able to inform several dragons of (the situation).'
(15C, Welinsekpwo)

c. na-**eykey** twon-i iss-ta.
I-**DAT** money-NOM exist-DCL
'There is money for me/I have money.'
(Modern Korean)

(11) *-hanthey*

a. twu pwuthyey **hontoy** anc-a kye-si-kenul
two Buddha **together** sit-CONN exist-HON-CONN
'Two Buddhas sit down (there) together.'
(15C, Welinsekpwo)

b. na-**hanthey** twon-i iss-ta.
I-**DAT** money-NOM exist-DCL
'There is money for me/I have money.'
(Modern Korean)

(12) *-tele*

a. camwo-i na-**lol** **tol(i)-ey** kiphachen-ul
mom-NOMI-**ACC** **accompany-CONN** Kiphachen-ACC

pwoy-sowol
show-HON

'Mother will bring me and show (me) Kiphachen.'
(15C, Nungemkyengenhay)

b. ku-ka na-**tele** malha-ess-ta.
he-NOM I-**DAT** say-PST-Dec
'He talked to me.'
(Modern Korean)

(13) *-pwokwo*
a. hon salom-**olpwo-kwo** mwul-wotoy
one person-**ACCsee-COMP** ask-CONN
'(Somebody) saw one person and asked him.'
(15C, Welinsekpwo)

b. ku-ka na-**pwokwo** mwul-ess-ta.
he-NOM I-**DAT** ask-PST-DCL
'He asked me.'
(Modern Korean)

As shown above, Modern Korean DMs and their sources in 15th century documents differ greatly in their forms and meanings. The stages of change between the 15th and early 20th centuries are the subject of our analysis for the remainder of this paper. We will begin our discussion with *-eykey* in section 3.

3. Case Study 1: *-eykey*

The DM *-eykey* is a fully grammaticalized form from the construction [*-uy kungey*] 'GEN there'. As shown in (14) and (15), the old form of *-eykey*,[*-oy kung-ey*], is used with semantic transparency in a 15th century document with the interpretation [GEN Place]. Here, both *kungey* and *kekuy* refer to specific places. Over time, however, the forms *kungey* and *kekuy* underwent semantic reduction to function only as function words/morphemes.

(14) canay-**s** **kuy** phwunglyuho-non kaksi-lol tasenyong-**oy**
you-**GEN** **there** throw.a.party-CONN lady-ACC allSenyoug-**GEN**

kungey ka (-a) phwunglyuho-la
there go (-CONN) throw.a.party-DCL

'Let the girls who are at your place play at Senyong's place.'
(1447, Sekpwosangcel)

(15) cangssi nilwo-toy homa mayngssi-**uy** **kekuy** kiyakho-ni
Cangssi say-CONN already Mayngssi-**GEN there** promise-CONN
'Mr. Chang said that he already made a promise to Mr. Mayng.'
(1514, Swok-Samkanghayngsildwo)

As noted by many researchers (Bybee 1995, Bybee & Hopper 2001, Pinker & Jackendoff 2005, Goldberg 2006), not only lexical items but also patterns or constructions are stored if they are sufficiently frequent. Our findings show that emergence of Korean DMs is the grammaticalization of constructions. Frequent usage of the source construction yielded the grammaticalized form. In other words, the source construction [GEN + *kungey* 'there'] was frequently used and the construction was grammaticalized. The role of frequency for the case of *-eykey* is discussed in section 3.1.

3.1. The Frequency of *-eykey* (*-uykey*)

The role of frequency has been discussed by many scholars in the literature on grammaticalization (Givón 1979, Krug 2000, Bybee 2003, Bybee & Hopper 2002, among others). In dealing with the ongoing grammaticalization of several discourse markers in Korean, the role of frequency has been extensively discussed by S-O Sohn in her series of works on grammaticalization (S-O Sohn 2007). Sohn claims that Korean utterance-final marker *-canh(a)*, for instance, is derived from a phonological contraction of *–ci anh(a)*. Sohn argues that the frequent use of *-ci anh(a)* yielded phonological reduction and functional shift, eventually leading to a new discourse marker.[2] A similar phonological contraction is observed in the case of *-eykey*. In the grammaticalized form, the contracted form is used, while the full form is used only in the phrasal form. After undergoing the phonological contraction, the frequency of *-eykey* has continuously increased, which is illustrated in Table 1. There are 113 (198 including phonological variations) tokens of the *-eykey* (*-uykey*) form in 15th century documents. Among these, only 13 occurrences are found with the meaning 'something's place', which were still used as phrases. We call this phrasal use of *-uykey* Pre-Gram (Pre-Grammaticalized form) in Table 1. The other 110 occurrences of *-uykey* (185, including phonological variations) are all fully grammaticalized forms that no longer exhibit phrasal properties. There is no intermediate stage found between Pre-Gram and Full-Gram (fully grammaticalized forms). If the grammaticalization was in progress during the 15th century, the intermediate stage between the Pre-Gram form and the Full

[2] The main point of S-O Sohn (2007) is to argue that the emergence of the new discourse marker *-canha(yo)* was motivated by multiple factors such as frequency, prosody, intersubjectification, etc. We will not introduce motivations other than frequency argued by S-O Sohn (2007) here.

Table 1. The Frequency of *-eykey*

	15th	16th	17th	18th	19th	20th
Pre-Gram	13	0	0	0	0	0
Full-Gram	110 (185)	332	483	2,444	7,934	6,217

Gram form would be expected. However, no occurrence of the intermediate forms is attested in the 15th century documents. We thus claim that the grammaticalization of *-eyeky* started very early, before the 15th century. From the 16th century, the phrasal usage had completely diminished. Since then, the frequency of *-eykey* as a DM has continuously increased.

The high frequency of *-eykey* supports the view that the more grammaticalized lexical items are, the more frequently they are used. Since *-eykey* is the item that first underwent grammaticalizaion among the four DMs, it is not surprising that the frequency of *-eykey* is significantly high, compared to other DMs which will be discussed later. Although the frequency explains the emergence of *-eykey* relatively well in this case, frequency alone cannot be used to fully explain the grammaticalization of *-eykey*. In fact, frequency by itself cannot fully explain the grammaticalization process in any sense. Bybee et al.'s (1994: 4) seminal work shows that changes in the frequency of use of a form almost certainly indicate changes in the conventional meaning and/or discourse function. Bybee (1985) also argues that semantic relevance governs the mental representation of the organization of morphological paradigm. That is, the more semantically related the forms are, the closer they are linked to each other morphologically. Bybee's work shows that semantic relevance is an important consideration to explain the motivation behind grammaticalization. Naturally, this is something to consider in the explanation of the evolution of the DMs. The semantic relevance to the grammaticalization of *-eykey* is discussed in the following subsection.

3.2. Meaning and Function: Metaphorical Extension and the Reference Point

Semantics is the other motivation for the grammaticalization of the DM. Grammaticalization is a consequence of human creativity (Heine et al. 1991). When speakers develop new expressions for new grammatical concepts, they tend to conceptualize abstract domains of cognition in terms of metaphors. As noted by Heine et al. (1991: 48), language evolves through metaphorical extension. The extension, however, is not random. Rather, it tends to follow some hierarchy. Heine et al.'s (1991: 48) hierarchy to introduce the notion of metaphorical extension is illustrated in (16).

