

A Corpus-Based Study of the Literal vs. Metaphorical Meanings of the Terms *Meli* ‘Head’, *Kasum* ‘Chest/Breast’, and *Maum* ‘Mind’ in Korean*

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1. Introduction

In recent decades, metaphor Theory (MT) has influenced on the study of metaphorically extended meanings of many lexical items and grammatical constructions in cognitive linguistics (Lakoff & Johnson 1980, Kövecses 2002, Sweetser and Dancigier 2014). Among many studies in MT, much research has been carried out on body-part terms such as head, heart, hand, and foot in expressing metonymic and metaphorical notions as embodied expressions (Kövecses 2010, Lakoff & Johnson 1980, Lakoff 1987, etc.). Much cognitive linguistic research has shown that the *head* is closely related to intellectual abilities, the *heart* to emotional feelings, and the abstract notion *mind* is a cover term for mental and emotional abilities and processes (Athanasiadou & Tabakowska 1998m Berendt & Tanita 2011, Kövecses 2002, Niemeier 2000, Perez 2008, Yu 1995, 1998). In everyday language, the three lexical items are used interchangeably or distinctly in expressing such mental capacities and activities. MT claims that metaphorical meanings can be explained in terms of the mapping between abstract notions in the target domain and terms for concrete objects in the source domain. Adopting this claim, a number of cognitive linguists have carried out research on metaphorical expressions, producing many fruitful results. However, it has been pointed out that one of the major problems of metaphor theoretical analyses lack empirical evidence for their claims. Deignan (2005)

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claims that metaphor-theoretical analyses of lexical items or grammatical constructions should be supported by empirical evidence for proper understanding. Deignan (2005, 2008), and Stefanowitsch and Gries (2006) claim that many instances of metaphor and metonymy should be explained through an examination of corpus data to be empirical evidence. In the last few years, a number of research on metaphorical expressions have been carried by adopting the methods of corpus linguistics, as a way of providing empirical evidence for the claims made in MT.

The purpose of this research is to explore literal vs. metaphoric meanings of the body-part terms *meli* 'head' and *kasum* 'chest/breast', and the abstract concept *maum* 'mind' in Korean in terms of corpus linguistics and MT (Perez 2008, Berendt and Tanita 2011)². More specifically, this research examines the meanings and uses of the term *meli* 'head' as a locus for reasoning and exerting intellectual abilities. It also examines literal and metaphoric meanings of *kasum* 'chest/ breast', and its related terms the Sino-Korean term *simcang* 'heart' and *ces-kasum* 'milk-breast'. After that, this research explores the meanings of the Korean lexical item *maum* 'mind', an abstract cover term for intellectual and emotional mental activities, addressing questions such as: (i) how the abstract notion *maum* is expressed in terms of concrete terms in Korean? (ii) what lexical items co-occur with *maum*?, (iii) what metaphors are at work in figurative meanings of *maum*? This research will use a Korean written corpus data, focusing on co-occurrence relations and collocation patterns of the three terms with subjects and predicates (Deignan 2005, Stefanowitsch & Gries 2006). First, this study analyzes tokens of the three terms in terms of literal vs. metaphorical uses, claiming that they show different degrees of metaphoricity, and thus metaphoricity should be viewed as a cline on the continuum. Second, this paper explores how intellectual vs. emotional feelings are expressed in the three terms.

Examination of the three terms in the database shows some

² These three terms are all pure Korean lexical items. Chinese characters for these terms can make a great number of words and compounds. In the present research Chinese-based words are excluded for convenience.

similarities and differences in expressing intellectual and emotional capacities and processes, unlike the observations in some other languages, as in the following: (i) intellectual abilities and reasoning are usually expressed in terms of *meli*, as in the fixed expressions *meli-ka cohta/napputa* ‘he is bright/stupid’, (ii) the Sino-Korean term heart *simcang* is used literally as a technical term in medical contexts, (iii) *ces-kasum* is used literally to refer to a woman’s breast, (iv) *kasum* is used to refer not only to the upper body part literally but also to an entity as a locus and perceiver of emotion/feelings metaphorically, (v) *maum* is a cover term not only for denoting intellectual and emotional abilities but also to refer to mental functions for cognitive processes for willing to do something and making one’s ethical, moral judgement, and so on.

Furthermore, this research explores metaphorical uses of *meli*, *kasum*, and *maum*. Examination shows the following results: (i) the frequency of the figurative use of *meli* is limited, with the rate of 5%, (ii) *kasum* is frequently used to express emotions/feelings, being viewed as a locus for emotion. As these findings show, in Korean, as folk knowledge contrary to the scientific knowledge of the brain/head, *kasum* is viewed as a locus or perceiver for emotional feelings in response to physical/physiological stimuli. (iii) *maum* is viewed as a concrete entity such as a container or location where abstract notions as concrete objects can be put into or stored. Finally, this research shows that in Korean the three related terms *meli* and *kasum*, and *maum* play an important role in expressing intellectual abilities and emotional feelings, displaying conceptual metaphorical meanings derived from mapping entities in the target domain and concrete objects in the source domain.

2. Context of the Research

In the study of word meanings, formal approaches, often based on the researchers' intuition, have been dominant in the last decades. However, in recent decades, corpus linguistics has established itself as a new research paradigm, providing a way

of characterizing word meanings in the context where they are used (Biber, Conrad, and Reppen 1998, Kennedy 1998, Hunston & Francis 2000, etc.). So far, corpus linguistics has explored many topics in the research in lexical semantics and grammar constructions in terms of language use and empirical evidence based on statistical analysis of corpora made of selection of vast amount of language data. Influenced by corpus-based research, many cognitive linguists have carried out many corpus-based studies of grammatical constructions, exploring cognitive aspects of grammar (Stefanowitsch & Greis 2006, Greis & Stefanowitsch 2006, cf. Barlow & Kemmer 2000).

Corpus linguistics functions as a useful tool in exploring similarity or difference between synonymous words or closely related constructions by examining their frequency, co-occurrence relations, and collocation patterns in the given corpus. So far, many researchers have carried out a number of studies in lexical semantics, grammar, historical linguistics, language acquisition, second language learning/teaching, and so on (Altenberg & Granger 2002, Biber et al. 1998, Hunston & Francis 2000, Kennedy 1998, McEnery et al. 2006, Partington 1998, Stefanowitsch & Gries 2006, Teubert & Krishnamurthy 2007).

