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Korean Morphological Collocations: Theoretical and Descriptive Implications*

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Abstract. Phrasemes are often characterized as constrained multiword expressions, like *spill the beans* (idiom) or *black coffee* (collocation), and the very term *phraseology* seems to imply that this phenomenon is restricted to phrases only. Consequently, morphological compounds, like *highbrow* or *bookstore*, are usually excluded from the scope of phraseological studies. Phrasemes, however, are not necessarily phrases (syntactically connected wordforms). In Korean, in particular, many compounds have to be analyzed and modeled as phrasemes. Like their phrasal counterparts, Korean compound phrasemes can be either semantically compositional or non-compositional. This paper deals with the first class of such compounds, which we term *morphological collocations*. It begins with a presentation of basic phraseological notions (section 1). Then, Korean morphological collocations are introduced (section 2), followed by descriptive repercussions exemplified with the lexicographic modeling of the phraseology of Korean nouns denoting body elements (section 3). The conclusion summarizes theoretical and practical implications of this study (section 4).

Keywords: phrasal *vs.* morphological collocation, Korean, body element noun.

1 Background notions

Before we start, we need to clarify important notions on which this paper is based, focusing on the notion of functional collocation (1.1). Considerations on language discrepancies in regards to collocational phenomena will follow (1.2).¹

1.1 Functional collocations

It is a well-known fact that the literature on phraseology features two distinct, though related notions of collocations, that can be termed:

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- *frequency-based collocations* [1, 2];
- *functional collocations* [3, 4].

While frequency-based collocations can loosely be characterized as word combinations that are recurrent in texts, the notion of functional collocations is better understood in reference to how they are typically produced by the Speaker.² As our study is based on functional collocations, it is important that we propose a definition of this latter notion.

A *collocation* – in the functional sense – is a linguistic expression AB (or BA) that the Speaker assembles by freely selecting A to express its meaning ‘ A ’, while B is selected in order to express a particular meaning ‘ m ’ according to combinatorial constraints imposed by A .
 A collocation is thus a semi-phraseological expression. A is called the *base* of the collocation and B the *collocate* of the base A .

For instance, *puppy love* ‘intense and often short-lasting love of a very young person’ is a collocation whose base is the noun *love* and collocate *puppy*. Clearly, *puppy* is here functionally dependent on *love*: it is a combinatorial property of the lexeme LOVE_N to select *puppy* as syntactic modifier as a means of expressing the specific meaning ‘[love] that is intense and often short-lasting, as experienced by a very young person’.³

The above definition of the notion of functional collocation shows that collocations are semantically compositional (though phraseological) expressions: they are assembled by the Speaker. In this respect, they are distinct from idioms, such as *blow the whistle*, *can of worms*, *on the spot*, etc. Idioms are not Speaker’s constructs: they are full-fledged lexical units, that happen to be formally expressed by phrases instead of wordforms.⁴

Though extremely varied in terms of formal structure and semantic content, many collocations are based on universal **collocational patterns** known as *standard syntagmatic lexical functions* [5–7]. The system is too rich to be introduced here; suffice it to indicate that standard syntagmatic lexical functions are used to encode collocations controlled by the keywords of lexicographic articles [4].

Let us examine two well-known collocational patterns and their encoding by means of lexical functions, illustrating each case with collocations whose base is SIGH_N – i.e. collocations that are encoded in the lexicographic article for SIGH_N in order to account for its combinatorial properties.⁵

² The term *Speaker*, written with an initial capital, refers to the producer of a given utterance, in contrast with *speaker of a language*.

³ The lexicographic name of a lexical unit – i.e. its basic form as headword of a lexicographic article – is written here in small capitals. The part of speech ($N_{[\text{oun}]}$, $V_{[\text{erb}]}$, etc.) is specified in subscript when necessary: LOVE_V *vs.* LOVE_N .

⁴ See section 2.1 below for a definition of the notion of wordform.

⁵ Collocations encoded below were extracted from the article for SIGH_N in the *The BBI Combinatory Dictionary of English* [8].

