

# Semantic Specificity and Syntactic Realization of Japanese and Korean Ideophones

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## 1 Introduction

This paper investigates the relationship between the syntactic realization and semantic features of Japanese and Korean ideophones. In both languages, ideophones typically function as adverbs (Hamano 1998; Chae 1993), although they can also function as verbs and adjectives. Japanese ideophones are combined with *suru* ‘do’ (e.g. *hurahura-suru* ‘stagger’) or *iu* ‘say’ (e.g. *piyopiyo-iu* ‘chirping’) to form verbs and with a copula to form nominal adjectives (e.g. *bityobityo-da* ‘be soaked’) (Kageyama 2007; Toratani 2015). Korean ideophones can function as verbs or adjectives in combination with four suffixes: *-kelita/-tayta/-ita* ‘keep doing’, *-hata* ‘do, be’ (e.g. *pithul-*

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*kelita/pithulpithul-hata* ‘stagger’) (An 2007). However, in both Japanese and Korean, some ideophones can only function as adverbs, as in (1) and (2).

- (1) a. *Ki ga **sukusuku** {sodat/\*si/\*it}-ta.* (J)  
 tree NOM IDEO grow/do/say-PST  
 ‘The tree grew *rapidly*.’  
 b. *Namwu ka **mwulekmwulek** {cala-ss/\*hay-ss/\*kely-ess/\*tay-ss}-ta.*  
 (K)  
 tree NOM IDEO grow-PST/do-PST/keep.doing-PST-DEC  
 ‘The tree grew *rapidly*.’
- (2) a. *Tanaka wa okasi o **kossori** {tabe/\*si/\*it}-ta.* (J)  
 PSN TOP snack ACC IDEO eat/do/say-PST  
 ‘Tanaka ate the snack *secretly*.’  
 b. *Cinswu nun kwaca lul **salccak** {mek-es/\*hay-ss/  
 PSN TOP snack ACC IDEO eat-PST/do-PST/  
 \*kely-ess/\*tay-ss}-ta.* (K)  
 keep.doing-PST-DEC  
 ‘Cinswu ate the snack *secretly*.’

The possibility of verbalization has been discussed in terms of iconicity (Akita 2009, 2013c) and frequency of use (Dingemanse 2011, 2017). However, previous studies do not exclusively cover adverbial ideophones like (1) and ‘deideophonized’ expressions like (2). To cover these and other cases, this paper proposes an alternative generalization based on the notion of ‘semantic specificity’ (Akita 2013a, 2013b). The discussion leads to the conclusions that: (i) ideophones that too-high and too-low semantic specificity classes prevent verbalization, (ii) Korean ideophones are more integrated into the language system than Japanese ideophones.

The organization of this paper is as follows: Section 2 surveys previous studies on the verbalization of ideophones. Section 3 defines the concept of semantic specificity and presents the syntactic distributions of ideophones with different degrees of semantic specificity. Section 4 discusses the relationship between semantic specificity and verbalizability of ideophones in terms of their collocability with verbs. Section 5 summarizes the findings from a crosslinguistic perspective, and Section 6 concludes the paper.

## 2 Previous Studies

Several crosslinguistic observations on the verbalization of ideophones have been proposed (Akita 2013c; Dingemanse 2011, 2017). For example, Akita (2013c) observed a generalization of ideophone syntax depending on the degree of ‘lexical iconicity’, which is based on ‘the lexical iconicity hierarchy’ (LIH). Akita (2013c: 340) proposed that ‘ideophones with higher iconicity

tend to be realized outside the head position of a main clause (i.e. argument, adjunct, interjection), whereas those with lower iconicity tend to be realized in the head of a main clause (i.e. predicate)'. For example, animal or human voice mimicry that tends to be realized as an adverb rather than a verb or adjective is located near the high end of the LIH. However, the psychological state and inner sensations of the body that tend to be realized as predicates, such as verbs or adjectives, are located the opposite end.

Dingemanse (2011, 2017) argued that frequency-based proposition, the more frequently an ideophone is used, the more likely they are to be predicated and integrated into the language system. In other words, high frequency of use triggers verbalization.

The two proposals above offer a typological generalization of ideophone verbalization. Nevertheless, these findings do not fully explain why (1) and (2) cannot be used as verbs or adjectives despite their low degree of iconicity and frequent use. Further findings have risen with regard to ideophone verbalization and semantic properties. Akita (2013a, 2013b) found that a strong collocational relationship of ideophones and host verbs, then suggests an inheritance relationship for ideophone collocation. For instance, the Japanese ideophone about the manner of walking, *tekuteku*, indicates 'walking with a constant pace', which provides concrete information on the general act of walking expressed with the host verb of *aru-ku* 'walk'. Namely, an ideophone evokes a specific event concretely represented by a host verb.

