

Retrieving Prefixation from Derivational Morphology*

Haruki Isono, Hiroko Wakamatsu, and Ryohei Naya

1. Introduction

Morphologists have recognized that complex words can be classified into several groups according to the types of their constituents and discussed how they are formed. For example, compounds and derivatives are distinguished based on whether the lexical item used therein is a lexeme or a functional morpheme; while a compound consists of two (or more) lexemes (e.g. *apple* + *pie* → *apple pie*), a derivative is formed by combining a lexeme and a functional morpheme (e.g. *develop* + *-ment* → *development*). Thus, the distinction between a lexeme and a functional morpheme is important in identifying the type of a complex word.

However, some lexical items cannot be easily classified as lexemes or functional morphemes. Such lexical items blur the distinction between compounds and derivatives when they are used as a part of a complex word. Among the morphemes with unclear morphological status are prefixes. Generally, prefixes, along with suffixes, belong to the class of functional morphemes. This classification seems to be natural given that both of them are bound morphemes and that (most) bound morphemes are regarded as functional morphemes. In contrast to this general view, Nagano (2011a, 2013a, 2013b) points out that many of the prefixes in English have properties characteristic to lexemes and argues that they are, in fact, lexemes. If so, complex words with such prefixes should be regarded not as derivatives but as compounds. In other words, the attachment of them to (free) morphemes is not derivation but compounding.

Note that not all English prefixes are lexemes; Nagano (2013b) analyzes some prefixes as functional morphemes. Adopting the general view, one might assume that functional prefixes participate in derivation, forming derivatives. Importantly, however, functional morphemes can be involved not only in derivation but also in inflection, one of the major morphological processes along with derivation and compounding. In this connection, Emonds (2005) offers a new different view on prefixation. Assuming prefixes to be P appearing inside words, he proposes that prefixation is the process that syntactic features are phonologically realized by prefixes at the post-syntactic level. That is, prefixation is an inflection-like process.

The combination of Nagano's and Emonds' analyses provides a new way to explore the nature of prefixes (and that of morphological processes as well); prefixes are not homogeneous and accordingly, neither is prefixation. More precisely,

* We would like to thank Jenny Hodgkins, Abu Girma Moges, Duane Isham, and Michael Denley Francis Stout for kindly acting as informants. This work was supported in part by the Japan Society for the Promotion of Science (Grant-in-Aid for JSPS Research Fellow, Grant No. 16J01676).

prefixes are classified into lexical and functional types. Consequently, the attachment of lexical prefixes is compounding and that of functional prefixes is inflection. As a result, we can say that prefixation is “retrieved” from derivational morphology.

If this reasoning is correct, all of the prefixes can be involved in either compounding or inflection. In order to retrieve all the prefixes from derivation, we still need to clarify the morphological status of some prefixes that are not explicitly examined in Nagano’s and Emonds’ studies. Such prefixes include the prefixes that are formally identical to prepositions (e.g. *out-*, *over-*, *under-*, *up-*). These morphemes, which we call prepositional prefixes, have attracted much attention because their forms identical to their prepositional counterparts obscure their morphological status and further, the distinction between compounds and derivatives (see e.g. Kastovsky (2013), Olsen (2014:Section 3.3.2), among others). With this background, this paper aims to demonstrate that prepositional prefixes are also divided into two types and that they can be analyzed as being involved in either compounding or an inflectional process.

This paper is organized as follows. Section 2 outlines Nagano’s (2011a, 2013a, 2013b) classification of prefixes. Introducing Emonds’ (2005) theoretical framework, section 3 overviews his analysis of prefixation, where the process is regarded as the same type as inflection. Section 4 observes that prepositional prefixes are also classified into the two types. Section 5 proposes that this heterogeneous nature of prepositional prefixes can be successfully captured by combining Nagano’s (2011a, 2013a, 2013b) and Emonds’ (2005) analyses. In addition, the section proposes the syntactic features related to a functional prepositional prefix that we found. Section 6 shows that the proposal can be supported by the fact of zero-nominalization. The section also demonstrates that the proposal is not strange, based on certain compounds in Japanese. Section 7 offers concluding remarks.