- Syntactic modifiers expressing intensification of the keyword’s meaning are encoded by the lexical function **Magn**; in the article for $SIGH_N$, this gives:

Magn: *audible; deep, profound*

- Support verbs⁶ that take the keyword as first complement and the keyword’s first actant as subject are encoded by the lexical function **Oper₁**; in the article for $SIGH_N$, this gives:

Oper₁: *to give, to let out [a ~]; to breathe, to heave [a ~] | for ~ of relief*

Lexical functions have been extensively used to formally encode collocations in lexical models such as: (i) *Explanatory Combinatorial Dictionaries* [9] and (ii) *Lexical Systems*, i.e. lexical networks structured by the system of Meaning-Text lexical functions [10].

1.2 Language-dependent properties of collocational patterns

An interesting and challenging aspect of collocational patterns is that – though universal in principle – they are influenced by the grammatical characteristics of each individual language. For instance, while **Magn** collocates (intensifiers) of nouns are prototypical syntactic modifiers, they are often not presented as such in Korean dictionaries when the collocate is an adjectival predicate. In Korean, the default syntactic position of an adjectival predicate is that of syntactic governor of the sentence, with the first semantic actant of the adjective expressed as grammatical subject. Consequently, (1a) below is a much more natural way of presenting a collocation in a Korean collocation dictionary than (1b):

- (1) a. *Gaseumi pungmanhada*
bosom+SUB be.ample+PRES+DECL
‘Somebody has a large bosom’
- b. *pungmanhan gaseum*
be.ample+MOD bosom
‘large bosom’

To some extent, the notion of **Magn** has to be somehow tailored for Korean, by considering that a prototypical **Magn** is either a syntactic modifier of the keyword or, in the case of predicative adjectives, a syntactic governor of the keyword, that functions as its grammatical subject.

The present paper is dealing with another, far more striking, specificity of collocational phenomena in Korean: the omnipresence of *morphological collocations*. The existence of morphological collocations has strong implications on the structuring of the Korean lexis, that ought to be taken into consideration both for lexicographic modeling and for the processing of Korean phraseology.

Phraseological discrepancies between natural languages are the first target of comparative approaches to the study of collocations. This paper is based on the outcome of research focusing on the comparison between Korean and French

⁶ Support (or light) verbs are collocates that act as syntactic governors of the keyword without adding any significant meaning to it in the context of the collocation.

collocations [11].⁷ We believe that the specific problems posed by morphological collocations in Korean, as well as the notion of morphological collocation, have been overlooked in the past and we hope our work will partly remedy this situation.

2 Morphological collocations in Korean

2.1 Phraseologization in wordforms

We have introduced collocations in section 1 as a special type of compositional phrasemes. The notion and the classification of phrasemes, including collocations, was explained at the level of phrases. Multilexicality, the first necessary condition for phrasemes, is generally applied in the context of phrase. In this section, we show that phraseologization in Korean is also possible at the level of *wordforms* and that Korean compound lexemes can be analyzed as phrasemes. Note that, in our terminology, a wordform is not just a *word form* (a linguistic signifier). It is a full-fledged linguistic sign: i.e. a triplet constituted of a given signified, a given signifier and a given combinatorics.⁸ Wordforms can thus be conceived of as “desambiguated word forms.”

To illustrate phraseologization in Korean wordforms, we start with collocations controlled by the lexeme BI ‘rain’ (i.e. collocations whose base is BI). In particular, we are focusing on collocations expressing the de-intensification of the meaning of this lexeme, such as in (2) below.

- (2) *Biga buseulgeorinda*
rain+SUB produce.lightly+PRES+DECL
‘The rain is light’

In (2), the verb BUSEULGEORIDA⁹ is selected restrictedly – according to BI’s combinatorial properties – to express simultaneously ‘takes place’, i.e. to function as syntactic governor of the sentence, and to de-intensify the meaning of BI. In terms of Meaning-Text lexical functions, it corresponds to the configuration of standard lexical functions **AntiMagn+Func₀**.

De-intensification of the noun BI can also be expressed as a single **AntiMagn**, using the verb BUSEULGEORIDA as collocative modifier:

- (3) *buseulgeorineun bi*
produce.lightly+MOD rain
‘light rain’

⁷ On collocations for this language pair, see for instance [12].

⁸ “A wordform is a segmental sign that is more or less autonomous in [a given natural language] **L** and not representable in terms of other (previously established) wordforms” [13, p. 30].