Researchers have frequently pointed out these phenomena in many languages besides Japanese and Korean ideophones (An 2008; Childs 1994; Hirose 1981; Kita 1997). Furthermore, Toratani (2007) noted that ideophone-verbal relations can be characterized in terms of 'hyponymy'. Specifically, while a verb denotes a general type of event (hyperonym), an ideophone denotes a subset of the verbal event (hyponym) (Toratani 2007: 325-326).

These results suggest that there may be a link between the semantic features of ideophones and the possibility of verbalization. However, despite the fact that extensive research has been carried out on the specific meaning of ideophones that indicate a particular manner, previous studies have not covered 'deideophonized' expressions, such as (2).

Therefore, to comprehensively address only-adverbial usage, such as (1) and (2), this paper argues that 'semantic specificity' (Akita 2013a, 2013b) includes the degree of specification. Semantic specificity refers to the degree of concreteness in how an event is depicted. In this paper, the degree of semantic specification is set to either too-high, medium, or too-low, which are determinants of verbalization. Based on the above standpoint, I suggest the following hypotheses for ideophone verbalization (3).

- (3) The verbalization of ideophone in semantic specification:  
 (i) If an ideophone shows too-high semantic specificity, it depicts concretely a specific subpart of an event represented with a host verb, then it is restricted verbalization.  
 (ii) If an ideophone shows too-low semantic specificity, which comprehensively indicates an abstract event such as a degree or frequency, then they are similar to prosaic adverbs in meaning, thus it is restricted verbalization.

These hypotheses are examined in the following chapter based on the range of verbalization in Japanese and Korean (Park 2017) and the strength of the collocation (t-score) [ideophone–host verb] construction in Japanese and Korean corpora data.

### 3 Semantic Specificity

#### 3.1 Distribution in a degree of semantic specificity

Before demonstrating the strength of the collocation of the ideophone–host verb construction, I show the distribution by a degree of specificity to gain a detailed understanding of ‘semantic specificity’. The following, (4) to (7), are examples with too-high semantic specificity classes, (8) to (10) are examples with middle classes, and (11) to (12) are examples with too-low classes.

- (4) *Tanaka wa tobotobo arui-ta.* (J)  
 PSN TOP IDEO walk-PST  
 ‘Tanaka was *plodding* along.’

In (4), *tobotobo* ‘plod’ depicts a specific manner of walking heavily or laboriously, and it is collocated with a verb *aru-ku* ‘walk’.

- (5) *Ku nun kunye ekey kolaykolay soli lul cill-ess-ta.* (K)  
 he TOP she DAT IDEO voice ACC shout-PST-DEC  
 ‘He *shouts* at her.’

In (5), *kolaykolay* ‘shout’ depicts a manner of raving with fury, and it is collocated with the objectives {*soli/koham*} ‘voice/shout’ and a verb *cilu-ta* ‘shout’.

- (6) a. *Kemuri ga mokumoku tatinobo-tte i-ta.* (J)  
 smoke NOM IDEO climb-CONJ be-PST  
 ‘The smoke *climbed* [into the sky].’

- b. *Yenki ka molakmolak phieoll-ass-ta.* (K)  
 smoke NOM IDEO climb-PST-DEC  
 ‘The smoke *climbed* [into the sky].’

In (6a) and (6b), *mokumoku* and *molakmolak* denote an event in which the thickness of smoke, clouds, or steam rises. They collocate the verbs *aga-ru* ‘rise up’ or *nobo-ru* ‘climb’ (J) and *phieolu-ta* ‘rise up’ (K), which describe an event in detail.

- (7) a. *Ame ga sitosito hu-tte i-ta.* (J)  
 rain NOM IDEO fall-CONJ be-PST  
 ‘It was *drizzling*.’  
 b. *Pi ka pwusulpwusul nayly-ess-ta.* (K)  
 rain NOM IDEO fall-PST-DEC  
 ‘It was *drizzling*.’

In (7a) and (7b), *sitosito* and *pwusulpwusul* denote an event in which gentle rain is falling. They show a strong collocational relationship not only with the verb (*hu-ru* ‘fall’ (J), *nayli-ta* ‘fall’ (K)), but also subjectives (*ame* ‘rain’ (J), *pi* ‘rain’ (K)).