(16) Person > Object > Activity > Space > Time > Quality [State]

The formation of the Korean DM *-eykey* seems to have undergone the metaphorical extension process either from Process (Activity) to Space or from Space to Time (or Quality). The DM source construction for *-eykey*, [*uy kungey*] was used in the context of location (Space) to mean 'there'. Later, the construction became a grammatical marker that denotes non-spatial abstract properties. These non-spatial abstract properties are on a par with Heine et al. Quality in the hierarchy.

This metaphorical extension approach, however, faces two potential problems. One is from a general consideration when we deal with language change, while the other is particularly related to the case of *-eykey*. First, the hierarchy does not include the intermediate stages in grammaticalization pathways, as pointed out by Croft (2000: 161). Considering that language change is not a clean-cut development of a system, the metaphorical extension approach needs to be refined. The second problem is related to the notion of semantic relevance. The metaphorical extension considered above applies only to the locational noun *kungey* 'there'. Note, however, that the whole construction [GEN *kungey*] underwent grammaticalization, not just *kungey* 'there'. If we directly apply the metaphorical extension hierarchy here, we ignore the semantic relevance among the items in the source construction [NP GEN *kungey*]. This type of metaphorical extension analysis fails to capture the semantic relevance among the NP, the Genitive marker, and *kungey* 'there'. This does not mean that the hierarchy is not correct. This means the metaphorical extension hierarchy provided in (16) only illustrates the general tendency of language change. To provide a finer-grained account of grammaticalization and language change in general, this general hierarchy must be understood in conjunction with other cognitive motivations.

To fill this gap, we could account for the grammaticalization of *-eykey* based on general human cognition by adopting the notion of "reference point" from cognitive linguistics. A reference point usually functions as an access point to establish a dominion in which the appropriate head noun can be selected. In English, possessors function as a reference point (Langacker 1999). For example, the speaker focuses the hearer's attention on *John* in *John's watch*. *The watch of John* construes the situation differently, by putting the attention on the *watch*, not *John*. Conceptually, the reference point is the focus of attention of the hearer, and the selection of the head noun is guided by the reference point. In this sense, the reference point is tightly bound with the head noun. Based on this semantic property of the possessive construction, we argue that this conceptual bounding motivated the initial step of grammaticalization of *-eykey*. Due to this conceptual bounding, the genitive marker *-uy* morphologically fused with *kungey*. Our argument is on a par with the position supported by

Hopper and Traugott (2003: 76).

> Meaning changes and the cognitive strategies that motivate them are central in the early stages of grammaticalization and crucially linked to expressivity.

Our proposal is to say that some kinds of meaning changes, motivated by this cognitive property of the genitive construction, were the first step in the grammaticalization of *-eykey*. The source construction [NP GEN *kungey*] was first semantically reanalyzed due to the conceptual affinity between the genitive marker and *kungey*. That is, [NP GEN *kungey*] was reanalyzed from [NP + Possession + Place] to [NP + [Place-Possession]]. This semantic reanalysis initially motivated the functional shift of [GEN *kungey*] followed by structural reanalysis and analogy, which are the subjects of section 4.1. It is not difficult to trace a conceptual connection between possession and location. In fact, many languages express the notion of possession in terms of location. In English, the possessive expression *The mall has three parking lots* may also be expressed as *There are three parking lots in (at) the mall.* In other languages such as Japanese, Korean and Russian, a similar phenomenon is observed. In Russian, for example, *John has two children* is often expressed as *U Johna yest dyva dyetey*, which means 'At John's presence are two children'. Korean also shows a similar pattern. In Korean, the sentence *John has two children* can be expressed as *con-eykey twu atul-i iss-ta*, which literally means 'At John, there are two sons'. This affinity between the two different notions might have initially enabled the semantic reanalysis of the construction [GEN *kungey*]. In other words, the conceptual similarity between the genitive marker and the locaitonal noun made the morpho-phonological fusion possible. The same observation was made by Claudi (1986: 4) and Heine (1997a: 89, 1997b: 50) based on the prior observation of Clark (1978) and Lyons (1967, 1977). According to these scholars, possession often belongs to the same general category as location. The assumption of these scholars is that possessive constructions are historically related to locative constructions. Based on this quasi-universal nature, Heine (1997a, b) attempts to analyze a location schema as one of the source schemas from a cognitive linguistics perspective. The detailed analysis of Heine (1997a, b) is beyond the scope of this paper. However, Heine's analysis is clearly on a par with our analysis of the motivation of the source construction's grammaticalization.

This explanation can be further supported by the presupposition effect of the possessive marker. In order to analyze the gerundive nominalization in English, Portner (1992) observes that the English possessive construction presupposes "existence" (of an event). For instance, (17) and (18) have different presuppositions, which are syntactically expressed in their number agreement pattern. Most native speakers treat *John coming* and *Mary leaving* in (17) as a

singular event. By contrast, *John's coming* and *Mary's leaving* is often treated as a plural event as in (18), where the plural form of the verb is used.

(17) John coming and Mary leaving bothers me.

(18) John's coming and Mary's leaving bother me.

The conjoined NP in (18) is treated as plural because *John's coming* and *Mary's leaving* are treated as two different events. The interpretation of the two different events are motivated by the possessives *John's* and *Mary's*. *John's* presupposes one event, while *Mary's* presupposes the other. This individuated reading of the conjoined NP sheds light on the nature of the possession. The possessive construction iconically reflects the relation between the possessor and the possessee. In other words, the mental processing from *John* to *coming* is bridged by way of the possessor in (18). Because of the possessive marker, *John* and *coming* are tightly connected to form one event, as are *Mary* and *leaving*. A similar example is found in Korean. The relation between *John* and *swuhak-ul kongpwuha-m* 'studying mathematics' in (19) is tighter than that of *John* and *swuhak-ul kongpwuha-m* in (20). (19) thus can be interpreted as a somewhat lasting event such as 'John is majoring in mathematics', making 'studying mathematics' a type of *John*'s property. Such an interpretation seems infelicitous in the case of (20).

(19) na-nun con-uy swuhak-ul kongpwuha-m-ul an-ta.
I-TOP John-GEN math-ACC study-NML-ACC know-DCL
'I know John's studying mathematics.'

(20) na-nun con-i swuhak-ul kongpwuha-m-ul an-ta.
I-TOP John-NOM math-ACC study-NML-ACC know-DCL
'I know John studying mathematics.'