In lexical semantics, diversity of meanings has been described in terms such as polysemy, synonymy, and homonymy, and so on. But traditional approaches to word meanings has certain limitation in dealing with the issues of polysemy, only describing diverse meanings of given words. Since 1980s, metaphor theory in cognitive linguistics has provided a new way of exploring word meanings, particularly figurative meanings. Metaphor Theory (MT) claims that figurative meanings are expressed by matching abstract concepts (i.e., the target domain) to concrete objects (i.e., the source domain), establishing one-to-one correspondence relations between the target domain and the source domain (Johnson 1987, 2007, Kövecses 2002, Lakoff 1987, 1993, Lakoff & Johnson 1980, Lakoff and Turner 1989). By applying MT, many linguists have characterized not

only literal meanings but also figurative meanings of given words. To characterize diverse meanings, this research attempts to apply MT how the figurative meanings of *meli*, *kasum* and *maum* are expressed in the text.

To characterize the meanings of *meli*, *kasum* and *maum*, we need to make a distinction between ordinary language expressions and scientific expressions. As is well known, in formal approaches to languages, logicians and philosophers make a distinction between an object language and a metalanguage. Such a distinction is proposed on the belief that natural languages as object languages are not reliable to express truth conditions of events which can be determined by scientifically verified knowledge. However, natural languages are full of expressions which are based on our folk knowledge. Cognitive linguistics claim that such expressions come from the way of representing what we perceive in our daily life, not coming from the knowledge of scientific discovery of the world (cf. Croft and Cruse 2004, Langacker 1987, 1991, 2008, Taylor 2002). Examination of such expressions coming from folk knowledge can reveal how we perceive things and events and represent them in the world, addressing the fundamental question about the relationship between perception and expression.

In recent years, many researchers have paid attention to the meanings of body-part terms as a way of exploring the subjective nature of language and the embodied nature of language. Some of them have explored metonymic/metaphoric uses of the heart from the cognitive perspective of metaphor theory (Berendt and Tanita 2011, Niemeier 2000, Perez 2008, Yu 1995, 1998). They have shown that in many languages the head is related to rational reasoning but the heart or the belly is viewed as a site of emotions. They have shown that in Japanese expressions with *hara* ‘belly/stomach’ and *jai* ‘heart’ in Thai tend to display both rationalistic and emotive aspects in discourse. Such research has shown that languages differ in the use of body part terms in expressing rationalistic and emotive

aspects in language.

In this line of research, the present research attempts to characterize the literal and figurative meanings of *meli*, *kasum* and *maum* in Korean through an analysis of a Korean written corpus.

3. Database and Methods of Analysis

To characterize the meanings and uses of the three lexical items *meli*, *kasum* and *maum* in Korean, we analysed the tokens of the three items in a Korean written corpus. The corpus analyzed is the Sejong Project Corpus constructed by the National Institute of the Korean Language. Among the corpus, this research uses the magazine corpus, a subset of the original data, to make the data manageable for qualitative and quantitative analyses of the tokens for the three lexical items.³ Examination of the corpus shows the number of the tokens of *meli* amounts to 996, *kasum* 1,150, and *maum* 3742 times.⁴ As chest-related terms, *simchang* 'heart' occurs 175 times, and *ceskasum* 'milk-breast' occurs 16 times in the present data. [Table 1] is the summary of the tokens to be analyzed and discussed in the next sections.

[Table 1]. Tokens of *maum*, *meli*, *kasum*, *simchang*, and *ceskasum*

<i>maum</i> 'mind'	3,742
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³ If we use the corpus, the tokens for *meli* occurs 22,211 times, *kasum* 13631 times, *maum* 34,765 times in the written corpus. But these numbers of tokens include homonyms, errors, single words, and so on. For qualitative and quantitative analyses of these tokens, we have to manually check all the tokens and exclude homonyms, errors, single words for proper research. For these reasons, this research uses only the magazine corpus, which is relatively manageable for the present research.

⁴ In the magazine data, the original numbers of the tokens for *kasum* amounts to 1,234, *meli* 1,883, *maum* 4022 times. When we exclude homonyms, compounds, single words without context, errors, we have these numbers. The original number for *simchang* occurs 345 times, but when we exclude compound nouns, single words, and errors, we have only 175 tokens.

<i>meli</i> 'head'	996
<i>kasum</i> 'chest/breast'	1,150
<i>simcang</i> 'heart'	175
<i>ceskasum</i> 'milk-breast'	16
Total	6,079

[Table 1] shows the distribution of *meli*, *maum*, *kasum* and its related words (i.e., *simcang* and *ceskasum*) in the present database. Among these, *maum* is the most widely used words in Korean. Among the number of chest/breast-related words, *kasum* is the most widely used words in Korean. The frequency rates of the *simcang* and *ceskasum* are relatively very low, when we compare them with the frequency of *kasum* in the database. Based on these statistics, we will explore meanings and uses of *meli*, *kasum* and *maum*.

In analyzing the present database, we will focus on the co-occurrence relations, paying attention to the predicates which cooccur with *meli*, *kasum* and *maum*, exploring literal vs. metaphorical meanings of the three lexical items and chest-related terms.

4. Analysis of the Meanings and Uses of *Meli* ‘Head’

First, let us examine the frequency of the word *meli*. The raw number of *meli* tokens in the magazine corpus amounts to 1,883. In Korean, *meli* is ambiguous referring to ‘head’ or ‘hair’, not making a clear distinction between the two meanings, unlike in English. When we exclude the ‘hair’ tokens of *meli*, compounds, repetitions, single words without context, and errors, we have 996 tokens remaining. Based on this number, let us consider the meanings and uses of *meli*. Examination shows the following distribution of meanings of *meli*.