This shows that too-high semantic specificity classes can cooccur with a particular verb or a few verbs and can denote an accurate description that modifies a verb for a general type of event. Thus, in these classes, the ideophones show a strong collocational relationship with their host verbs. Taken together, too-high semantic specificity classes are regarded as ‘quasi-verbal’ uses.

However, the most common classes that middle semantic specificity pertains to the dynamic and static events, can be verbalized. In Japanese, they can be verbalized in combination with a quotative verb *iu* ‘say’, a dummy verb *suru* ‘do’, or a copula. Korean ideophones are combined with the verbalizer/adjectival suffixes *-hata* ‘do/be’ and *-kelita/-tayta/-ita* ‘keep doing’, as in (8) to (10).

- (8) a. *Kimura wa sake ni yo-tte hurahura-si-te*  
 PSN TOP liquor DAT get.drunk-CONJ IDEO-do-CONJ  
*i-ta.* (J)  
 be-PST  
 ‘Kimura *staggered* because he gets drunk from liquor.’  
 b. *Minswu nun swul ey chwiha-y pithul-tay-ss-ta.* (K)  
 PSN TOP alcohol DAT get.drunk-CONJ IDEO-keep.doing-PST-DEC  
 ‘Minswu *staggered* because he gets drunk from alcohol.’

- (9) a. *Suzuki wa kooen de urouro-si-te i-ta.* (J)  
 PSN TOP park LOC IDEO-do-CONJ be-PST  
 ‘Suzuki was *hanging around* the park.’  
 b. *Swuji nun kongwen eyse esulleng-keli-ko iss-ess-ta.* (K)  
 PSN TOP park LOC IDEO-keep.doing-CONJ be-PST-DEC  
 ‘Swuji was *hanging around* the park.’

In (8) and (9), *hurahura* ‘stagger’, *pitul* ‘stagger’, *urouro* ‘wander’, and *esulleng* ‘wander’ are likely to be understood as subordinate walking events, but they should be regarded as obviously different from *tobotobo* ‘walk ploddingly’ in above (4). For example, *urouro* ‘wander’, and *esulleng* ‘wander’ denote a whole event in which staying in the same place does not have a specific purpose. Thus, they cannot relate to the subset event of *aruu-ku* ‘walk’ (J) or *ket-ta* ‘walk’ (K).

- (10) a. *Yoohuku ga yoreyore-da.* (J)  
 cloth NOM IDEO-copula  
 ‘[My] clothes were in *tatters*.’  
 b. *Os i netelnetel-ha-ta.* (K)  
 cloth NOM IDEO-be-DEC  
 ‘[My] clothes were in *tatters*.’

(10) shows the static event of clothes that are so badly torn in several places that pieces can easily come off. From the perspective of semantic specificity, compared with (4) to (7), ideophones describe the whole event nonconcretely.

The third class is composed of ‘deideophonized’ ideophones that show too-low semantic specificity. They behave as prosaic words in their meaning.

- (11) a. *Zen zaisan o sukkari tuka-tte sima-tta.* (J)  
 whole fortune ACC IDEO spend-CONJ PERF-PST  
 ‘[I] spent [my] whole fortune *completely*.’  
 b. *Cen caysan ul hollang nally-e pely-ess-ta.* (K)  
 whole fortune ACC IDEO blow-CONJ PERF-PST-DEC  
 ‘[I] blew [my] whole fortune *completely*.’

In (11), *sukkari* ‘completely’ and *hollang* ‘completely’ indicate the degree of an event. They denote an event in which there is nothing left there.

- (12) a. *Izen, kanojyo wa Nagoya ni tyokutyoku ki-te i-ta.* (J)  
 before she TOP Nagoya LOC IDEO come-CONJ be-PST  
 ‘Before, she came to Nagoya *frequently*.’

- b. *Haksayng siceI-uy chwuekl-i sayloksaylok tteoll-ass-ta.* (K)  
 student days-GEN memory-NOM IDEO remind-PST-DEC  
 ‘The memories of my student days *keep popping up* [in my 9head].’

The two ideophones in (12) modify the course of the whole situation in frequency. *tyokutyoku* indicates that the events occurred often, and *sayloksaylok* indicates the succession of a new thing.

### 3.2 Method

I investigated the objects of 738 Japanese ideophones (Atoda & Hoshino 1993) and 4,985 Korean ideophones (Kim 1995). I then classified the data into three classes in verbalizability: (i) [+verbalization], [-verbalization] {(ii) ‘quasi-verbal’, and (iii) ‘deideophonized’}.

The evaluation of verbalizability was based on the syntactic description in the dictionary. I then investigated the cooccurrence of a verb and objective noun for each ideophone from the example sentences in the web corpora. In the case of polysemy ideophones, the analysis was conducted for each semantic item.