2. Classification of Prefixes: Nagano (2011a, 2013a, 2013b)

This section outlines how Nagano (2011a, 2013a, 2013b) classifies prefixes into lexemes and functional categories. One way to see the morphological status of a given prefix is to examine whether a complex word containing the prefix is a compound or not. She diagnoses the compoundhood of a complex word in question by applying to it coordination reduction (CR) (see Kenesei (2007)). This is because CR is an example of the violations of the Lexical Integrity Principle, which occur, if possible, only in compounding. Thus, if a complex word can undergo CR, it is a compound and accordingly, the constituents are lexemes. For example, the obvious examples of compounds in (1) can undergo CR.

- (1) a. book-__ and newspaper-stands
 b. gossip-__ and scandal-mongers
 c. book-binders and __-sellers

(Kenesei (2007:274))

In (1a), the two compounds *book-stands* and *newspaper-stands* are coordinated, and the common part *stands* is deleted in the left conjunct. By contrast, the tense marker, a typical example of functional morphemes, cannot be deleted even in the context of coordination, as shown in (2).

- (2) John walk*(ed) and danced.

(Nishiyama (2016:84))

Applying CR to complex words with prefixes, Nagano (2013a) shows that many of them are compounds and thus the prefixes contained are lexemes. For example:

- (3) a. super-__ and supra-national
 b. anti-federalist and __-nationalist (opinions)

(Kenesei (2007:274))

Given that the complex words with prefixes in (3) can undergo CR, the compounds *super-national* and *anti-nationalist* are compounds and the two prefixes *super-* and *anti-* are lexemes. In addition, Nagano (2013a) points out that prefixes can be coordinated with uncontroversial lexemes as shown in (4).

- (4) a. para-__ and alternative medicis
 b. fore-__ and main-masts

(Bauer (2003:37), with slight modifications)

Nagano (2013b) also shows that some prefixes do not tolerate deletion in CR, as shown in (5).

- (5) a. * I do not know if he should be dis-__ or en-couraged.

(Scalise (1984), with slight modifications)

- b. * Mary un-__ and re-tied her races.

(Sadler and Arnold (1994:208), with slight modifications)

These examples indicate that the conjuncts *discouraged* and *encouraged* are not

compounds. Accordingly, the prefixes *dis-* and *en-* are regarded as functional morphemes.

Based on these kinds of data, Nagano (2013b:121) classifies prefixes as follows:

- (6) a. Lexical Prefixes
 - (i) Evaluative Prefixes (e.g. *de-*, *non-*, *super-*)
 - (ii) Spatio-Temporal Prefixes (e.g. *circum-*, *inter-*, *pre-*)
 - (iii) Quantative Prefixes (e.g. *multi-*, *semi-*)
- b. Functional Prefixes
 - (i) Negative Prefixes (e.g. *de-*, *non-*, *un-*)
 - (ii) Aspectual Prefixes (e.g. *be-*, *en-*, *re-*)

Given this classification, the attachment of lexical prefixes, which have the status of lexemes, is considered to be compounding, not derivation. The remaining question is, then, in what process functional prefixes are involved. Are they involved in derivational morphology as generally assumed? In the next section, we introduce Emonds' (2005) framework, which provides us with a new view on functional prefixes.

3. Prefixation as an Inflectional Operation: Emonds (2005)

3.1 *The Bifurcation of the Lexicon and Multi-level Insertion*

Emonds (2005) proposes a new approach to prefixation, where prefixes are inserted at the post-syntactic level just like inflectional suffixes. Before introducing his analysis of prefixation, let us briefly overview his theoretical framework, which contains two main hypotheses first proposed in Emonds (2000): the bifurcation of the lexicon and multi-level lexical insertion.

Firstly, he divides the lexicon into two subcomponents, the Dictionary and the Syntacticon. The former lists lexical categories (i.e. N, V, A, and P), and the latter functional categories such as inflectional affixes and derivational affixes. Lexical categories and functional categories are distinguished based on their feature contents. Emonds (2000) assumes the two types of features that lexical items can have, namely purely semantic features *f* and cognitive syntactic features *F*, which are defined in (7a) and (7b), respectively.

- (7) a. Purely semantic features *f*, which are present *only* on the head categories $X = N, V, A$ and P . They are not used in syntax and are not present on closed subclasses of Grammatical X .
- b. Cognitive syntactic features F [...], which can occur with all syntactic

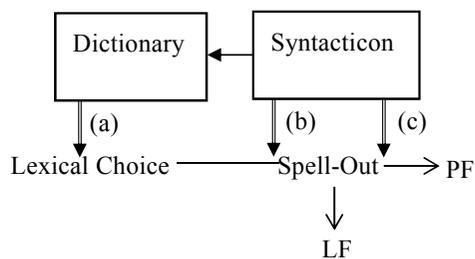
categories. They play a central role in both syntax and at Logical Form (LF).