⁹ *Buseulgeorida* is the infinitive of the verb – and its lexicographic name (BUSEULGEORIDA) –, while *buseulgeorinda* in (2) is a tensed form (present).

alternative realizations, one can compare the wordform in (7) and its phrasal counterpart in (8):

- (7) *sandeulbaram* [Asyntactic morphological collocation Adv_{root}+N]
 softly+wind
 ‘light wind’
- (8) *sandeulgeorineun baram* [Phrasal collocation V $\xleftarrow{\text{mod.}}$ N]
 produce.softly+MOD wind
 ‘light wind’

As illustrated with the above examples, both asyntactic and syntactic compounding in Korean can give rise to semi-phraseological units, i.e. collocations whose base is their morphological head: *buseulbi*, *keunbi*, *danbi*, *jangdaebi*, *iseulbi*, etc. These semantically compositional phrasemes are by no means lexicalized entities (= lexical units). In other words, it would be very counterintuitive to consider a proliferation of quasi-synonyms of BI: *BUSEULBI, *KEUNBI, *DANBI, *JANGDAEBI, *ISEULBI, etc. One should rather envisage a single lexical unit BI, that controls (i.e. is the base of) multiple collocations that are constructed either syntagmatically (9) or morphologically (10):

- | | | | | |
|-----|------------------------|-----------|------|-----------------|
| (9) | <i>buseulgeorineun</i> | <i>bi</i> | (10) | <i>buseulbi</i> |
| | produce.lightly+MOD | rain | | lightly+rain |
| | ‘light rain’ | | | ‘light rain’ |

We shall call constructs such as (9) *phrasal collocations* and constructs such as (10) *morphological collocations*.

Morphological collocations are multilexical, semantically compositional and non-free (more precisely, semi-fixed) expressions, same as phrasal collocations. Discrepancy in the level of phraseologization makes it necessary to distinguish between morphological collocations and two types of formally comparable compounds: free compounds (section 2.2 below) and lexicalized compounds (2.3).

2.2 Free compounds

The term *morphological collocation* is strictly restricted to compounds that are indeed semantically compositional **and semi-phraseological** (semi-fixed). Morphological collocations have to be distinguished from *free compounds* [19, p. 274]. The latter are compounds freely assembled by the Speaker, based on morphological rules of the grammar, the choice of each element of the compounds to lexicalize the corresponding meaning being performed independently. (There is no base-collocate functional organization in free compounds.)

Wordforms (11a) below are free compounds whose morphological head is *bi* ‘rain’; conversely, (11b) shows free compounds with *yeoreum* ‘summer’ as morphological modifier:

- (11) a. *sigolbi*; *saebyeokbi*; *bambi*
 countryside+rain; dawn+rain; night+rain
 ‘countryside/dawn/night rain’
 b. *yeoreumnaj*; *yeoreumbam*; *yeoreumeumsik*
 summer+day; summer+night; summer+food
 ‘summer day/night/food’

As stated earlier, these compounds are made up of two nouns that are chosen unrestrictedly by the Speaker. The two nominal components are freely selected and combined according to Korean grammatical rules that build N+N wordforms.

2.3 Lexicalized compounds

In contrast with free compounds, *lexicalized compounds* – e.g. the Korean compounds listed in (12a–c) below – are not assembled by the Speaker. They are diachronically lexicalized and belong to the lexicon prior to their use.

- (12) a. *jakeunabeoji*
 be.small+MOD+father
 ‘uncle younger than one’s father’
 b. *keunabeoji*
 be.big+MOD+father
 ‘uncle older than one’s father’
 c. *heulkbi*
 soil+rain
 ‘dust storm’

Languages differ considerably as regards to compounding. While Korean – like Chinese [20], German, etc. – manifests both free and lexicalized compounding, other languages, such as French, possess only the latter type of compounding – see the French lexicalized compounds in (13a–b).¹¹

- (13) a. *tire-bouchon*
 [it] pulls+cork
 ‘corkscrew’
 b. *grand-père*
 big+father
 ‘grandfather’

The idiomaticity of lexicalized compounds has been extensively studied by Korean linguists at the expense of free compounds. This may explain why Korean morphological collocations – on which we focus here – are also barely studied and are modeled in an erratic way (section 3.2): morphological collocations can be viewed as phraseology that “takes advantage” of the presence of free compounding in the grammar of the language.