[Table 2]. Distribution of the meanings of <i>meli</i> .	
physical body part	572 (57.4%)

mental abilities, sensory responses	373 (37.5%)
metaphorical meanings	51 (5.1%)
Total	996 (100%)

As shown in [Table 2], *meli* is most frequently used to refer to a physical body part, with the frequency rate of 57.4% (i.e., 572 out of the total of 996 cases). *Meli* is also used to denote abstract, mental activities or intellectual abilities, with the rate of 37.5%. Among these 4.6% (i.e., 46 tokens) are used to signal sensory or emotional feelings such as anger, headache, dizziness, etc. However, *meli* is rarely used with metaphorical meanings.

First, *meli* is used with literal meaning to refer to the physical top part of a human or animal body. Sometimes, *meli* also refers to a bald head, being used interchangeably with *taymeli* ‘bald head’. When *meli* is used literally, it is often accompanied by possessives or adjectives which describe the physical aspects of the head. In English, the collocated words are adjectives such as bald, shaved, small, big etc., and verbs such as poke, put, stick, turn, raise, bow, drop, nod, shake, etc., Likewise, in Korean, similar adjectives and verbs are used. Sometimes the following expressions are used with their literal meanings or metaphorically extended meanings: *meli-lul swukita* (머리를 숙이다) bend one's head, *meli-lul kkatukita* (머리를 끄덕이다) nod one's head, *meli-lul naymilta* (머리를 내밀다) poke one's head/ show up, *meli-lul mactayta* (머리를 맞대다) put your heads together (=reason together), and so on.

Second, *meli* is used to denote mental processes or intellectual abilities. Physically, *meli* is the top body part, but one of the main functions of the head is its ability for controlling mental or cognitive processes, manipulating physical movements or expressing emotional feelings, and so on. In this respect, when the word head is used to denote the mind-related meanings, the collocated words in English are as in the following: (i) ADJ: clear, cool, level | good, (ii) (a) VERB + HEAD: use | enter | get it into | put sth into | get sth out of, put

sth out of | bother, (b) HEAD + VERB: spin, (iii) PREP: in your ~, inside your ~, (iv) PHRASES: can't get your head round sth, need your head examined. Likewise, in Korean, *meli* often cooccurs with the following adjectives, denoting metaphorical meanings: *nayngcenghan* (냉정한) 'cool'(-->'cool head'), *chakawun* (차가운) 'cold' (-->'cold head (i.e., sharp head/mind), *cohun* (좋은) 'good' (-->'good head/smart mind', *yenglihan* (영리한) 'smart' (-->'smart head'), *nappun* (나쁜) 'bad' (-->'bad head/stupid person') are used.⁵

Third, *meli* is often used to denote the extended, metaphorical meanings, but the frequency in the present database is very low compared to other uses, as shown in [Table 2]. As a physical body part, *meli* 'head' is the top part of a body. So, the semantic feature 'top part' is metaphorically extended to the top part of groups/organizations, events, or things, comparing them to a human body.⁶ In Korean, this kind of metaphorical use is not common, but we can find such examples in the present database, as in (1).

- (1) a. 겨울눈을 머리에 두르고 솟아있는 장엄한 산
the soaring magnificent mountain, the head of which
is covered with winter snow.
b. 책/소설 첫머리
The preface/the first passage of the book/novel.

5 The following expressions are used to denote mind-related meanings, more or less metaphorically: 머리가 굳다 hard understanding, 머리가 깨끗해지다 have a clear head/mind, 머리가 돌다 off one's mind, 머리가 잘 돌아가다 be quick in mental processing, 머리를 식히다 cool one's head/calm down, 머리에 떠오르다 come into one's head, etc. As these expressions show, *meli* is frequently used to show mind-related processing or intellectual ability.

6 According to Oxford Collocation Dictionary (2002), in English, when head is used to denote metonymic or figurative meanings, it is found in the following patterns: (i) ADJ.: deputy | departmental | nominal, titular | crowned, (ii) HEAD + NOUN: gardener, teacher, waiter | boy, girl (iii) PHRASES: a head of department, the head of the family, a head of government/state, a head of (the) household.

As shown in (1a), the peak of the mountain, as the top part of it, is viewed as the head of the mountain. In (1b), the preface or the first/top part of the book/novel is treated as the 'head' of the content of the book/novel. Some other nouns used figuratively with *meli* are the bow ship, the edge of a table, the head of a flower, and so on.

5. Analysis of the Meanings and Uses of *Kasum* and its Related Words *Simcang* and *Ces-kasum*

In Section 3, we have seen the frequency of *kasum* and its related terms *simcang* and *ces-kasum*. As has been shown earlier, the tokens of *kasum* occurs 1,150 times, showing the highest frequency rate among the three lexical items. In Korean, *kasum* is used a cover term for the English words 'heart', 'chest', 'breast', 'bosom', and 'bust' as equivalent expressions. In English, 'chest' is used to refer to the front part of a human body between one's neck and one's stomach, usually being defined as a literal, referential meaning. 'Breast' is defined usually as woman's chest that produce milk when she has a baby. 'Bosom' shares the meanings with 'breast' in many ways when the 'breast' and 'bosom' refer to (i) the front part of a woman's chest, (ii) a woman's breast, and (iii) someone's feelings and emotions. 'Heart', on the other hand, refers not only to the organ inside the chest in a literal sense but also as the center for a person's feelings. In everyday life, we frequently use expressions such as "I love you with all my heart", "my heart sank", "his heart broke with the sad news", and so on, showing that the heart is used to express emotional feelings. Thus, in cognitive linguistics, the term 'heart' has been widely explored as a body part term for the locus of emotional feelings. In Korean, on the other hand, all these and many other expressions are translated with the term *kasum* 'chest', not with *simcang* 'heart'. Bearing this difference in mind, let us examine the meanings of *kasum*, *simcang*, and *ceskasum* in more detail.

First, let us examine tokens of *kasum* in the database, paying attention to the distribution of the meanings of *kasum*. The meaning of *kasum* can be divided into the following three categories: (I) the central physical part of the body, (II) physiological responses of the central body part, (III) metaphorically extended meanings, expressing emotional feelings. Examination of the database shows the following distribution of the meanings of *kasum*.

[Table 2]. Distribution of the meanings of *kasum*.