(Emonds (2000:12))

As defined in (7), while lexical categories have purely semantic features f , functional categories consist exclusively of cognitive syntactic features F . This does not mean that all the N, V, A, P must have purely semantic features f ; some lexical categories N, V, A and P can be characterized by only syntactic features. The N, V, A, and P without f are called semi-lexical categories (Emonds (2001)). The absence of f indicates that semi-lexical categories are functional items and are listed in the Syntacticon.

The second hypothesis is multi-level lexical insertion, where the items stored in the Syntacticon can be inserted at three stages of syntactic computation. This can be schematized as in (8), where the three downward arrows (a), (b), and (c) represent the three levels of lexical insertion, Deep Insertion, Syntactic Insertion, and PF Insertion, respectively.

(8)



(cf. Emonds (2000:117, 437))

- (a) Deep Insertion
- (b) Syntactic Insertion
- (c) PF Insertion

As arrow (a) indicates, Dictionary items are inserted only by Deep Insertion. Syntacticon items can also undergo Deep Insertion via the Dictionary, as indicated by the leftward arrow in (8). In addition, they can also undergo Syntactic Insertion, which occurs after syntactic operations and before Spell-Out. Productive suffixes with transparent meanings undergo Syntactic Insertion. Furthermore, they can undergo PF Insertion, which takes place after Spell-Out. PF Insertion is exemplified by realization of inflectional affixes. Since PF Insertion takes place after Spell-Out, the items inserted at this level do not contribute to semantic interpretation at LF.

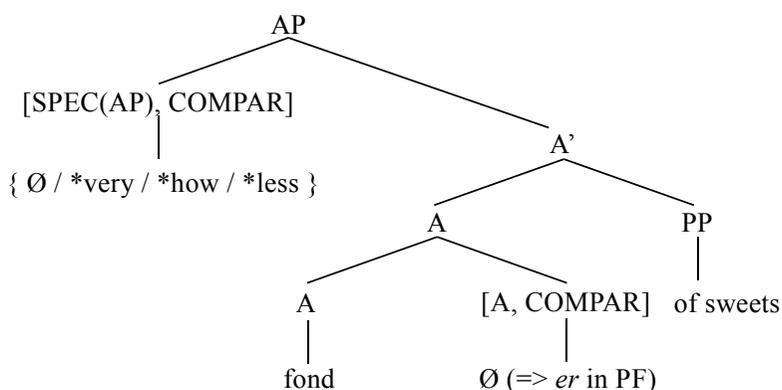
Importantly, PF Insertion can phonologically realize syntactic features in the

position different from where they are interpreted at LF in certain environments. The features relating to inflection are realized in this way. For example, let us consider the case of inflected comparatives. Emonds (2000) first identifies the LF-interpreted position of comparatives by following Bresnan's (1973) observation that they do not co-occur with degree words, as shown in (7).

- (9) *very fonder of sweets, *how fonder of sweets, *less fondest of sweets, etc.
(Emonds (2000:126))

Following Bresnan (1973), Emonds (2000:126) argues that “the locus of comparative interpretation is not on A but rather on the AP modifier position in SPEC(AP).” That is, the comparative feature [COMPAR] is assumed to occur on SPEC(AP), as in (10).

(10)



(Emonds (2000:126), with a slight modification)

However, the feature is not phonologically realized on that LF-interpreted position; alternatively, it is realized by the inflectional suffix *-er*, which undergoes PF Insertion and occurs under A. Emonds (2000) calls this realization pattern alternative realization (AR).

3.2. Emonds' Analysis of Prefixation

Within the framework introduced in section 3.1, Emonds (2005) analyzes prefixes as alternative realizations of certain syntactic features. First, in order to identify syntactic position for the relevant features, he observes the complementary distribution of the prefix *re-* and post-verbal particles:¹

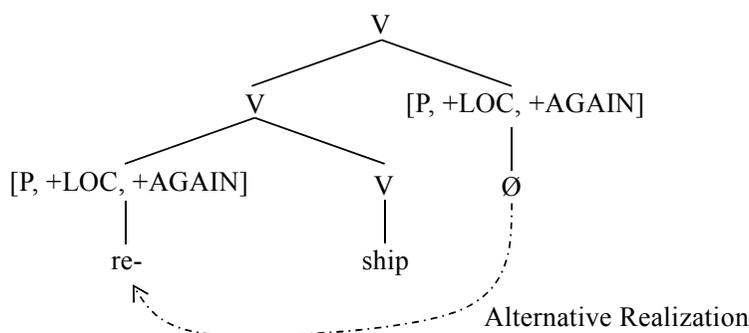
¹ See also Carlson and Roeper (1980), Keyser and Roeper (1992), and Ishikawa (2000), for the issue of the complementary distribution of prefixes and verb particles.