This concludes our presentation of the notion of morphological collocation in Korean and its comparison with related phrasal and morphological constructs;

¹¹ Of course, it is possible to generate new compounds in French, that will be considered neologistic until they eventually become lexicalized.

see Annex at the end of the paper for a synthetic recapitulation of important notions that have just been introduced.¹² We can now proceed with the topic of the modeling of Korean collocations.

3 Descriptive implications: Korean body element nouns

3.1 Lexicon of body element nouns in Korean

To show phraseologization in wordforms as well as in phrases in Korean, we choose the lexicon of *body element nouns*.¹³ The scope of this study is restricted to human external body element nouns, that are neutrally used: IP ‘mouth’ (not its familiar counterpart JUDUNGI), BAE ‘belly’ (not WI ‘stomach’, that denotes an internal body element), etc. We extracted about 200 entries that designate human external body elements from the entries of *Pyojun Gukeo Daesajeon*, hereafter PGD¹⁴ – see Table 1.

Head	Limbs	Trunk	Whole body
103 entries	44 entries	30 entries	18 entries

Table 1. Localization of external body elements denoted by entries in PGD

Body element nouns draw our attention not only by their lexical abundance but also by the abundance of phraseology they display. First of all, they control a lot of collocations that describe quantification, position, appearance, function, structure, mobility, etc. of body elements:¹⁵

- (14) a. *soni gopda*
 hands+SUB be.comely+INF
 ‘hands to be beautiful’

¹² For lack of space, we leave aside the interaction of the above classification of compounds with interesting descriptive notions that have been put forward in the study of semantic classes of compounds. Such is the case of the distinction between *endocentric compounds* – compounds whose semantic head is lexicalized in the compound structure (e.g. *drawbridge*, for ‘**bridge** that ...’) – and *exocentric compounds* – compounds that do not display such lexicalization of their semantic head (e.g. *pick-pocket*, for ‘**thief** that ...’). On the distinction between these two semantic classes of compounds, see [21–23].

¹³ We deliberately use the term *body element* rather than *body part*, as the former is a more general term than the latter. For instance, a leg is a body part, but not a tooth or an eye. By contrast, legs, teeth, eyes, etc. are all body elements.

¹⁴ *Pyojun Gukeo Daesajeon* ‘Standard dictionary of Korean language’, National Institute of Korean Language, <http://stdweb2.korean.go.kr/main.jsp>.

¹⁵ For a semantic classification of the collocations controlled by Korean body element nouns, see [11], where a list of 725 phrasal collocations controlled by body element nouns is presented.

- b. *soneul naemilda*
hands+ACC hold.out+INF
'to hold out hands [to shake hands]'
- c. *soneul naejeosda*
hands+ACC wave+INF
'to wave hands in order to deny'
- d. *soneul heundeulda*
hands+ACC wave+INF
'to wave hands in order to greet'

A considerable number of Korean **idioms** also include body element nouns:¹⁶

- (15)
- a. *soni keuda*
hands+SUB be.big+INF
'to be generous'
 - b. *soni jakda*
hands+SUB be.small+INF
'to be stingy'
 - c. *soni maepda*
hands+SUB be.spicy+INF
'hit done with the hands to be painful'
 - d. *soneul nohda*
hands+ACC put+INF
'to stop the work'
 - e. *soneul ssisda*
hands+ACC wash+INF
'to cut off negative relations'

Expressions such as (15a,b,d,e) above are in fact structurally (and semantically) ambiguous: *soni keuda*, for instance, can be analyzed either as a collocation that describes the dimension of hands or, as glossed in (15a), as an idiom.¹⁷

This study focuses on the description of morphological collocations controlled by Korean body element nouns, i.e. semi-phraseological compounds whose semantic pivot is a body element noun (section 2 above).