Literal, referential meanings	282 (24.2%)
Physiological responses	183 (15.7%)
Extended abstract meanings	700 (60.1%)
Total	1165 (100%)

As shown in [Table 2], the frequency rate of the literal use of *kasum* amounts to 24.2% (282 cases out of the total of 1,165). The rate of the use of extended meanings amounts to 60.1% (700 cases), doubling the rate of the referential, literal meanings. [Table 2] shows that *kasum* is much more widely used to express extended meanings which result from physiological responses than to express literal meanings in referring to the specific physical body part. Bearing this distribution of meanings in mind, let us examine the meanings in more detail.

First, when *kasum* is used literally to a body part, the referential meanings can be divided into three: (i) the physical human body part chest from the neck to the stomach (or inside of the chest) (173 tokens), (ii) woman's breast, including 16 instances of the word *ces-kasum* 'milk breast', suggesting that in Korean *kasum* or *ceskasum* are used interchangeably in referring to a woman's breast (102 instances), and (iii) the animal body part of animals (three tokens). The following are some examples of the literal meanings of *kasum*.

(2) (i) 오른 손을 아기의 가슴 위에 얹는다.

[She] put her right hand on the chest of the baby.

(ii) 가슴 성형수술을 하는 모델들도 적지 않다.

There are not few models who do the plastic surgery of the breast.

(iii) 암사슴처럼 보이는 것이 가슴을 적시며 ... 강을 건너왔다.

'An [animal] that looked like a doe, wetting its chest, came crossing the river.

Second, *kasum* is used to refer to physiological responses caused by emotional feelings. When *kasum* is to signal physiological responses, it co-occurs with certain specific predicates such as *ttukepta* 'hot', *ttattushata* 'warm', *pwuphwulta* (부풀다) 'swollen', *pekchata* (벽차다) 'be overfilled', *okulatulta* (오그라들다) 'be shrunk', *thecita* (터지다) 'broken', *ppwuteshata* (뿌듯하다) 'be satisfied', *thata* (타다) 'burning', *colita* (졸이다) 'pressing' and so on. When people experience emotional moments, they have physiological symptoms such as the beating or pounding of the heart, the rising or falling of the body temperature, shortness of breath, or high blood pressure, and so on. These symptoms are controlled by the brain in the head, and they are displayed by the functions of the heart, lungs, blood vessels, skins, and other related organs. However, in our language, these symptoms are described in terms of the responses of the chest in our body. So, in Korean, such responses are expressed by accompanying predicates as we have just seen. The following are some examples which express the physiological responses of *kasum* 'chest' in Korean:

(3) (i) 터질 듯 부푼 가슴 안고 ...

with the swollen chest [=heart] as if it is breaking

(ii) 가슴 떨리는 두려움...

chest-trembling fear

(iii) 가슴 두근거리는 사랑 이야기...

the chest-throbbing [heart-throbbing] love story

Third, *kasum* is used to express extended or figurative meanings

with the frequency of 60.1% (i.e., 700 tokens out of the 1,165 cases). That is, when *kasum* is used to denote figurative meanings, *kasum* is used to signal emotional feelings or it is often viewed as locus for emotion. This use is closely related to physiological responses of the chest and emotional feelings, often expressed with predicates such as *aphuta* (아프다) ‘sick/aching’ and *sellyeta* (설레다) ‘moving’. That is, *kasum* is used metaphorically in the sense that *kasum* is viewed as a locus for emotion, treating *kasum* as a place where emotional feelings come or the most important area or point with which the feelings are associated. In treating *kasum* as a locus for emotional feelings, *kasum* usually takes locative or directional cases in Korean. *Kasum* is also viewed in a metaphorical sense as entities or concrete objects which can be covered, carved, scratched, opened, placed, contained, and so on. In that sense, some of the tokens of *kasum* are viewed as containers which something can be put into, placed in, or stored, as shown in (4):

- (4) (i) 그녀의 가슴을 분노로 들끓었다.
 Her chest [=heart, mind] boiled [overflowed] with anger.
 (ii) 기도가 가슴 깊은 곳으로부터 자꾸만 터져 나왔다.
 Prayers kept coming out from the deep of the chest
 [=heart, mind].

Fourth, let us examine the meanings and uses of the lexical item *simcang* ‘heart’. As we have seen, *simcang* ‘heart’ occurs 175 times in the present data. In English, the meanings of ‘heart’ are so diverse that most of the English dictionaries provide diverse definitions and idiomatic expressions.⁷ In Korean, on the other hand, the lexical item *simcang* ‘heart’ has limited meanings and uses. Korean does not have

⁷ For example, LDCE provides the following definitions: (i) the organ in your chest which pumps blood through your body, (ii) emotions/love: the part of you that feels strong emotions and feelings, (iii) your chest: the part of your chest near your heart, (iv) important part of sth: the most important or central part of a problem, question etc., (v) encouragement: confidence and courage, among others. In addition to these, the dictionary provides 28 examples of ‘heart’ which is used in idiomatic expressions.

a pure Korean word for the heart, but *simcang* is a borrowed word from China, and it is composed of the two characters, i.e., *sim* 'mind' and *cang* 'storage/hiding place'. So the combination can be translated as 'a storage/hiding place of mind' as the original, literal meaning in Chinese.

Examination of the database shows that 151 cases (86.3%) out of the total of 175 tokens of *simcang* are used literally to refer to the heart, the organ in the chest which pumps blood through the human body. Such uses of *simcang* can be found in examples in (5).

(5) (i) 심장 뛰는 소리가 들렸다.

The sound of heart beating was heard.

(ii) 오늘은 13개월 된 예진이가 심장수술을 받는 날이다.

Today is the day for a heart operation for Yejin, [the] 13-month old [baby].

As shown in (5), *simcang* is used to refer to the heart as a body part, describing physical responses, health problems or diseases. This fact suggests that most of the tokens of *simcang* in Korean, unlike *heart* in English, are used literally to refer to the body part heart.

Simcang is also used figuratively, though the number of tokens is limited, i.e., only occurring 24 times (13.7%). More specifically, *simcang* is used figuratively to represent the center of some objects or it denotes the mind itself, as shown in (6).⁸

(6) (i) 알고리즘은 프로그램의 심장부이다.