- (11) a. John shipped (off) his prizes.
 b. John reshipped (*off) his prizes.
- (12) a. Let's build (up) our defenses.
 b. Let's rebuild (*up) our defenses.
- (13) a. She wrote (down) the response.
 b. She rewrote (*down) the response.

(Emonds (2005:259))

In (11a), for example, the verb particle *off* can co-occur with the verb *ship*. However, when the prefix *re-* is attached to the verb, the resultant complex verb is not compatible with *off* as in (11b). Observing these examples, Emonds (2005:259) argues that “[t]he complementary distribution between *re-* and post-verbal particles, widely agreed to be intransitive P, suggests that the former is also a P appearing inside the verb.” That is, the prefix *re-* has the same grammatical status as post-verbal particles. If so, the syntactic features related to *re-* (e.g. [AGAIN]) and those related to post-verbal particles occur at the same position, namely, post-verbal complement, where they are interpreted at LF. As a result, they compete with each other for that syntactic position, resulting in the complementary distribution. Note that the features related to *re-* are not phonologically realized on that position. They are alternatively realized by *re-* in the pre-verbal position, as represented in (14).

(14)



Under this analysis, *re-* is just a phonological realization which does not contribute to LF-interpretation by itself.

4. Two Types of Prefixes and Morphological Processes

The combination of Nagano's (2011a, 2013a, 2013b) and Emonds' (2005) studies suggests that prefixes and prefixation are not homogeneous. Prefixes are

classified into a lexical or functional class, and the processes realizing them are different according to their class. These properties of prefixes can be captured based on the framework of Emonds (2000) as follows. While lexical prefixes are lexical prepositions, functional prefixes are semi-lexical prepositions in the Syntacticon. The former undergo Deep Insertion, forming compounds. The latter alternatively realize some syntactic features after Spell-Out, as proposed by Emonds (2005).

If this analysis is correct, all prefixes can be analyzed as either lexical or functional prefixes. In addition, if a prefix falls under the functional class, it should be compatible with the AR analysis. To confirm that all prefixes can be analyzed based on the combination of Nagano's (2011a, 2013a, 2013b) and Emonds' (2005) studies, we will examine prepositional prefixes in the rest of this paper. First, we classify prepositional prefixes in section 5. Then, we examine whether they can participate in either compounding or AR in sections 6 and 7.

5. Observation: Lexical and Functional Prepositional Prefixes

This section classifies prepositional prefixes with recourse to CR. We found that many complex words with prepositional prefixes can undergo CR, but the examples with *out-* cannot when the prefix has the meaning of 'surpass.'

Let us observe the examples that can undergo CR:^{2, 3}

- (15) a. Geographically, the research focuses on two geographical areas, up- and low-country.
(Dulna Karunarathna (2014) *Imaging the Role of Women in Changing Social-Cultural Contexts*, p. i)
- b. ? The 2016 results are being updated and loaded to the events page.
(<http://firstrespondergames.com/>)
- (16) a. ... its importance has been both over- and underestimated, ...
(Brian L. Silver (1998) *The Ascent of Science*, p. xiii)
- b. Hotelrooms could be over- and doublebooked!
(https://www.tripadvisor.com.au/ShowUserReviews-g187870-d233932-r195134556-Hotel_Tre_Archi-Venice_Veneto.html)
- (17) a. Please remember the season, don't overdrink and eat, look after your cat, and may she long look after you.
(<http://www.jaguarforums.com/forum/xj-xj12-x305-57/where-have->

² The examples cited from the Internet were last accessed on May 25th, 2017. We underlined the expressions in question.