To demonstrate the cooccurrence and frequency of ideophones and verbs, I excluded ideophones that were not present in the web corpora. Therefore, 51 Japanese words and 136 Korean ideophones were removed from the data. I examined the strength of cooccurrence (T-score; Church et al. 1991) in construction of the [ideophone–host verb] based on the corpora data. If the obtained t-value was high, it indicated a significant collocation. If an ideophone included two verbs for which the t-value was 2.00 or more, I included all the data for the two verbs.<sup>1</sup> The t-value will be as supporting evidence for collocability of an ideophone and a host verb.

I used two Japanese corpora, the Balanced Corpus of Contemporary Written Japanese (BCCWJ, Chunagon) and the Tsukuba Web Corpus (TWC), through a collocation extraction system called NINJAL-LWP for BCCWJ and NINJAL-LWP for TWC. BCCWJ was used for the t-value. Using internet text from sources such as website text, bulletin boards, and blogs, the TWC

<sup>1</sup> In this paper, I used “the test of significance” (Church et al. 1991). It tests whether the words A and B are meaningful collocations. Normally, the obtained value exceeds 2.00, which means that the cooccurrence of the two words is statistically significant. It is necessary to investigate the total word number (W) of the corpus, the frequency of word A (fA), the frequency of word B (fB), and the collocation frequency of word A and B (fAB). A simplified formula is as follows (Strafella, E. L. et al. 2012: 55).

$$T = \frac{[f_{AB} - \frac{f_A \times f_B}{W}]}{\sqrt{f_{AB}}}$$

contains about 1 billion 100 million morphemes. In addition, BCCWJ contains about 104.3 million morphemes from general books, magazines, newspapers, business reports, blogs, and internet forums, among other sources. Korean data was taken from the SJ-RIKS Corpus extension (Seyjong-Research Institute of Korean Studies extension), which contains 116,065,151 words from conversations between friends as well as newspapers, magazines, and novels.

To compare ‘-verbalization’ classes (i.e. ‘quasi-verbal’, ‘deideophonized’) and ‘+verbalization’ classes, I examined the t-score of the ideophone and its host verb in ‘+verbalization’ classes. For example, the Japanese ideophone *nikoniko* ‘smilingly’ can be combined with the dummy verb *suru* ‘do’ (e.g. *nikoniko-suru* ‘smile radiantly’), but I investigated the t-score with a prosaic verb *wara-u* ‘smile’ rather than with the dummy verb *suru* ‘do’.

## 4 Results

As a result, too-high semantic specificity classes and too-low semantic specificity classes prevented verbalization in both languages. This result supports the hypotheses of (3).

### 4.1 Quasi-verbal classes: Too-high semantic specificity

Too-high semantic specificity classes include ideophones that represent dynamic events in both languages, particularly, in Japanese, there are many of ideophones that depict body action, such as the manner of walking (e.g. *sutasuta* ‘briskly’  $t = 6.555$ , 34 ranked) (13 ideophones), speaking (e.g. *perapera* ‘chatter’  $t = 6.402$ , 36 ranked) (3 ideophones) and seeing (e.g. *majimaji* ‘stare’  $t = 10.861$ , 6 ranked) (4 ideophones). They focus on a particular subpart event represented in detail by host verbs, such as stride, speed, and voice. In other words, ideophones and their host verbs form semantic inheritance/subsumption relationships (Akita 2013a, 2013b; Toratani 2007). As a result, these classes modify their host verbs, which cause them to appear as adverbial uses.

Korean does not have skewed tendencies like Japanese; Korean ideophones include not only a wide range of movements such as body action, but also static events such as emotion. There is only one word relating to the manner of speaking (e.g. *cwucelicwuceli* ‘ramble’  $t = 1.732$ , 212 ranked) and two words relating to the manner of eating (e.g. *akwiakwi* ‘greedily’  $t = 5.652$ , 125 ranked). This class is called ‘quasi-verbal’ uses because of the strong semantic relationship between an ideophone and a host verb.

However, despite too-high semantic specificity, few ideophones can be verbalized. For example, the Japanese ideophones *nikkori* ‘smile’ ( $t = 15.551$ , ranked 2), and *niyaniya* ‘grinning’ ( $t = 9.587$ , ranked 8) and Korean ideo-



phones *kkelkkel* ‘guffaw’ (t = 34.914, ranked 5) and *sayngkulsayngkul* ‘smiling’ (t = 15.190, ranked 29) show a high t-value with the verbs *wara-u* ‘smile’ (J) and *us-ta* ‘smile’ (K), respectively.