3.2 Inconsistencies in dictionaries and lexical resources

In a lexicographic project, identifying which lexical items should appear as dictionary entries is more perplexing when one treats compounds or derivatives in languages where compounding and derivation are highly productive. As we have seen in section 2, there are three main types of compounds in Korean. These compounds need to receive lexicographic description that reflect their respective status, which is far from being the case in standard dictionaries. For example, we

¹⁶ H.-S. Kim constructed a list of 2,585 Korean idioms, of which 798 idioms include body elements nouns [24].

¹⁷ Only *soni maepda* (15c) does not display such ambiguity.

can find as **entries** in PGD the following lexical items that designate the nose and nose elements:¹⁸

<i>ko</i>	‘nose’
<i>koan</i>	(nose+inside) ‘inside of the nose’
<i>koeonjeori</i>	(nose+surround) ‘side of the nose’
<i>koheori</i>	(nose+middle part) ‘middle part of the nose’
<i>kokkeut</i>	(nose+tip) ‘tip of the nose’
<i>kosbangul</i>	(nose+bell) ‘rounded sides of the nose’
<i>kosdae</i>	(nose+stem) ‘nasal bridge’
<i>kosdeung</i>	(nose+upper part) ‘nasal bridge’
<i>kosgumeoong</i>	(nose+hole) ‘nostril as opening’
<i>kosmaru</i>	(nose+ridge) ‘ridge of the nose’
<i>kosnal</i>	(nose+blade) ‘nasal bridge’
<i>kossok</i>	(nose+inside) ‘inside of the nose’
<i>koteol</i>	(nose+hair) ‘nose hair’

Table 2. Entries for nouns denoting nose and nose elements in PGD

Even though PGD treats all these compounds as entries, their lexical status are not same. Some compounds, like *koan* ‘inside of the nose’ and *koeonjeori* ‘side of the nose’, can be analyzed as free compounds. Speakers can assemble them freely: *ipeonjeori* (mouth+side), *ipan* (mouth+inside), etc. Other compounds, like *kosbangul* ‘rounded sides of the nose’ and *kosnal* ‘nasal bridge’, are better analyzed as lexicalized compounds.

In addition to compounds such as those presented in Table 2 above, one can find in PGD compounds that describe shapes of the nose and that are of two different structural types.

Firstly, there are compounds that consist of adjectival or adverbial root and *ko* ‘nose’ – i.e. based on the **Adj/Adv_{root}+N** compounding pattern:

- (16) a. *oddukko*
highly+nose
‘high-bridged nose’
- b. *napjakko*
flat+nose
‘flat nose’
- c. *ppyojokko*
pointedly+nose
‘pointed nose’

These compounds are semi-phraseological units, i.e. morphological collocations. Take *napjakko*, for example. The standard way to describe its lexicalization is to consider that the Speaker chooses the base of the collocation – in our case, *ko*

¹⁸ Entries are listed in alphabetical order of transliterations.

‘nose’ – and then the collocate *napjak* is selected according to this base in order to express the meaning ‘that is flat’ next to the base. Such compounds should be modeled as being “assembled” by the Speaker, due to their compositional (though semi-phraseological) nature; they should not possess their own lexicographic entry and should rather be accounted for as combinatorial properties of their base.

Secondly, there are compounds that consist of a noun and *ko* – i.e. based on the N+N compounding pattern:

- (17) a. *maeburiko*
hawk.beak+nose
‘aquiline nose’
b. *jumeokko*
fist+nose
‘bulbous nose’
c. *deulchangko*
pushed.up.window+nose
‘upturned nose’

In Korean compounds of the N+N form, the second noun is always a *semantic pivot* and the first noun is a modifier [25]. In (17a–c), the second noun (*ko*) is freely chosen by Speaker and the first noun (*maeburi*, *jumeok*, *deulchang*) is selected in a restricted way of express a specific type of nose shape. Such compounds should clearly be analyzed and modeled as morphological collocations.

In contrast, there exist some clearly lexicalized compounds that are not to be treated as compositional constructs, such as:

- (18) *ddalgiko*
strawberry+nose
‘rosacea (= chronic inflammatory condition of the nose)’

The semantic pivot of this compound is not the meaning expressed by *ko*, but the semanteme ‘disease’. Lexicalized compounds like (18) are genuine lexical units in Korean, that have to possess their own entry in Korean dictionaries and other lexicographic models.