The algorithm is heart [part] of the program.

(ii) 필승불패의 신념을 심장에 아로새기며...

carving on the heart the belief of always-winning and never-failing

As shown in (6), in Korean, *simcang* is used figuratively to refer to the essential part of an object or to describe mental or emotional

⁸ For the convenience, only the underlined parts are translated into English.

feelings. That is, in Korean, *simcang* is directly related to some emotional feelings such as happiness, surprise, anger, and sadness, and it responds to such feelings. When people feel such emotions, the responses of *simcang* are described with expressions such as *ttyuta* 'beat', *twukunkelita* 'pound', *okulatulta* 'shrink', *kotongchita* 'pound', *makhita* 'be clogged', etc. are common predicates which co-occur with *simcang*, constituting collocational patterns.

So far, we have seen the statistical distribution of the meanings of *kasum* in the database. As has been discussed, the meanings of *kasum* can be divided broadly into two: (I) literal meanings and (II) extended or figurative meanings. The former can be subdivided into the following three categories: (i) examples of *kasum* which refer the physical body part between the neck and the stomach, (ii) the physical responses of the body part, particularly the movement of the heart, and (iii) woman's breast, often interchangeably used with *ces-kasum* 'milk-breast'. The latter also can be divided into two: (i) tokens of *kasum* which express emotional feelings caused by physiological responses, and (ii) examples of *kasum* which describe abstract aspects of the functions of the body part chest/breast. More specifically, the former use of *kasum* is to refer to the outer or internal body part chest or a woman's breast and its accompanying physical responses such as beating and pounding of the heart. The latter use of *kasum* is to express extended meanings of the body part *kasum* by describing emotional feelings caused by the physiological responses. The latter use also includes tokens which express *kasum* as a body part which controls or is controlled by cognitive or sensual processes, denoting abstract concepts and emotional feelings. It also refers to the cases where *kasum* is viewed as a locus or entities/objects in a metaphorical sense. Examination of the literal vs. extended meanings has shown that the frequency rate of the literal use is 24.2 %, and when we include the physiological responses to the literal use, it amounts to 39.9%. Examination shows that the frequency rate for figurative use of *kasum* amounts to 60.1%, exceeding the rate of the literal use. This fact indicates the importance of *kasum* in expressing extended meanings, denoting

physiological responses and emotional feelings in the use of *kasum*. We also have seen that in English the term *heart* is widely used to denote emotional feelings, but that the equivalent Korean lexical item *simcang* is used most frequently to refer to the physical body part heart.

6. Analysis of the Meanings and Uses of *Maum* 'Mind'

As we have seen in Section 3, *maum* and is the most widely used lexical item among the three, occurring 3,742 times in the present database. In English, mind is defined as the ability to think and imagine, character, intelligence, or intelligent person. In Korean, the meanings and use of the abstract noun *maum* 'mind' is very close to those of English. So, in Korean, *maum* is defined as one's character, will/intention, ability to think, memorize, feel emotions, conscience, judgement to do good or evil, insight, and so on. Examination shows that the main meanings of *maum* can be broadly categorized into the following: (i) intelligence or one's ability to think and imagine, (ii) one's character, showing such properties as kindness or cruelty, (iii) one's will or intention to do something, (iv) the locus for emotional feelings, and (v) one's moral judgement or one's propensity for good or bad behaviors. Bearing this in mind, let us consider meanings of the term *maum* in more detail.

First, *maum* is used to denote one's intelligence or ability to think and imagine as a human specific ability to acquire knowledge and control cognitive processes.

- (7) (i) 우리는 느낌과 생각을 여러 방식으로 일깨우고,
마음속에 생생하게 떠오르는 그 느낌과 생각을
여러 가지 방식으로 표현해 냈다.
'We expressed the feelings and thoughts... in many ways
which vividly occur in the mind.'
- (ii) [브랜드는] 소비자들의 마음속에 독특한 이미지를
구축한다.
'Brands constructs specific images in the minds of

consumers.

Second, *maum* is used to show one's character, signalling the way to think and behave in a good or bad way, as the examples in (8) show:

- (8) (i) 수난을 함께 겪었던 그 때는 마음들이 지금보다 훨씬 순수하고 고왔던 것 같습니다.
(ii) 내 처가 외모는 조금 못났지만 마음만은 비단결이란다.
'My wife, although she is a bit homely, has the mind as soft as silk.'
(iii) 그 사람 마음 착해질는지 악독해 질는지....
[We don't know] whether his mind will become good or evil...

Third, *maum* is used to denote one's will or intention to do, plan, decide on something,

- (9) (i) 그러나 마음먹은 대로 잘 되지 않았다.
But things didn't go well as he made up his mind.
(ii) 수강생 마음대로 선택할 수 있는 강의 시간.
The class schedule which students can choose at their own mind/will [as they wish].
(iii) 남성이 마음만 먹으면 무슨 일이든 여성보다 잘 할 수 있는 것이다.
Once man makes up his mind, he can do better whatever he does.

As shown in (9), *maum* is used to signal one's will or intention to do something. In English, such a meaning is expressed in the phrases such as 'make/set up one's mind' and 'at one's own will'. Likewise, in Korean, *maum-ul mekta* 'make/set up one's mind' and *maum-taylo* 'at one's own will' are used.

Fourth, *maum* is used to signal the locus for emotional feelings

such as affection, kindness, comfort, discomfort,

- (10) (i) 저녁빛에 마음 두근거리려 흔들림으로써...
Being shaken by the pounding of the mind (<--heart) at the evening sunshine.
- (ii) 마음속에는 심히 불안하면서도 대단한 희망에 넘치는 것을 느꼈다.
In my mind, I felt worried deeply and had the feeling of overflowing great hope.
- (iii) 친구들 앞에서 떨리는 마음으로 발표를 하고, ...
After making a presentation before my friends with trembling mind (=heart).

As shown in (10), *maum* is used to denote the place for emotional feelings such as anxiety, uncomfortableness, worry, and so on. Some other expressions are *maum-i aphuta* ‘the mind(=heart) aches’, *원망하는 마음* ‘resenting mind’, *병든 마음* ‘sickening mind’, *마음에 들다* ‘get an affective mind’, and so on. As the translation shows, when *maum* is used to denote the locus for emotions, it can be used with *kasum* interchangeably in many cases.