³ Our informants point out that (15b) is not good as (15a) but is still acceptable.

all-big-cats-gone-154789/)

- b. I now know how much overate and drank in my previous life!
(<http://www.sterlingclinics.co.uk/ian-lost-6st-in-23-weeks/>)
- (18) a. [Control] of capital allocation to prevent under- and over-commitments to physical plant. (OED, s.v. *over-*)
b. ... the under and fore-part of the cheek (OED, s.v. *orbital*)
- (19) a. The appointment of a labour master to superintend the out and in-door labour of the poor of the union. (OED, s.v. *labour*, n)
b. Sometimes it [*sc.* rebuilding] is only taken to be the un moulding of the frame and the stripping of the out and in-board work.
(OED, s.v. *outboard*)
- (20) Much of the latter capability is due to the fighter's .. ability to fuse information gathered by on and offboard sensors. (OED, s.v. *off-board*)

In (15a), for example, the words *up-country* and *low-country* are coordinated, and the common part *country* is deleted in the left conjunct. Likewise, the complex words with *over-* in (16) and (20) can undergo CR. As we have already seen in section 2, these behaviors in CR indicate that the complex words in question are compounds. Thus, the relevant prefixes can be considered to be lexemes, and accordingly, they can be called lexical prepositional prefixes.

Unlike these lexical prepositional prefixes, the prefix *out-* with the meaning of 'surpass' behaves as a functional category. Let us observe the following examples:

- (21) a. Mary outran and outswam Bill.
b. * Mary out-ran and -swam Bill.
(Sadler and Arnold (1994:208))

The prefix *out-* in (21a) has the meaning of 'surpass' in that the expression *outrun and outswim Bill* means 'run and swim faster or further than Bill.' The CR of the two verbs results in an ungrammatical expression as shown in (21b). This example shows that the complex words are not compounds. Accordingly, *out-* with the 'surpass' meaning can be regarded as a functional prefix.

6. Proposal

In the previous section, we have observed that prepositional prefixes are also

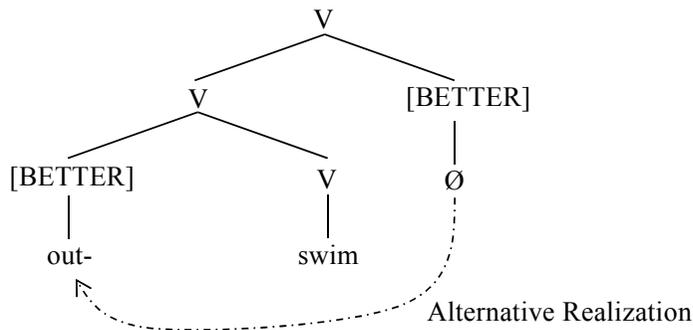
classified into lexical and functional prefixes. Under the framework of Emonds (2000), lexical prepositional prefixes can be analyzed as lexical prepositions, which undergo Deep Insertion and form compounds.

Let us turn to *out-* with the meaning ‘surpass.’ If it is a functional prefix and undergoes AR, the prefix is a semi-lexical preposition in the Syntacticon. This means that the prefix should be fully characterized by syntactic features. To identify the features that *out-* realizes, let us carefully examine its meaning. As mentioned in the previous section, *out-* expresses surpassing or superiority in some properties. These meanings can be reduced to ‘better.’ In fact, *swim better* in (22a), for example, can be paraphrased as *out-swim* without major semantic change, as in (22b).

- (22) a. ... animals that aren’t fish but can still swim better than plankton
 (Susan Milius (2007) ‘What’s going on down there?’, *Science News* 171.7, 107-109; underlining ours)
- b. ... animals that aren’t fish but can still outswim plankton

Given these examples, we propose that *out-* realizes the same syntactic features as those related to *better*. More precisely, *out-* realizes the features including [MANNER, EVALUATIVE, COMPARATIVE, POSITIVE]. Consequently, the verb *outswim* can be analyzed as in (23), where the features are represented by [BETTER].

(23)



The feature complex [BETTER] occurs in the post verbal position, where the features are interpreted at LF. After Spell-Out, [BETTER] is alternatively realized by the phonological form *out-* in the pre-verbal position.

7. Evidence

7.1. Zero-Nominalization

In the previous section, we proposed that while lexical prepositional prefixes undergo Deep Insertion, the functional prepositional prefix *out-* undergoes AR. This analysis predicts that the complex words with lexical prepositional prefixes can, but those with functional prepositional prefixes cannot, undergo pre-Spell-Out processes such as zero-nominalization (or V-to-N conversion).⁴ This prediction is borne out. The verbs with the prepositional prefixes that are unambiguously lexical can undergo zero-nominalization, as shown in (24) and (25).