The natures of the possessive construction in English and Korean clarify the evolution of *-eykey* from its source construction [*uy kungey*]. As a mental bridge, the genitive marker was tightly bound to its head noun *kungey* in the speaker's conceptual structure. This conceptual closeness of *-uy* and *kungey* was realized as an iconic closeness by shifting the morpheme boundary. The formal reanalysis from [*uy kungey*] to *-eykey* is thus not only motivated by the frequency, but also by the speaker's (and hearer's) mental processing. Interestingly, a very similar reanalysis pattern is observed in Samoyedic, a Uralic language. Mikola (1975 – recited from Hopper and Traugott 2003: 66) describes that the locative particle *nîn* 'onto' in Samoyedic emerged from a construction [Noun-GEN Locational.Noun] through reanalysis. For instance, Proto-Samoyedic had the

structure *mäto-n* + *in* 'tent-GEN + TOP'. Later, the genitive marker *-n* is reanalyzed and the morpheme boundary shifted to yield the structure *mäto-nîn* 'onto the tent' in Samoyedic. Even though it is unclear whether Mikola reached a similar cognitive-based conclusion similar to ours, the reanalysis of the genitive marker in Samoyedic seems to be accounted for identical to the emergence of *-eykey* on the grounds of the speaker's (and hearer's) cognitive process and the conceptual affinity between possession and location.

4. Case Study 2: *hanthey*

The second DM we will examine is *hanthey*. As in (21), *hontoy* (the old form of *hanthey*) literally meant 'together' in the 17th century documents. Later in 19th century, *honthey* became a function affix that did not exhibit semantic transparency, as shown in (22).

(21) kimsithyek-kwa sisyeng-un syewul salom-i-ni
Kimsithyek-CONJ Sisyeng-TOP Syewul man-COP-CONN

hyengtyey **hontoy** sal-mye
brother **together** live-CONN

'Kimsithyek and Sisyeng are from Seoul (and they are) brothers (and they) live together.'

(1617, Twongsin Samkanghayngsildwo)

(22) cwisoykki-ka emi-**honthey** wa-se malho-kilol
mouse-Nom mom-**DAT** come-CONN say-CONN
'The mouse came to (his) mom, and said…'

(19C, Cengsimswohak)

Like *-eykey*, *-hanthey* (*hontuy*) is attested as a phrase to mean 'one-place' in the 15th century documents as shown in (23).

(23 = 7) nay … canay **hontuy** ka-kwocye ho-ni
I you **same.place** go-DCL do-CONN
'I want to go to the same place as yours.'

(1568, Letter of Lee, Ungtay)

In the 15th century, *hon-tuy* was used only with full semantic transparency as shown by the number of Pre-Grams in Table 2. In the 16th century documents, the phonologically altered form *hon-toy* is found within limits in its constructional usage. *Hon-toy* began to be used only in the specific construction [NP-*wa*

Table 2. The Frequency of *hanthey*

	15th	16th	17th	18th	19th	20th
Pre-Gram	262	67	202	55	11	3
Fixed Con.	0	7	10	3	0	0
Full-Gram	0	0	0	0	8	276

hon-toy V] 'NP-with one-place V', where V stands for the verbs that include *iss-ta* 'exist', *ka-ta* 'go', *o-ta* 'come'. The token frequency of this construction increased until the 17th century as illustrated by the Fixed Con row in Table 2. As a result of sufficient repetition (approximately 5% out of the total Pre-Grams), a fully grammaticalized form was first attested in 19th century documents, and began to be used as a function affix.

In early 20th century documents, the old phrasal usage of *hon-toy* becomes almost obsolete, and the fully grammaticalized form is found with extremely high frequency (276 occurrences). The intermediate stage, Fixed Con, was not observed in the 19th and early 20th documents. Just like the case of *-eykey*, *hanthey* emerged from its source construction, in which frequency played an important role.[3]

4.1. Reanalysis, Analogy, Metonymy, and Metaphor

To explain the semantic motivation, we put forward a hypothesis which accounts for the emergence of *hanthey* based on analogy. This is due to the fact that *hanthey* exhibits similarity to *-eykey* in source construction structure as well as in meaning. The relatively later emergence of *hanthey* also motivates the aforementioned hypothesis. In the 15th century, *hon-toy* 'one-place', was used with that literal meaning: one place. *Hon-toy* began to be used in a specific construction [NP-*wahon-toy* V] or [NP *hon-toy* V], where V was a motion verb such as *ota* 'come' and *kata* 'go' and the copular *iss-ta*. We claim that the limited structural context motivated a reanalysis of *hon-toy* as a locational noun. In the construction [NP *hon-toy* V], only limited types of verbs appeared. Since the verbs all require the locational information of the NP, *hon-toy* was semantically reanalyzed as a locational noun.

To account for this change more specifically, let us consider the notion of frames oft-cited in cognitive semantics (Fillmore 1975, 1982). Fillmore (1975: 124) defines frame as a system of linguistic choices that is associated with prototypical instances of scenes. Later he elaborates the notion of frame as a spe-

[3] As pointed out by one reviewer, there is an alternative analysis of the source construction of *hanthey*. The source construction we posited is [*hon-toy*] 'one-place'. We proposed that *hon-toy* became a nominal that had meaning 'together'. The review pointed out that [adnomial + noun] should be interpreted as ad adverbial. Even though the reviewer's point is valid, we cannot decide which analysis is more accurate, due to the lack of the data concerning *hanthey*.

cific unified framework of knowledge or coherent schematization of experience (Fillmore 1985: 223). For example, the [BUY] frame includes at least four frame elements: BUYER, SELLER, GOODS, and MONEY. The notion "frame" can be used to explain the motivation for the reanalysis addressed here. The V in the construction [NP-*wa hon-toy* V] or [NP *hon-toy* V] belongs to frames [MOTION] or [EXISTENCE]. Both of these frames include a referent to LOCATION, since LOCATION is an essential element for motion and existence. When the speaker uses the verb *ota* 'come', for instance, the hearer projects the [MOTION] frame. In this projected frame, the LOCATION element is included, although the element can be downplayed making its inclusion in conversation optional. This frame structure of the V used with *hon-toy* motivated the initial innovation (reanalysis). In reanalysis, the hearer understands the form to have a structure and a meaning that are different from those of the speaker (Hopper & Traugott 2003: 50). In the case of *hon-toy*, the hearer's projected frame structure motivated a different interpretation than of the speaker's. In other words, in the hearer's projected [MOTION] frame, the LOCATION element was focused, which might have been different from the speaker's intention. In the development of the DM *hanthey*, the semantic property was first modified by this process.

Though reanalysis is a very important motivation for grammaticalization, reanalysis itself does not change the surface structure immediately. The change in surface structure is achieved through analogy. In this sense, reanalysis is a precursor of analogy. While reanalysis is an innovation, analogy is a generalization. After the semantic reanalysis of *hon-toy*, the meaning of *hon-toy* was generalized modeled on the existing DM *-eykey*. The generalization occurred in two ways. First, following the morphological pattern of *-eykey*, *hon-toy* became a case affix. Second, the innovative use of *hon-toy* with the limited verbs (motion verbs and the copula) spread to other verbs. As a result, *-hanthey* began to be used in the same context as *-eykey*. A change from a (relational) noun to a case affix is not unique to Korean. Lehmann (1985) describes a universal cline for grammaticalization as in (24). Note that following this cline, *hon-toy* was interpreted as a relational noun, since its locational meaning was 'in relation to' another noun. Then it became an agglutinative case affix.