Fifth, *maum* denotes one’s moral judgement, the intention to do good or evil, or the potential possibility for carrying out moral or immoral things. So one

- (11) (i) 마음속에 나쁜 생각이 생기면 ‘초자아’가 그 것을 막습니다. ...
When you have a bad thought in your mind, the ‘superego’ prevent it.
- (ii) 수많은 사람들이 마음을 다스리겠다고 명상에 집착하는 데는 이유가 있다.
There is a reason for a great number of people to devote themselves to meditation.
- (iii) 그 사람들 마음에 아무런 원한이나 적의, 살기가 없으니까...
In those people’s mind, they don’t have any hatred,

enmity, or a violent temper.

As shown in (11), *maum* is the place for making a moral judgement and the place where good or evil thoughts reside in or come from. People can practice their mind for the goodness of other people and seeking goodness by training their mind. To express such meanings, *maum* is used.

7. Analysis of Figurative Meanings: Folk Model vs. Cognitive Analysis of Conceptual Metaphors

As has been discussed, the body part terms *meli* and *kasum* are used not only to refer to concrete, physical body parts but also to denote mental abilities and emotional feelings. The abstract term *maum*, on the other hand, is a cover term used to denote not only cognitive, intellectual abilities but also emotional feelings, overlapping its meanings with *meli* and *kasum* to a certain extent. In this regard, here let us consider the question of how we can understand the figurative uses of the three related lexical items.

First, let us explore the similarities and differences of the meanings of the three items. Above all, *meli* and *kasum* are physical body part terms but *maum* is an abstract cover term for describing mental abilities and cognitive and emotional processes in the brain. More specifically, *meli* is used to refer to the top part of a body, but when it is used abstractly it denotes one's intellectual abilities and cognitive processes in acquiring knowledge and making judgement of truth and cognitive processes in most cases, as shown in the fixed expressions *meli-ka cohta/napputa* 'he is bright/stupid'. Sometimes, it refers to physiological, sensory responses and emotional feelings though such instances are not that frequently found. *Kasum* is used to refer to the upper body part literally, but when it is used abstractly it usually indicates an entity as a locus and perceiver of emotional feelings, often being motivated by sensory, physiological responses, as shown in *kasum-i aphuta/selayta* 'the chest(=heart) is aching/moving'. As a related lexical item, the Sino-Korean term heart

simcang is used literally as a technical term in medical contexts. Another related term *ces-kasum* 'milk-breast' is used literally to refer to a woman's breast. *Maum* is used to describe not only intellectual and emotional abilities but also cognitive processes, controlling aspects, and intention and willingness, making an ethical judgement, and so on, as in *maum-taylo hata* 'do at one's mind (=will)' and *maum-ul mekta* 'make up one's mind'. Although it is an abstract term, *maum* is often viewed as a physical entity such as a container or controller/manipulator in expressing cognitive processes in concrete terms.

Second, the figurative meanings of *meli* and *kasum* can be explained from the perspective of a folk model. As has been discussed, *meli* denotes mental processes or intellectual abilities, and *kasum* expresses emotional feelings which result from the physiological responses caused by emotional stimuli. We cannot see mental, cognitive processes in the brain, but we sense the physical movement/responses of the internal organs such as the head, heart, lungs, and blood vessels when we experience mental processing of certain emotional feelings. In explaining figurative or metaphorically extended meanings of *meli* and *kasum*, the present research attempts to apply the folk model of the head as an entity for intelligence and the chest as a locus for emotions from a cognitive perspective. According to folk knowledge, *meli* is regarded as a locus for intelligence and cognition, and *kasum* for emotions. For example, although we know that the earth revolves around the sun and that the moon around the earth through scientific discovery, we still use expressions such as 'the sun rises/sets', 'the moon rises/sets'. Likewise, we know that brains are responsible for our cognitive and sensory processes, we still use expressions such as 'my heart is full of happiness/sadness', and so on. However, scientific research based on medical science, neurology, anatomy, and psychology has shown that our emotional as well as rational, cognitive processing is all controlled by the brain in our head. In spite of such scientific discovery, people express just what they feel and

believe in terms of traditional ordinary language.

In discussing metonymic and metaphorical explorations of the heart in English, Niemeier (2000:195) proposes “the folk model of the heart as the site of emotions.” She defines it “as the synthesis and simultaneously as the source of many clusters of metaphors and metonymies and also of many single individual metaphors and metonymies.” She also points out that “while the folk model of the heart as the site of emotions does not qualify as a cultural universal, it is nevertheless found in many different cultures.” When we accept her idea, *meli* and *kasum* in Korean can be explored in terms of the folk model that views *meli* ‘head’ as the site of intelligence, and the *kasum* chest/breast as the locus for emotions.

Third, the figurative meanings of *meli*, *kasum*, and *maum* can be explained in terms of Metaphor Theory (MT). In the last decades, MT has proven to be a useful and fruitful approach to the study of words through cognitive analysis of conceptual metaphors. MT claims that understanding metaphorically extended meanings can be facilitated by mapping the meaning of a concrete structure (the source domain) onto the abstract conceptual structure (the target domain). Lakoff and Johnson (1980) and Kövecses (2002) propose a variety of metaphors by matching the source domains and target domains. Lakoff and other researchers assume the notion of conceptual metaphor to be one global conceptual domain mapped on some other domain.