3.3 Proposal for lexicographic modeling of Korean compounding

Even though all compounds mentioned in section 3.2 possess their own entry in a Korean dictionary such as PGD, we have seen that they correspond to three distinct types of complex wordforms: free compounds like *koan* ‘inside of the nose’, morphological collocation like *maeburiko* ‘aquiline nose’ and lexicalized compound like *ddalgiko* ‘rosacea’. This section examines how to model these different compounds in a coherent and systematic way.

First of all, it should be stressed that free compounds should not be registered as dictionary entries. Speakers can freely produce countless compounds of that type according to general grammar rules of the language. For the sake of economy

(and theoretical relevance), one should exclude from lexical models' wordlist free compounds, such as *koan*, *koeonjeori*, *kokkeut* and *kossok* listed in Table 2 above.

Morphological collocations, as well, do not possess a status of a full-fledged lexical unit. They are assembled by the Speaker according to combinatorial properties of their base. We therefore propose to describe not only phrasal collocations, but also morphological collocations in the entry for the base, as shown in Table 3.

KO 'nose'
~ <i>ga oddukhada</i> 'nose to be high-bridged'
~ <i>ga napjakhada</i> 'nose to be flat'
~ <i>ga mungtukhada</i> 'nose to be blunt'
~ <i>leul golda</i> 'to snore'
~ <i>leul japda</i> 'to hold one's nose [for protection against a bad smell]'
(...)
<i>oddok</i> ~ 'flat nose'
<i>napjak</i> ~ 'high-bridged nose'
<i>ppyojok</i> ~ 'pointed nose'
<i>jumeok</i> ~ 'bulbous nose'
<i>maeburi</i> ~ 'aquiline nose'

Table 3. Phrasal and morphological collocations to appear in the entry for KO 'nose'

Lexicalized compounds, finally, are non-compositional prefabricated morphological phrasemes¹⁹, and they have to possess their individual entry in lexical models.

To sum up, a proper diagnosis of the linguistic nature of compounds has strong incidence on the structure and content of dictionaries and lexical databases. Let us look back at the statistics presented in Table 1 (section 3.1). According to our classification of compounds, we can exclude about 20 lexicographic entries from the 103 entries in PGD that denote elements of the head: free compounds like *ipsok* 'inside of the mouth' and morphological collocations like *wisni* 'upper teeth' – the latter being accounted for in the entry for their base.

4 Conclusions

The aim of the present study was to examine Korean compounds from a phraseological point of view. This study has shown that phraseologization is possible in compound wordforms as well as in phrases.

The principal theoretical implication of this study is the distinction of Korean compounds according to the same criteria of phraseologization, i.e. restrictedness and compositionality. Korean has not only free compounds (*koan* 'inside of the

¹⁹ Morphological phrasemes are called *morphophrasemes* by D. Beck and I. Mel'čuk [26].

nose') and lexicalized compounds (*ddalgiko* 'rosacea'), but also semi-restricted and compositional compounds (*napjakko* 'flat nose'), that we term *morphological collocations*.

This research has several practical applications. Firstly, it helps to understand how to describe different types of compounds according to their lexical status in a systematic and exhaustive way in dictionaries, or any lexical resources. Secondly, it contributes to an efficient teaching and learning method of morphological collocations: teaching or learning morphological collocations along with phrasal collocations under the base will be more efficient than teaching or learning these compounds separately.

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Annex: Korean constructs introduced in section 2

Constructs	Examples
Phrasal collocation	<p>비가 부슬거리다 <i>biga</i> <i>buseulgeorida</i> rain+SUB produce.lightly+INF ‘The rain is light’</p>
	<p>부슬거리는 비 <i>buseulgeorineun</i> <i>bi</i> be.thin+MOD rain ‘light rain’</p>
Morphological collocation	<p>부슬비 <i>buseulbi</i> thinly+rain ‘light rain’</p>
	<p>큰비 <i>keunbi</i> be.big+MOD+rain ‘heavy rain’</p>
	<p>장대비 <i>jangdaebi</i> stick+rain ‘torrential rain’</p>
Free compound	<p>밤비 <i>bambi</i> night+rain ‘night rain’</p>
Lexicalized compound	<p>흙비 <i>heulkbi</i> soil+rain ‘dust storm’</p>