(24) Relational noun > Secondary adpositoin > Primary adposition > Agglunative case affix > Fusional case affix.

Similar to the argumentation provided here, M Kim (2008) argues that the locative marker *-eykeyse* is a grammaticalized form of *-eykey* through analogy.[4]

[4] In a similar vein, M Kim (to appear) convincingly argues that the Korean connective *siphi* 'similar to' was developed from the probability meaning of *siph* 'probable.' This analogy was modeled

According to M Kim (2008), the grammaticalization of *-eykeyse* was possible in comparison to a similar locative grammaticalization of *-eyse* from *-ey*, which occurred earlier. M Kim's analysis of *-eykeyse* was based on Lehmann's (2004) analysis of analogically motivated grammaticalization. Lehmann (2004) claims that some grammaticalizations are directed by analogy to earlier grammaticalization. This analogy hypothesis seems to provide a reasonable explanation of the emergence of *hanthey*. By analogy modeled on *-eykey*, *hanthey* seems to have undergone grammaticalization.

The model of analogy for *hanthey*, however, may be bifurcated. That is to say, the grammaticalization of *hanthey* may have been modeled not just on *-eykey*, but on other forms. *hanthey* exhibits a great similarity to the other DM *-tele* in its original meaning and source construction.[5] The source construction of *-tele* was [NP *tolye* V] 'NP accompany-Affix V', which is semantically almost identical to that of *hanthey*. The first grammaticalized form of *-tele* is attested in the 17th century, which is far earlier than the emergence of the grammaticalized form of *hanthey* (the 19th century). Over the course of grammaticalization, *hanthey* acquired a new meaning 'together.' This intermediate stage meaning of *hanthey* is almost identical to the original meaning of *-tele*, and this semantic similarity between the two items might have further facilitated the grammaticalization of *hanthey*.

The other consideration we should make is the role of metonymy and metaphor in the development of *hanthey*. As mentioned earlier citing Heine et al. (1991), semantic change is often viewed cognitively as problem solving. The problem solving technique is a cognitive process that relates literal meanings to extended meanings by mapping one set of conceptual entities onto another. The mapping is achieved by metonymy and metaphor. In terms of cognitive linguistics (Croft 1993), metonymy is mapping within the same domain (or frame), while metaphor is a mapping across the two different domains (or frames). In this sense, reanalysis is a metonymic change because one meaning is specified in terms of the other within the same context. By contrast, analogy is a metaphoric change because one meaning is specified in terms of the other outside of the context. As discussed, the original meaning of *hanthey* was 'one-place.' Later, the meaning changed to 'together', and this meaning was reanalyzed by specifying one meaning, location, which was construed within the context. At the conceptual level, this is a metonymic shift because the mapping occurred within the same domain (context). At the later stage, *hanthey* became a DM by analogy, spreading the innovation of the reanalysis to other constructions. This is the case of metaphoric mapping because the specific meaning, Dativity, was not present in the context. Our analysis of *hanthey* based on re-

on the existing construction *kathi* 'similar' and *tusi* 'similar.'

[5] The grammaticalization of *-tele* is discussed in section 5.

analysis, analogy, metonymy, and metaphor is reminiscent of Hopper and Traugott's (2003: 92-93) analysis of the English *be going to*. The English *be going to*, where *to* was originally a purposive, was reanalyzed as an auxiliary from *be going [to visit Bill]* to *[be going to] visit Bill*. This change is a metonymic shift because the auxiliary meaning *be going to* in the reanalyzed form can be construed in the context. By analogy, the innovative use of *be going to* spread to other constructions such as *[be going to] like Bill*. This spread is metaphorical in that the meaning of *be going to* is not construed in the original context. The mapping happened across the two different domains (contexts).

Even though our proposal is similar to Hopper and Traugott's (2003) reanalysis-analogy-based explanation of the English *be going to*, there is a difference between our proposal and Hopper and Traugott's. Hopper and Traugott's model is a two-way distinction model, where meaning change may involve metonymic and metaphoric shifts. Our proposal is a three-way distinction model in that semantic reanalysis is given an independent status in the grammaticalization process. For example, the original meaning of *hanthey* was initially semantically reanalyzed as 'together' (from [one.place] to [same.place] to [together]). This semantic reanalysis was followed by metonymic and metaphoric shifts. In this sense, our proposal is more similar to Eckardt (2006). Eckardt's (2006) assumption is that structural reanalysis is accompanied by its concomitant semantic reanalysis. While we agree with Eckardt in the general sense that the semantic reanalysis and its structural counterpart are co-occurring, we moreover argue that semantic reanalysis is the driving force for the structural reanalysis (metonymic shift) and analogy (metaphoric shift). The emergence of *-eykey* and *hanthey* are well accounted for by this mechanism. Because of human beings' various cognitive processes, semantic reanalysis happened at the earliest stage of the DMs' grammaticalization. This semantic reanalysis then motivated other following shifts. If we assume that the structural reanalysis was followed by the semantic reanalysis, it would not be easy to find the motivation for the structural reanalysis. Our analysis provides a better understanding of an early stage grammaticalization, at least for the DMs we have discussed thus far. The other difference between Eckardt's and ours is a theoretical consideration. While Eckardt claims that truth-conditional semantics provides a tool to better understand grammaticalization, we view grammaticalization from a holistic perspective that includes conceptual, semantic-pragmatic, and even language-external social factors. These methodological differences between the two approaches, however, are the beyond the scope of our discussion.

4.2. The Semantic Similarity between *-eykey* and *hanthey*

In Modern Korean, *-eykey* and *hanthey* perform a very similar function mor-

phosyntactically as well as semantically. This is not always true for other location-related markers. While other location-related markers exhibit different semantics from *-eykey* and *hanthey*, the semantic difference between *-eykey* and *hanthey* is not easy to explain. If there is no semantic difference between the two, it needs to be determined if this can be explained. Before addressing the issue of explanation, let us first discuss the differences among the location-related markers. In Korean, there are several markers that denote locative functions. Aside from *-eykey* and *hanthey*, a handful of markers such as *-ey*, *-lo*, *-(ey)se* are used to express locativity. Even if all of them exhibit the locativity function, their specific usages are different. *-ey* is attached to an inanimate nominal as shown in (25-26).

(25) nay-ka ku chayk-ul hakkyo-ey ponay-ss-ta.
I-NOM that book-ACC school-LOC send-PST-DCL
'I sent the book to the school.'

(26) * nay-ka ku chaky-ul con-ey ponay-ss-ta.
I-NOM that book-ACC John-LOC send-PST-DCL
'I sent the book to John.'

(26) is acceptable only when *-ey* is used to mean 'by way of', where the locativity is all but non-existent. In this case, the meaning would be 'I sent the book by John (in person)'.