Firstly, *meli* is used metaphorically to represent the top part of some concrete objects in the world: the peak of mountains, the front part of a ship, the preface of a book, the front part of a field, and so on. As this list shows, *meli* cooccurs with certain specific words, and thus the frequency of the metaphorical meanings is very low, showing only 5.1% (i.e., 51 out of the total of 996 cases). The figurative meanings of head is derived from the metaphor THE TOP PART OF OBJECTS ARE THE HEAD OF A BODY. In the present database, we have the following examples: (i) pays-meli ‘the ‘head’ [front

part] of a ship (=bow), (ii) *papsang/chayksang meli* (밥상/책상 머리) ‘the ‘head’ of the dining/study table, (iii) *chayk ches meli* (책 첫머리) ‘preface (of a book)’, (iv) *path-meli* (밭머리) ‘the ‘head/margin’ of the field’, (v) *kkoch meli* (꽃머리) ‘the head of a flower’, among others. In English, we have examples such as ‘department head’, ‘head nurse’, ‘head office’, ‘headquarters’ and so on. These words have metaphorically extended meanings, being derived from the metaphors THE ORGANIZATION IS A BODY and THE PRIME LEADER OF THE ORGANIZATION IS THE HEAD. From these metaphors, we can derive the figurative meanings which view the leader of an organization as the head of a body.⁹

Secondly, the figurative meanings of *kasum* can be explained in terms of MT. That is, the figurative meanings of the chest are derived from the metaphor THE CHEST IS A SITE OF EMOTIONS. As we have seen, although the chest is a physical body part, it can be used interchangeably with mind when *kasum* is used with the metaphor MIND IS AN ENTITY. As a sub-model of this metaphor, we have the metaphor THE CHEST IS A CONTAINER FOR EMOTIONS. Examples in (12) show how the metaphors are at work in the metaphorical use of *kasum*.

- (12) (i) 지난 10년 동안 가슴 깊은 곳에 쌓여 있던 서럽고
아픈 감정이 용암처럼 폭발하고 있었다.

The sad and painful feelings which had been deposited in
the deep place of the chest (=mind) during the last ten

9 As noted earlier, this research only examines pure Korean words. In Korean, the Chinese characters 두(頭) and 수(首) ‘head’ are borrowed, and they are used frequently to make compounds such as *swu-kanhosa* ‘head nurse’. Another thing to be noted is that in Korean the departmental head is ‘부장’, which means ‘department aged person’. Such a difference in expressions between English and Korean is related to the fact the head of an organization is usually the oldest in the Korean society. The term ‘수장(首長)’, meaning ‘head+aged person’, well expresses an extended metaphorical and social meaning of the term *head*.

years were exploding like lava [from a volcano].

- (ii) 그녀와 지내는 동안 많은 얘기들을 나눴지만 가슴에
담아두었던 말들은 막상 주고받지 못했다.

While staying with her, although I shared/had many conversations with her, we didn't share the words placed/cherished in my chest (=mind).

As shown in (12), *kasum* as a physical body part is viewed as an abstract notion mind. And the mind is viewed as a site or place, being based on the MIND IS AN ENTITY metaphor. As the examples in (12) show, the emotions such as shame, pains, sadness are viewed as entities. Consequently, THE CHEST IS A SITE OF EMOTIONS. Furthermore, (9ii) is an example which views mind as a container, being based on THE CHEST IS A CONTAINER FOR EMOTIONS metaphor.

Another metaphor of the chest is derived from the metaphor THE CHEST AS AN ENTITY/OBJECT. In this metaphor, the chest as an object is viewed as a container which can be plastic, changeable, or flexible. The chest is also construed as a conduit which can be clogged or opened. It is also construed as an object which can be pierced or pricked. Examples in (13) show such a metaphoric use of the chest as an object.

- (13) (i) ... 한 섬세한 영혼이 타인의 닫힌 가슴을 어떻게 열 수
있는가 실감했습니다.

'I felt seriously how a fragile/delicate spirit can open another person's closed chest (=mind)' ...

- (ii) “ ... 해태전자 어떨 것 같아요?” 고객이 전화로 물어오면, 순간 가슴이 짹 막혔다.

“What about [the stock prices of] the Haitai Electronics Co?” When a customer asked [about the stock market], suddenly his chest got choiced/clogged.

- (iii) 무엇인가 그의 가슴을 후벼팠다. 사랑해, 사랑해, ...
Something poked/dug his chest. I love you, I love you....'

As shown in (13), the chest is used to denote mind, not to refer to a physical body part chest. As these examples show, when the chest as mind is construed as a concrete object, THE CHEST IS A CONCRETE OBJECT metaphor is at work for a proper interpretation of the examples in (13). That is, in (13i) the chest as a container can be opened (or closed), in (13ii) it is viewed as a conduit which can be clogged or opened, and in (13iii) it is construed as an object that can be poked or dug.

As another metaphor, the chest is construed as a temperature indicating or temperature-sensitive entity. In this regard, the following examples are possible based on THE CHEST IS TEMPERATURE metaphor.

- (14) (i) ... 멋쩍은 듯 머리를 긁적이시는 아빠를 보는 순간
나는 가슴이 뜨거워졌다.
 ‘At the moment when I saw Dad, who was scratching his hair shamefully, my chest(=heart) became hot.’
- (ii) 거세게 솟구치던 감정들이 그대로 얼어붙었다. 씨늘해진 가슴으로 그는 기다렸다.
 The wildly soaring feelings got frozen. With cooled/frozen chest(=chest), he waited.

As shown in (14), *kasum* is often used with temperature-denoting words: *ttukepta* ‘hot’, *ttattushata* ‘warm’, *silita* (시리다) ‘cold’, *sikta* (식다) ‘cool down’, and so on. This use of *kasum* as a temperature-sensitive object is based on THE CHEST IS TEMPERATURE metaphor.

Fourth, the figurative meanings of *maum* is derived from viewing the abstract concept as a concrete entity/object. As has been discussed, *maum* is defined as one’s character, will/intention, ability to think, memorize, feel emotions, conscience, judgement to do good or evil, insight, and so on. To represent such abstract notions, the abstract term *maum* is viewed as a concrete object such as a container, a storage, a conduit, and so on.