- (24) a. *overdrink*_V
 ‘To drink more than one should (usually with reference to alcohol); to carry on drinking until one is drunk.’ (OED, s.v. *overdrink*, v.)
- b. *overdrink*_N
 ‘Excessive drinking, drunkenness.’ (OED, s.v. *overdrink*, n.)
- (25) a. *update*_V
 ‘To supply (a person) with the most recent information; to bring (a person) up to date.’ (OED, s.v. *update*, v.)
- b. *update*_N
 ‘The action or result of updating; the supplying of new information, data, etc.’ (OED, s.v. *update*, n.)

In contrast, the verb *outswim*, where *out-* has the meaning of ‘surpass’ as indicated in (26a), cannot be changed into a noun with that meaning as in (26b).

- (26) a. *outswim*_V
 ‘To surpass in swimming; to swim better, faster, or further than’
 (OED, s.v. *outswim*, v.)
- b. *outswim*_N
 * ‘an act of outswimming; an act of swimming better or faster than someone’

Furthermore, if a verbal form is ambiguous between ‘spatial’ and ‘surpass’ meanings,

⁴ Within the framework of Emonds (2000), Naya (2016) proposes that V-to-N conversion is the process where a silent nominal element is attached to a verb at the level of Deep Insertion. If one assumes a zero nominal suffix that has the same grammatical status as that of overt nominalizers like *-ment* and *-ation*, the zero suffix undergoes Deep Insertion or Syntactic Insertion (see Emonds (2000:section 4.7.2) for the analysis of overt nominalization). That is, the attachment of the zero suffix occurs before Spell-Out. Accordingly, it is safe to say that zero-nominalization is a pre-Spell-Out process.

its nominal counterpart is predicted to only have the ‘spatial’ meaning. For example, the verb *outrun* is an ambiguous verb as shown in (27). When it is turned into a noun, the noun has the spatial meaning in (28a) but lacks the ‘surpass’ meaning in (28b).

(27) *outrun*_V
 ‘To outdo or outstrip in running, to run faster or farther than; to leave behind by superior speed; hence, to escape or elude.’
 (OED, s.v. *outrun*, v)

(28) *out-run*_N
 a. ‘The act or fact of running out; spec. the outward run of sheepdog.’
 (OED, s.v. *out-run*, n)
 b. * ‘an act of outrunning; an act of running better or faster than (someone)’

These examples support the proposed analysis, where lexical prepositional prefixes are inserted before Spell-out and *out-* ‘surpass’ is phonologically realized after Spell-Out.

7.2. *The Dichotomy of Lexical Items and the Semantics of Over-*

In our proposal, spatial prepositions are regarded as a lexeme, specifically, a lexical preposition. One may argue against this analysis based on the semantic properties of prefixes. For example, the prefix *over-* has the meaning of ‘excess’ but the free form *over* lacks this meaning. Based on this semantic difference, one may argue that the prefix should be distinguished from the free form and regards it as a functional category (cf. Iwata (2004)).⁵ Under this analysis, complex words with *over-* ‘excess’ cannot be regarded as compounds.

However, the meanings of a lexical item that can be observed only in complex words do not necessarily suggest the independence of the item from its free-form counterpart. Namiki (2010:2384) argues that a lexeme can have the special meaning that it has only when it is used in compound-final position, which is called the “compound-specific submeaning.” The word *itiryuu* in Japanese, for example, has such a submeaning. Let us observe the examples in (29).

(29) a. *itiryuu-no* *sikaisya* [phrasal]
 first class-GEN master of ceremonies
 ‘a first-class master of ceremonies’ (Namiki (2010:2381))

⁵ Note that one can argue that the meaning of the prefix *over-* is still predictable from that of the preposition *over*. See Kaga (2007), among others, for the discussion.

- b. *rousi-itiryuu-no aironii* [compound]
 Rousi-unique-GEN irony
 ‘irony unique to Rousi’
 (Namiki (1996:312), cited from Namiki (2010))

In the phrasal use in (29a), *itiryuu* has the meaning in (30a). In the compound in (29b), the word has the special meaning in (30b).