-lo is used when the directionality is focused as in (27). In (27), the destination of John's leaving is specified by *-lo*. When *-ey* is used with the verb *ttena-ss-ta* 'leave', the sentence becomes infelicitous because *-ey* is more goal-oriented, as in (28). When *-ey* is used with a more goal-oriented verb like *tochakha-ss-ta* 'arrive', the sentence becomes acceptable in (29).

(27) con-i hawai-lo ttena-ss-ta.
John-NOM Hawaii-LOC leave-PST-DCL
'John left to Hawaii.'

(28) * con-i hawai-ey ttena-ss-ta.
John-NOM Hawaii-LOC leave-PST-DCL
'John left to Hawaii.'

(29) con-i hawai-ey tochakha-ss-ta.
John-Nom Hawaii-LOC arrive-PST-DCL
'John arrived at Hawaii.'

Unlike *-ey* and *-lo*, *-(ey)se* expresses stative locativity. Since *kongpwu-ha-n-ta*

'John's studying' is an unbounded event with a durational property, it is compatible with *tosekwan-eyse*, which denotes stative locativity as shown in (30). When *-eyse* is replaced with *-ey* or *-lo*, the sentence is not acceptable as in (31) and (32).

(30) con-i tosekwan-eyse kongpwu-ha-n-ta.
John-NOM library-LOC study-do-PRS-DCL
'John studies in the library.'

(31) * con-i tosekwan-ey kongpwu-ha-n-ta.
John-NOM library-LOC study-do-PRS-DCL
'John studies in the library.'

(32) * con-i tosekwan-(u)lo kongpwu-ha-n-ta.
John-NOM library-LOC study-do-PRS-DCL
'John studies to the library.'

These locative markers perform different grammatical functions, while all of them have one common function of locativity. However, it is not easy to see the difference between *-eykey* and *hanthey* in their usage and grammatical function. It seems that *-eykey* and *hanthey* are almost interchangeable. The contexts in which these two markers are found are almost identical. This functional similarity of these two markers is also noted by traditional Korean grammarians (M-S Kim 1971, C-S Suh 1996). The grammatical and functional similarity between the two markers seems to be due to the similarity between the source constructions for these two markers. Recall that the source construction of *-eykey* was [GEN there] and *hanthey*'s source construction was [one.place]. Both *-ekyey* and *hanthey* are evolved from content words that had a locational meaning. Grammaticalization bleaches the semantics of the words, this being the case for *-eykey* and *hanthey*. Nonetheless, as Hopper and Traugott (2003: 76) points out, older meanings still constrain newer, "emptier" ones, even after meaning loss or semantic bleaching of the older forms. The reason why *hanthey* and *-eykye* show great similarities in Modern Korean, when compared to other location-related markers, seems to be due to this trace of older meanings and constructions of the two DMs.

4.3. Ontogenetic vs. Diachronic Process

The other interesting phenomenon with regard to *hanthey* is the ontogenetic and diachronic processes in the grammaticalization and the language acquisition of *hanthey*. Ontogenic process refers to a child language acquisition, while diachronic process refers to language change. The question we raise here is

whether there is a correlation between the evolution process of the two DMs (*-eykey* and *hanthey*) and their acquisition by children. As discussed, the DM *hanthey* emerged much later than *-eykey*. In her work on locative markers, S Choi (1993) observes that *hanthey* is acquired by children later than other similar locative markers: *-ey*, *-eyta*, *-eyse*. S Choi's explanation for the late acquisition of *hanthey* is based on its plurifunctional nature (S Choi 1993: 213). S Choi (1993) points out that, different from the other three locative markers, *hanthey* exhibits multiple functions such as location, possession, and indirect object. A closer look, however, provides that the other three locative markers express multiple functions too. For example, *-ey* exhibits location, cause-motion, indirect object as demonstrated in (33), (34), and (35), respectively.

(33) con-i hakkyo-ey ka-ss-ta.
John-NOM school-LOC go-PST-DCL
'John went to school.'

(34) apeci-kkeyse noyeum-ey mom-ul tte-si-ess-ta.
Father-NOM.HON anger-LOC body-ACC shiver-HON-PST-DCL
'(My) father shivered because of anger.'

(35) ku hakkyo-ey computer-lul kicung-ha-ss-ta.
That school-LOC computer-ACC donate-do-PST-DCL
'(I) donated the computer the school.'

The other locative markers all exhibit plurifunctional properties. *-eyse* expresses subjectivity[6] (without the nominative marker) as in (36) and the source as in (37). Both indirect objectivity and goal can be expressed by *-eyta* as shown in (38) and (39), respectively.

(36) cenpwu-eyse cakum-ul cikup-ha-ss-ta.
government-LOC funds-ACC provide-do-PST-DCL
'The government provided the funds.'

(37) ku mwunhwa-nun Greece-eyse cicak-toy-ess-ta.
that culture-TOP Greece-LOC begin-become-PST-DCL
'The culture began from Greece.'

(38) con-i hakkyo-eyta ku chay-ul cwu-e peli-ess-ta.
John-NOM school-LOC that book-ACC give-COMP Aux-PST-DCL
'John has given the book to the school.'

[6] S Choi (1993) does not distinguish between the grammatical function (subjectivity) and the semantic function (goal, source, etc.), when she discusses the plurificative nature of *hanthey*.

(39) ku pyeng-ul senpan-ey noa-la!
that bottle-ACC mantel-LOC put-IMP
'Put the bottle on the mantel.'

Since other locative markers also exhibit a multifunctional nature, explaining *hanthey*'s late development in child language acquisition based on the multifunctional nature seems to be problematic. The late development of *hanthey* in language acquisition can be explained parallel to its diachronic development. That is, we might explain the phenomenon from the view that child language acquisition recapitulates diachronic development. Bybee et al. (1994) and Giacalone-Ramat (1995) support the view from the first language and second language acquisition, respectively. By contrast, Slobin (1994) denies the view, but nevertheless accepts that diachronic process and children's language acquisition might yield the same results. In this sense, there seems to be an agreed upon property between language acquisition and diachronic development: the two processes are not orthogonal in their outcomes. Perhaps, the emergence and the development of *hanthey* is one of such cases. However, we neither support nor deny any views on this matter. We only point out two different views on the connection between language acquisition and grammaticalization; the case of *hanthey* seems to show the parallelism between the two.

5. Case Study 3: *-pwokwo* and *-tele*

In this section, we deal with the two remaining DMs: *-pwokwo* and *-tele*. There is one noticeable difference between these and the DMs previously discussed: *-pwokwo* and *-tele* emerged from the verbal source construction. Nonetheless, the grammaticalization process for these was also motivated by the two primary factors, frequency and semantics. After illustrating the frequencies of these two DMs, we will discuss the semantic motivations for the grammaticalization of these two DMs.

5.1. The Frequency of *-pwokwo* and *-tele*

Sentence (40) illustrates a lexical verb usage of the verb *pwo-kwo* 'see-COMP' with semantic transparency, while (41) illustrates the grammaticalized form of *pwokwo*.