- (15) (i) 도와주는 마음가짐이 있어야 합니다.
 You should have the mind to help [others].
- (ii) 부인 이씨의 마음 한가운데에는 늘 미안함이 자리 잡고 있었다.
 Inside of her mind, Mrs. Lee kept the mind of being sorry.
- (iii) 멋진 당구 선수가 되기로 마음먹었어요.
 I make up my mind to be an excellent billiards player.
- (iv) 마음은 알지 못할 죄책감과 연민, 또 뜨거운 감정으로 가득 차오르면서...
 the mind overfilled with unknown sense of sinfulness, sympathy, and hot feelings

As shown in (15), *maum* is often viewed as a concrete object which one can have, control, and manipulate. That is, in (15i), one can have mind, in (15ii) and (15iv), mind is a concrete place or container which one keep emotions in it. In (15iii), mind is something you can eat, that is, you can make up your mind. As these examples shows, although *maum* is an abstract noun which represents mental, cognitive processes, it is treated as a concrete entity. These figurative uses of *maum* are derived from the following metaphors: (i) MIND IS A CONCRETE ENTITY, (ii) MIND IS A CONTAINER, (iii) MIND IS A STORAGE, and so on. In English, we have the same metaphors are at work. So, mind is frequently used in expressions such as ‘change one’s mind’, ‘make up one’s mind’, ‘have sb/sth in mind’, ‘bear/keep sb/sth in mind’, ‘get/[it sb/sth out of one’s mind’, ‘come/spring to mind’, and so on. These expressions shows that mind is an entity, a container, and a storage, and so on. As has been pointed out, when *kasum* and *maum* are viewed as a locus for emotions, they can be used interchangeably. So, in (15ii) and (15iv), *maum* can be used interchangeably with *kasum*.

8. Summary and Conclusions

So far, we have discussed the meanings of three related lexical items *meli*, *kasum*, and *maum*, based on an analysis of Korean corpus data. Based on a qualitative and quantitative analysis of the data, this research has shown different degrees of metaphoricality, similarities and differences in meanings and uses, and metaphors in the use of figurative meanings.

First, this research has examined literal vs. metaphorical uses of the three lexical items. Examination shows that *meli* is used figuratively with the frequency rate of 5.1%. Such a low frequency rate is related to the fact that *meli* is a pure Korean word, and it co-occurs with certain specific words. *Kasum* is frequently used frequently, showing the rate of 60.1% (i.e., 700 out of the total of 1,165 cases). *Maum*, on the other hand, is used metaphorically with the frequency rate of 55.7% (i.e., 2,066 cases out of the total of 3,710 tokens). *Maum* is an abstract cover term, but it is used metaphorically to represent cognitive, mental, or emotional processes in terms of a concrete object, treating *maum* as a concrete object, container, place for storage, and so on.

Second, we have examined similarities and differences of meanings of *meli*, *kasum*, and *maum*. Examination of the three terms in the database shows some similarities and differences in expressing intellectual and emotional capacities and processes, unlike the observations in some other languages, as in the following: (i) intellectual abilities and reasoning are usually expressed in terms of *meli*, as in the fixed expressions *meli-ka cohta/napputa* ‘he is bright/stupid’, (ii) the Sino-Korean term heart *simcang* is used literally as a technical term in medical contexts, (iii) *ces-kasum* is used literally to refer to a woman’s breast, (iv) *kasum* is used to refer not only to the upper body part literally but also to an entity as a locus and perceiver of emotion/feelings metaphorically, (v) *maum* is a cover term not only for denoting intellectual and emotional abilities but also to refer to mental functions for cognitive processes for willing to do something and making one’s ethical, moral judgement, and so on.

Third, we discussed the need for a folk model for a proper understanding of metaphorically extended meanings of the three lexical items. That is, the three items are used to describe physiological responses which lead to figurative meanings. However, this research points out that metaphorically extended meanings should be distinguished from the meanings derived from physiological responses. Some expressions such as *nay meli-ka/kasum-i/maum-i aphuta* ‘my head/chest/mind aches’ and *nay kasum-i/maum-i seleyta* ‘my chest/mind feels excited’ are derived from physiological responses. In this respect, it should be noted that some of the figurative meanings of the body-part terms *meli*, *kasum*, and *simcang* are derived from physiological

responses of the body-part terms.

Fourth, many of metaphorically extended meanings of the body-part terms and the abstract notion *maum* are derived from mapping the abstract notions in the target domain and the concrete objects in the source domain. As has been discussed, the frequency of metaphorical uses of the pure Korean lexical word *meli* is very low, showing only 5.1% (i.e., 51 out of the total of 996 cases). Examination of the present data shows that *meli* cooccurs with certain specific words such as ‘ship’, ‘book’, ‘dining table’, and ‘field’, and thus the frequency of the metaphorical meanings is very low. The figurative meanings of *meli* is derived from the metaphor THE TOP PART OF OBJECTS ARE THE HEAD OF A BODY. The figurative meanings of the pure Korean word *kasum* ‘chest’, on the other hand, shows relatively a high degree of metaphoricity. That is, while the frequency rate of the literal use of *kasum* amounts to 24.2% (282 cases out of the total of 1,165), but the rate of the use of extended meanings amounts to 60.1% (700 cases), doubling the rate of the referential, literal meanings. Examination of the present data shows that the figurative meanings of *kasum* are derived from the metaphors such as THE CHEST IS A SITE OF EMOTIONS, THE CHEST IS A CONTAINER FOR EMOTIONS, THE CHEST AS AN ENTITY/ OBJECT, THE CHEST IS A TEMPERATURE-SENSING OBJECT. The frequency rate for figurative meanings of the abstract term *maum* amounts to 55.7% (i.e., 2,066 cases of the whole of the 3710 tokens), treating *maum* ‘mind’ as concrete objects. More specifically, 1,519 cases (40.9%) treats *maum* as concrete objects which can be handled, carried, shared, and moved, 375 cases of *maum* are viewed as a place for storage, and 175 instances (8.5%) of *maum* are used to treat mind as an organ or container

for physiological responses. The figurative meanings of *maum* are derived from metaphors such as MIND IS A CONCRETE ENTITY, MIND IS A CONTAINER, and MIND IS A STORAGE, among others.

As has been discussed, this corpus-based analysis of the three body-part terms and the abstract term *maum* has shown similarities and differences in expressing the functions of mental activities, displaying different aspects of cognitive processing, physiological responses, and responses to senses and emotional feelings. Examination also shows what kinds of metaphors are at work for expressing figurative meanings. As this research has shown, corpus-based research can shed a new light on the exploration of literal vs. figurative meanings and the degree of metaphoricity.

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