- (30) a. first-class, excellence
 b. specific to ..., particular to ..., unique to ...; the left-hand element of a compound is limited to human nouns
 (Namiki (2010:2384))

The meaning in (30b) can be observed only when it is used as the compound-final constituent. However, the complex word in (29b) *rousi-itiryuu* is still a compound. Consequently, *itiryuu* is a lexeme even when it is used with the meaning in (30b). Given this analysis, we can say that a given lexical item is not necessarily a functional item even when it is used in a complex word and has a special meaning.

Although Namiki (2010) assumes that such special meanings are observed in compound-final position, it is not strange to argue that an element in the non-final position of a complex word can have special meanings. For example, Booij (2010) points out that *bloed* ‘blood,’ *dol* ‘mad,’ and *kots* ‘vomit’ in Dutch can have the emphatic meaning ‘very’ only when they are used in the left-hand constituents of complex words, as shown in (31).

- (31) a. *bloed* ‘blood’
bloed-serieus ‘very serious,’ *bloed-link* ‘very risky’
 b. *dol* ‘mad’
dol-blij ‘very happy,’ *dol-gelukkig* ‘very happy’
 c. *kots* ‘vomit’
kots-misselijk ‘very sick,’ *kots-beu* ‘very tired of’
 (Booij (2010:56))

This emphatic meaning is not available outside complex words. Accordingly, the meaning can be regarded as a submeaning that the lexical items in question can have only when they are in the left-hand position of complex words. Importantly, the complex words in (31) are still analyzed as compounds and thus, the left-hand constituents are lexemes. These examples suggest that left-hand elements can have

compound-specific submeanings.

Turning back to the preposition *over(-)*, we can regard the meaning ‘excess’ as its compound specific submeaning. Therefore, the semantic specialty of *over* in complex words does not necessarily mean that the item is an independent element (i.e., a functional item) from its free-form counterpart. As a result, *over(-)* can be analyzed as a lexeme even when it has the meaning of ‘surpass.’

8. Concluding Remarks

By combining Nagano’s (2011a, 2013a, 2013b) and Emonds’ (2005) studies, we have proposed a new analysis of prefixes and prefixation. Prefixes are divided into two classes, i.e. lexical prefixes and functional prefixes. While lexical prefixes undergo Deep Insertion and form compounds, functional prefixes alternatively realize some syntactic features after Spell-Out.

Along with the prefixes examined by Nagano (2011a, 2013a, 2013b) and Emonds (2005), prepositional prefixes can also be classified into the two types. In addition, they can be analyzed in the same way as the case of other prefixes. Lexical prepositional prefixes, which typically have spatial meanings, are lexical preposition and undergo Deep Insertion. The functional prepositional prefix *out-*, which has the meaning ‘surpass,’ is analyzed as a semi-lexical preposition in the Syntacticon and alternatively realizes the features containing [MANNER, EVALUATIVE, COMPARATIVE, POSITIVE].

This study has a theoretically important consequence; if prefixation is regarded as either compounding or AR, then it has no role in derivational morphology. In other words, prefixes do not have category-changing function. As a result, we can attribute category-changing function only to suffixation (see Nagano (2011b)). This further leads to the simplification of derivational morphology in that it exclusively functions to change one category to another category. Thus, to retrieve prefixation from derivational morphology is not only empirically but also theoretically preferable.

REFERENCES

- Bauer, Laurie (2003) “English Preposition — A Typological Shift?” *Acta Linguistica Hungarica* 50, 33-40.
- Booij, Geert (2010) *Construction Morphology*, Oxford University Press, Oxford.
- Bresnan, Joan (1973) “Syntax of the Comparative Clause Construction in English,” *Linguistic Inquiry* 4, 275-343.
- Carlson, Greg and Thomas Roeper (1980) “Morphology and Subcategorization: Case and the Unmarked Complex Verb,” *Lexical Grammar*, ed. by Michael Moortgat, Teun Hoekstra, and Harry van der Hulst, 123-164, Foris, Dordrecht.
- Emonds, Joseph E. (2000) *Lexicon and Grammar: The English Syntacticon*, Mouton de Gruyter,