(40) yeswu nwun-ol tul-e tyeca-lol **pwo-kwo** kalwo-sya-toy
Jesus eye-ACC lift-CONN follow-ACC **see-COMP** say-HON-CONN
'Jesus lifted his eyes, saw His disciples, and talked.'
(19C, Yeswu Sengkyeng)

(41) ne eti na-**pwokwo** kulen mal hay-ss-ni?
you how I-**DAT** that word do-PST-Q
'How dare you say that to me?'

(20C, Hulk)

The source construction of the DM *pwokwo* is [NP-ACC *pwo-kwo* V] 'NP-ACC see V'. The structural motivation for *pwokwo* from this source construction is straightforward. The accusative case marker in the construction dropped and the morpheme boundary of [NP-ACC *pwo-kwo* V] was reanalyzed as [NP-*pwokwo* V]. Through frequent usage, the new form emerged. Table 3 illustrates the text frequency of *pwokwo*. The frequency of the source construction for *pwokwo* continually increased until 19th century as shown by the Fixed Construction Usage row. In the early 20th century, the fixed construction emerged as a fully grammaticalized DM.

Table 3. The Frequency of *-pwokwo*

	15th	16th	17th	18th	19th	20th
Pre-Gram	424	240	311	1,393	2,218	2,192
Fixed Con	32	10	15	96	177	0
Full-Gram	0	0	0	0	0	87

The other DM, *-tele*, exhibits a similar pattern to *pwokwo*. The source construction of *-tele* was [NP *toli-e* V] 'NP accompany-CONN V'. In addition to the phonological reduction from *toli-e* to *tolye* in the 17th century, *tolye* was morphologically reanalyzed as an affix. Sentence (42) illustrates the source construction in the 15th century, and both (43) and (44) show the grammaticalized form of *tolye*.

(42) wang-i … palamwun-i aki **toli-e** tulewo-la
king-NOM Palamwun-NOM baby **accompany-CONN** enter-DCL

ho-si-kwo
say-HON-CONN

'The king said that Palamwun should come with the baby.'

(1459, Welinsekpwo)

(43) tayimi-ney seys-**tolye** tyo-hi isi-la anpwuho-wop-syosye!
Tayimi-GEN three-**DAT** fine-ADVZ stay-DCL greet-HON-DCL
'Give (my) best regards to Taymi's three (people).'

(17C, Letter of Kwak-ssi)

(44) kasom-uy kotokho-n thyunguy-lol nwul-**tolye** phwopoykho-li-wo?
heart-GEN filled-CONN loyalty-ACC who-**DAT** confess-FUT-DCL
'To whom I can express my heart which is full of (my) loyalty?'
(18C, Naksencay Novel)

Similar to other DMs, we found that the role of frequency played an important role in the formation of *-tele*. As illustrated in Table 4, no Dative usage of *-tele* was found in the 15th century documents. The frequency of the source construction of *-tele* has continuously increased since the 15th century. Over the course of its increased use, *-tele* began to be used with limited types of verbs such as *mal-hata* 'say' or verbs semantically similar to that. In the 17th century, a fully grammaticalized form is attested and its use has been increasing since then.

Table 4. The Frequency of *-tele*

	15th	16th	17th	18th	19th	20th
Pre-Gram	70	82	42	47	12	0
Fixed Con	753	237	0	0	0	0
Fully Gram	0	0	295	1,319	1,492	1,293

The grammaticalization of *-tele* seems to have undergone a very similar semantic shift to *hanthey*, as discussed in section 4.1. Similar to *hanthey*, *-tele* was first reanalyzed as a nominal affix, then it emerged as a Dative marker later.

The semantic motivation of the emergence of *-pwokwo* exhibits an interesting role of the human embodied cognition in language change. In the following subsection, we will explain this by adopting the notions of image schema and fictive motion from cognitive semantics.

5.2. Image Schema and Fictive Motion

The notion "image schema" was first introduced by Lakoff and Johnson (1980). To answer the question of where the complexity associated with our conceptual structural representation comes from, Lakoff and Johnson (1980) claim that there is a tight connection between the types of concepts human beings form and the nature of physical bodies they have. This connection (conceptual representation) that arises directly from our bodily experience is called image schema. Based on this basic thesis, Johnson (1987) proposes that image schemas derive from human sensory-perceptual experience as we interact in the world. Drawn from these earlier works, Clausner and Croft (1999: 15) provides an inventory of image schemas as in Table 5.

Image schemas make good source domains for metaphors because they developed from our early bodily experiences. For example, the CONTAINER

schema in Table 5 is developed in exploring the world around us when we grasp objects. The metaphor *He is in a mess* is based on the conceptual metaphor STATES ARE CONTAINERS provided by the CONTAINER schema. Among these image schemas, the most relevant schema to our discussion is FORCE. Johnson (1987) describes that the FORCE schema has several characteristics. We introduce only relevant characteristics to our current discussion in (45).

Table 5. Image Schemas

SPACE	UP-DOWN, FRONT-BACK, LEFT-RIGHT, NEAR-FAR, CENTER-PERIPHERY, CONTACT-PATH
SCALE	PATH
CONTAINER	CONTAINMENT, IN-OUT, SURFACE, FULL-EMPTY, CONTECT
FORCE	BALANCE, COUNTERFORCE, COMPULSION, RESTRAINT, ENABLEMENT, BLOCKAGE, DIVERSION, ATTRACTION
UNITY/MULTIPLICITY	MERGING, COLLECTION, SPLITTING, ITERATION, PART-WHOLE, MASS-COUNT, LINK
IDENTITY	MATCHING, SUPERIMPOSITION
EXISTENCE	REMOVAL, BOUNDED-SPACE, CYCLE, OBJECT, PROCESS

(45) The Characteristics of FORCE schema
  a. Force schemas involve a force vector (directionality).
  b. Force schemas involve a single path of motion.
  c. Force schemas have sources for the force and targets that are acted upon.

In order to explain the semantic-cognitive motivation for the emergence of *pwokwo*, these characteristics will be combined with the other notion, fictive motion. Fictive motion is a term coined by Talmy (1983, 2000). Fictive motion is a special type of mental scanning by which humans construe a static scene in terms of motion. In (46), the physical object *the cliff* does not move in its location in time. Instead, our eyes mentally scan an imaginary path from the top to bottom. In this regard, just like physical motion, fictive motion involves directionality.

(46) The cliff drops down 600 feet.

These two notions adopted from cognitive semantics shed light on understanding the grammaticalization of *-pwokwo*. The DM *pwokwo* emerged from the lexical verb *pwo-ta* 'see' used in the construction [NP *pwo-kwo* V] 'NP see-

COMP V'. The verb in this construction was *mal-ha-ta* 'say' or verbs semantically similar to *mal-ha-ta* 'say'. Our speaking activity clearly involves directionality. When we talk, we talk to someone or something, conveying our thoughts to other people. Based on this assumption, we argue that in the process of *pwo-kwo*'s grammaticalization, this directionality of speaking was construed as fictive motion due to the use of the verb *pwo-kwo* 'see-COMP'. In other words, the use of the verb *pwo-kwo* 'see-COMP' facilitated the mental scanning of a given situation. Due to the use of the verb *pwokwo* 'see' with the verb *mal-ha-ta* 'say', the speaker's visual scanning of speaking was conceptually reinterpreted as a motion. Our mental image of speaking was reinterpreted as motion by way of the use of the verb *pwokwo*. Since our speech activity expresses the SOURCE-PATH-GOAL pattern in highly abstract construal, ascribing a motion status to speaking, which could not actually undergo motion, is not surprising. After undergoing this conceptual shift through fictive motion, *-pwokwo* was reinterpreted as a Dative marker that exhibits directionality. In Modern Korean, *pwokwo* is still most often used with the *mal-ha-ta* 'say' related verbs (*mal-ha-ta* 'say', *ikayki-ha-ta* 'talk', *tayhwa-ha-ta* 'converse') which all require the abstract level SOURCE-PATH-GOAL construal as fictive motion. This restriction of *pwokwo* seems to be due to the trace of the earlier usage.

6. Other Issues: Predictability and Case Stacking

In this section, we deal with two issues related to the grammaticalization of the DMs in Korean. One is predictability and the other Case stacking. Grammaticalization is a diachronic phenomenon and ongoing process. If grammaticalization is a diachronic phenomenon, we should be able to make at least weak predictions on what is going to happen in the future. Heine (2003: 593) explains his point on predictability as below.

> Grammaticalization theory is a field that is diachronic in the true sense: it is not only allows for historical reconstruction but also makes it possible within limits to predict what is going to happen in the future.

Henie (2003) claims that if in a given language a new definite article arises, then it is likely to be derived from a demonstrative modifier. In citing Campbell (2001: 153), Heine admits that strong predictions on grammaticalization are difficult to make, though some probable predications are possible. We agree with Heine (2003) in this regard. We do not argue that we can predict the next stage of the DMs in grammaticalization, nor do we argue that we can predict the next possible DM that will arise through grammaticalization. However, considering the fact that all the DMs arose through grammaticaliza-

tion from specific constructions, we may make some probabilistic predictions on the emergence of a new DM. Our probable prediction would be that there might be some constructions that are in the process of grammaticalizing from a construction to a lexcial item. In the construction, the noun (or the verb) might have the meaning of 'place', 'together'; and 'directionality'. This prediction was possible based on the observations that these three properties were the semantic basis of the DMs we discussed. As illustrated in (47-49), *tay-ko* 'contact-COMP' seems to be undergoing this type of grammaticalization.

(47) sencang-i maikhu-ey **tay-kwo** swolichi-ess-ta.
captin-NOM microphone-LOC contact-COMP shout-PST-DCL
'The captain yelled at the crew through microphone.'

(48) hanul-ey **tay-kwo** haswoyen-ul ha-yss-ta.
sky-LOC contact-COMP complain-ACC do-PST-DCL
'(Somebody) complained (about something) to the sky.'

(49) emeni-nun atul-ey **tay-kwo** pwulman-ul
mother-TOP son-LOC contact-COMP dissatisfaction-ACC
naysswot-ass-ta.
speak.out-PST-DCL
'The mother expressed her disappointment to her son.'

Although we cannot say *tay-kwo* 'contact-COMP' is fully grammaticalized because it is not a fully bound morpheme yet, it does exhibit similar properties to the DM *-pwokwo*. Similar to *-pwokwo*, *tayko* shows some semantic bleaching and a newly acquired meaning of directionality. *tay-kwo* also exhibits a similar selectional restriction pattern to *pwokwo*: it is used with *mal-ha-ta* 'say' related verbs. Perhaps, *taykwo* is undergoing grammaticalization analogically based on the similar type of DM, *pwokwo*. Due to the lack of data, however, we will not provide our analysis of *tay-kwo* here.

The other issue we would like to discuss is the Case stacking phenomenon in Korean. We have observed that Korean DMs are evolved from certain types of constructions. While two of the DMs (*-eykey* and *hanthey*) emerged from nominal bases, the other two (*-tele* and *-pwokwo*) were evolved from verbal bases. Based on these syntactic facts of the source constructions, we argue that the traces of these source words play some role in determining Case stacking in Korean. Case-stacked nominals are commonly used in Korean with the restriction that the stacking ordering must be one semantic Case (DM) followed by one structural Case (Nominative or Accusative or Genitive). The Case stacked nominals generally enforce the focus interpretation. The follow-

ing sentences are all acceptable in Korean. In (50), the Nominative Case *-ka* is stacked on top of the semantic Case (DM) *hanthey*. Sentence (50) has the focus interpretation, meaning "it is Chelswu who has lots of money". A very similar stacking pattern is found with *-eykey* as in (51).

(50) chelswu **-hanthey-ka** ton-i manh-ta.
Chelswu -DAT-NOM money-NOM many-DCL
'It is Chelswu who has lots of money.'

(51) chelswu **-eykey-ka** yeppun ttal-i iss-ta.
Chelswu-DAT-NOM pretty daughter-NOM exist-DCL
'It is Chelswu who has a pretty daughter.'

This interesting phenomenon has been observed and analyzed by several researchers in various traditions (J H-S Yoon 2004, Schütze 2001, among others). However, the unacceptability of the following sentences is the topic that was not well discussed in the literature. Unlike (50) and (51), neither (52) nor (53) is acceptable, where either *-tele* or *-pwokwo* is stacked by the Nominative Case marker *-ka*.

(52) * chelswu-tele/pwokwo-ka ton-i manh-ta.
Chelswu-DAT-NOM money-NOM many-DCL
'It is Chelswu who has lots of money.'

(53) * chelswu-tele/pwokwo-ka yeppun ttal-i iss-ta.
Chelswu-DAT-NOM pretty daughter-NOM exist-DCL
'It is Chelswu who has a pretty daughter.'

It is not easy to account for this asymmetry between the nominal-based DMs (*-eykey* and *-hanthey*) and the verbal-based DMs (*-tele* and *-pwokwo*) syntactically. The difficulty arises due to the fact that the two types of DMs exhibit the same morphosyntactic behaviors. There might be some synchronic semantic explanations for this anomaly, though the possible explanation we propose here is based on the source constructions of the DMs. That is, we argue that the nominal and the verbal bases of the DMs have yielded different combination patterns.