- Berlin.
- Emonds, Joseph E. (2001) "The Flat Structure Economy of Semi-Lexical Heads," *Semi-lexical Categories*, ed. by Norbert Corver and Henk van Riemsdijk, 23-66, Mouton de Gruyter, Berlin.
- Emonds, Joseph E. (2005) "The Computational Lexicon," *English Linguistics* 22, 232-266.
- Ishikawa, Kazuhisa (2000) "A Local Relation between Particles and Verbal Prefixes in English," *English Linguistics* 17, 249-275.
- Iwata, Seizi (2004) "Over-Prefixation: A Lexical Constructional Approach," *English Language and Linguistics* 8, 239-292.
- Kaga, Nobuhiro (2007) "Settoji *Over-* to Imiyakuwari (The Prefix *Over-* and Semantic Roles)," *Eigo to Bunpo to: Suzuki Hidekazu Kyoju Kanreki Kinen Ronbunshu* (English and Grammar: A Festschrift for Prof. Hidekazu Suzuki on the Occasion of His Sixtieth Birthday), ed. by Akira Mizokoshi, Hiromi Onozuka, Shigeyuki Fujimoto, Nobuhiro Kaga, Toshiaki Nishihara, Makoto Kondo, and Michiyo Hamasaki, 133-144, Kaitakusha, Tokyo.
- Kastovsky, Dieter (2013) "English Prefixation: A Historical Sketch," *Historical English Word-Formation and Semantics*, ed. by Jacek Fisiak and Magdalena Bator, 9-30, Peter Lang, Frankfurt am Main.
- Kenesei, István (2007) "Semiwords and Affixoids: The Territory between Word and Affix," *Acta Linguistica Hungarica* 54, 263-293.
- Keyser, Samuel and Thomas Roeper (1992) "Re: The Abstract Clitic Hypothesis," *Linguistic Inquiry* 23, 89-125.
- Nagano, Akiko (2011a) "Relationships Between Prefixation, Suffixation, and Compounding," *Kotoba no Zizitu o Mitumete: Gengo Kenkyuu no Riron to Zissen* (Facing the Facts of Language: Theory and Practice of Linguistic Research), ed. by Kyoko Sato, Hisako Ikawa, Yoshie Suzuki, Takako Furuya, Akemi Matsuya, Haruko Miyakoda and Yoshiko Morita, 90-100, Kaitakusha, Tokyo.
- Nagano, Akiko (2011b) "The Right-Headedness of Morphology and the Status and Development of Category-Determining Prefixes in English," *English Language and Linguistics* 15, 61-83.
- Nagano, Akiko (2013a) "Hukugoo to Hasei no Kyookai to Eigo no Settoozu (The Boundary between Derivation and Compounding, and English Prefixes)," *Seisei Gengo Kenkyuu no Ima* (The Current Stage of the Studies in Generative Grammar), ed. by Masayuki Ikeuchi and Takuya Goro, 145-161, Hituzi Syobo, Tokyo.
- Nagano, Akiko (2013b) "Morphology of Direct Modification," *English Linguistics* 30, 111-150.
- Namiki, Takayasu (1996) "Review of Taro Kageyama (1993) *Bunpoo to Gokeese*," *Eibungaku Kenkyuu* (Studies in English Literature) 72, 309-313.
- Namiki, Takayasu (2010) "Morphological Variation in Japanese Compounds: The Case of *Hoodai* and the Notion of "Compound-Specific Submeaning," *Lingua* 120, 2367-2387.
- Naya, Ryohei (2016) "Deverbal Noun-Forming Processes in English," *English Linguistics* 33, 36-68.
- Nishiyama, Kunio (2016) "The Theoretical Status of *Ren'yoo* (stem) in Japanese Verbal Morphology,"

Morphology, 65-90.

Olsen, Susan (2014) "Delineating Derivation and Compounding," *The Oxford Handbook of Derivational Morphology*, ed. by Rochelle Lieber and Pavol Štekauer, 26-49, Oxford University Press, Oxford.

Sadler, Louisa and Douglas J. Arnold (1994) "Prenominal Adjectives and the Phrasal/Lexical Distinction," *Journal of Linguistics* 30, 187-226.

Scalise, Sergio (1984) *Generative Morphology*, Foris, Dordrecht.

DICTIONARIES

OED: *Oxford English Dictionary* on-line, Oxford University Press, available at <http://www.oed.com/>

(Haruki Isono)

Doctoral Program in Literature and Linguistics

University of Tsukuba

e-mail: st_one99@icloud.com

(Hiroko Wakamatsu)

Doctoral Program in Literature and Linguistics

University of Tsukuba

e-mail: h.wakamatsu@gmail.com

(Ryohei Naya)

Doctoral Program in Literature and Linguistics

University of Tsukuba

e-mail: naya.ryohei@gmail.com