It has been said that Korean structural Case markers establish syntactic dependencies between nominals and verbals (Y-M Cho & Sells 1995, O'Grady 1998, J Yoon 1995). In other words, the Nominative Case marker plays a role as a functor to connect a nominal and an intransitive verb, a VP, or even a sentence, while the Accusative marker establishes a dependency between a nominal and a transitive verb. The main idea here can be summarized as the

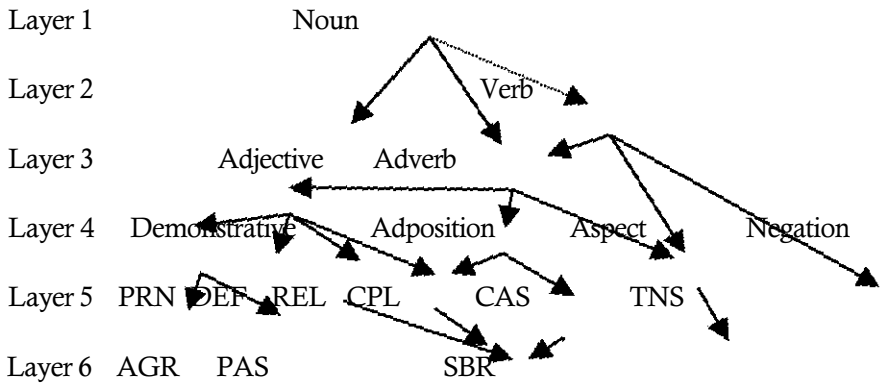
following: the structural Case markers must be attached to nominals and the Case marked nominals are combined with verbs. As a result we see that Korean Case markers play an active role in establishing syntactic dependencies. If this is so, we can account for the asymmetry between the nominal-based DMs and the verbal-based ones like the following. The verbal-based DMs yield nominals when they attach to nominals synchronically. However, the verbal properties of the source constructions still reside in those DMs. These historical traces prevent the DMs from being stacked by the structural Case markers, because structural Case markers are combined only with nominals. Since the nominal-based DMs do not show any trace of verbal properties historically, they can be stacked by the structural Case markers without difficulty. The synchronically puzzling asymmetry between the two types of DMs may naturally fall out when we use the information gathered from our observation, concerning their source constructions.

7. Conclusion

In our paper, we analyzed the grammaticalization process of the four Korean DMs. Our analysis was based on the two criteria: frequency and semantic-pragmatic-cognitive motivations. The frequency issue was relatively straightforward: the DMs emerged due to the frequent use of their source constructions. The second motivation, semantic-pragmatic-cognitive motivation, varied for the four DMs, though all of them are deeply rooted in our conceptualization mechanism of meaning. We attempted to explain the second motivation based on the several different notions: reanalysis, analogy, metonymy, metaphor. This function-based explanation was further supported by general human cognitive processes such as reference point and fictive motion.

Our analysis of Korean DMs can be further supported by Heine and Kuteva's (2007) recent research on the "language genesis". By investigating numerous languages, these authors provide a very well-articulated scenario of language evolution to show the layers of grammaticalization. The layers of grammatical development proposed by these scholars are cited as below in Figure 1. As shown below, Case markers are generally evolved from adverbs that originated from either verbs or nouns through the grammaticalization process. As illustrated throughout this paper, the Korean DMs have evolved from both nominal and verbal constructions. Even though we dealt exclusively with Korean in this paper, it should not be understood that the analysis is solely Korean-specific. Our analysis fits the general tendency of language change, which will make it possible to better understand the grammaticalization in Korean from the broader perspective of language change. Specifically, our analysis can be supporting evidence for Heine and Kuteva's (2007) "lan-

guage genesis" theory as illustrated in Figure 1.



Abbreviations: AGR = agreement, CAS: case marker, CPL: complentizer, DEF: marker of definiteness, PAS = passive, PRN = pronoun, TNS = tense, SBR = subordinate marker of adverbial clauses.

Figure 1. The Language Genesis Layer (Heine and Kuteva 2007: 111)

The DM *-eykey* emerged from the nominal construction. Through an intermediate stage of an adverbial, it became a Case marker. *hanthey* has developed from noun to adverb, then onto adverbial, ending as a case marker. Both *pwokwo* and *-tele* started as verbs. Through adverbial/adpositoin status, they became Case markers. Although our explanation of the emergence of the DMs is well-suited in Heine and Kuteva's (2007) the "language genesis" theory, not every lexical item that exhibits similar formal and semantic properties to the DMs does not follow the same pathway as theirs. For example, *tepwul-e* 'together' in Modern Korean emerged from the source construction, [NP-ACC *tepwul*-CONN V]. The source construction of *tepwul-e* and its context are almost identical to those of *-tele*. Despite the two constructions' great similarity in their form and meaning, *tepwule* was lexicallized as an adverb in Modern Korean. Its grammaticalization was somewhat halted at the level of adverbial, Layer 3 in terms of Heine and Kuteva. Even if the general tendency proposed by these scholars sheds light on understanding the general grammaticalization pattern across languages, we also have to permit that non-phonetically motivated language change tends to be less systematic. The case of *tepwule* seems to show this inconsistency of meaning change.

To explain the semantic-pragmatic motivations for the evolution of the DMs, we adopted several different notions from cognitive semantics under the assumption that the grammaticalization phenomenon can be better explained based on the non-objective facets of linguistic meaning. That is, our underlying assumption for the semantic analyses of the DMs was that semantics is not a

matter of the relationship between language and the meaning. Rather, semantics is primarily cognitive, which involves subjective construals. As noted by Bybee (2007: 969), "even the most abstract of grammatical notions can be traced back to a very concrete, often physical or locational concept involving the movement and orientation of the human body in space". Bybee (2007: 969) also claims that the sources for grammar are concepts and words drawn from the most concrete and basic aspects of human experience. Our semantic analyses were made based on the same assumption. The sources for the DMs were concepts, and these concepts were drawn from the speaker's/hearer's experience. The superficially various semantic motivations we provided throughout this paper boil down to this fundamental claim: conceptual structure is embodied. We explored the semantic motivations of the DMs from the question of how we experience the world, and we conclude that the way we experience the world (reference point, conceptual affinity, fictive motion, etc.) has motivated the emergence of the four grammatical markers.

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Appendix: Constructions Summarized

(A1)-*eykey*

Stage		Construction	
S1	NP	[GEN (*uy/oy*) + Noun (*kungey/kekuy* 'there')]	V(P)
S2	NP	[fusional form *uy/oy kungey/kekuy*]	V(P)
S3	NP	[DATIVE (*uykey*, *eykey*)]	V(P)
S4	NP-*eykey*		

(A2)-*hanthey*

Stage		Construction	
S1	NP	[N (*hon* 'same') + Noun (*toy* 'place')]	V(P) (V: *sal-ta* 'live', *ka-ta* 'move')
S2	NP	[N/Adv (*hontoy* 'together')]	V(P) (V: *sal-ta* 'live', *ka-ta* 'move'
S3	NP	[DATIVE (*honthey*, *hanthey*)]	V(P) (V: 'live', 'move', 'marry')
S4	NP- *hanthey*		

(A3)-*pwokwo*

Stage		Construction	
S1	NP	[ACC (*ul/ol*) + V (*po*- 'see') + (-*ko*)]	V(P) ('say')
S2	NP	[Adverbial form (*pwo-kwo*)]	V(P) ('say')
S3	NP	[DATIVE (-*pwokwo*)]	V(P) ('say')
S4	NP-*pwokwo*		

(A4)-*tele*

Stage		Construction	
S1	NP	[ACC (*ul/ol*) + V (*toil*- 'accompany') +CON (-e)]	V(P) ('say', 'go/come')
S2	NP	[Adverbial form (*toil-e*)]	V(P) ('say''go/come')
S3	NP	[DATIVE (-*tele*)]	V(P) ('say', 'go/come')
S4	NP-*tele*		

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