#### 4.2 Predicative verbal classes: Middle semantic specificity

This class of ideophones that can be verbalized represent entire events non-concretely compared with too-high semantic specificity classes (Nakakita 1991), and they cannot conduct semantic subsumption relationships with host verbs. For example, the Japanese ideophone *gakugaku* ‘tremble’ (t = 3.316, 131 ranked), when collocated with the verb *hurue-ru* ‘tremble, shake’ denotes the event of shaking something. The Korean ideophone *pintwungpintwung* ‘idly’ (t = 9.589, 69 ranked), when collocated with the verb *nol-ta* ‘play’, denotes a situation that does not have any special purpose or involves time wasting. Thus, *pintwungpintwung* and the verb *nol-ta* cannot have a subsumption relationship. Indeed, many ideophones indicate a static event, such as texture and an inner sensation. For example, the Korean ideophone *kkuncekkkunccek* ‘sticky’, when collocated with the verb *talllapwuth-ta* ‘stick’, captures the entire property of adhering to a surface (they do not subdivide).

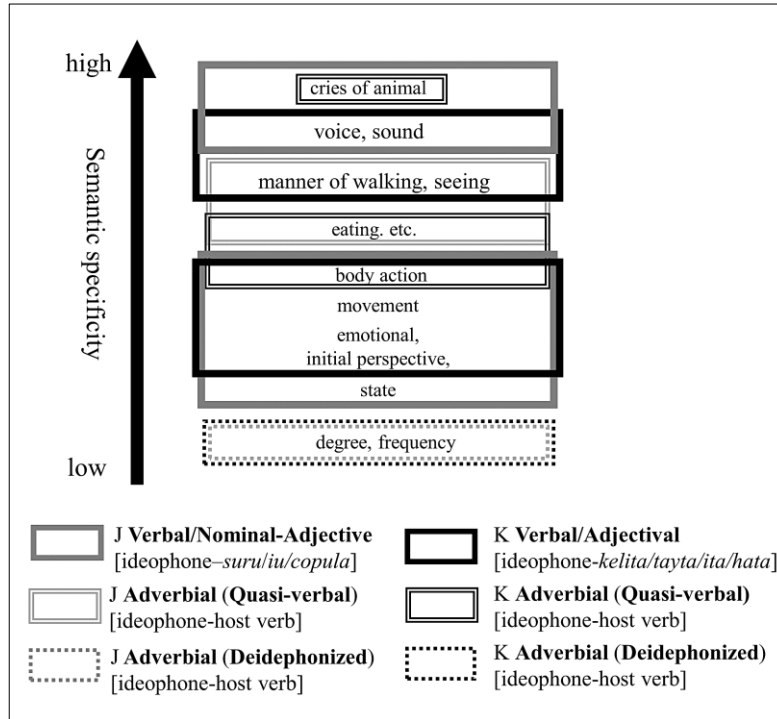
#### 4.3 Deideophonized classes: Too-low semantic specificity

The class with too-low semantic specificity also prevents verbalization. However, the semantic properties are quite different from the class with too-high semantic specificity. This class provides a general information such as the degree and frequency of an event, not specified a particular event, and can be said to represent meanings similar to those of prosaic adverbs undergoing a process called ‘deideophonization’. I investigated 61 words of the degree items with two words of the frequency items in Japanese and 36 words of the degree items with two words of the frequency items in Korean.

The class with too-low semantic specificity collocated with various verbs; they did not have a strong collocational relationship with any particular verb. For example, the Japanese ideophone *gungun* ‘steadily’ represents gradual changes in an event when it is collocated with verbs such as *nobi-ru* ‘grow’ (e.g. *Se-ga gungun nobi-ru* ‘grow taller *steadily*’) and *aga-ru* ‘rise’ (e.g. *Kion-ga gungun agar-u*. ‘Temperatures rise *steadily*’). In the above examples, *gungun* can be replaced with the prosaic adverb *zyozyo-ni*, ‘gradually’ (e.g. *Kion-ga zyozyo-ni agar-u* ‘Temperatures rise *gradually*’). The Korean ideophone *kkopakkkopak* ‘regularly’ represents something that continues constantly, which can be collocated with verbs such as *naka-ta* ‘attend’ (e.g. *Swuep-ey kkopakkkopak naka-ta* ‘[I] attend the class *regularly*’) and *nay-ta* ‘pay’ (e.g. *Sekum-ul kkopakkkopak nay-ta* ‘[I] pay taxes *regularly*’).

## 5 Discussion

Semantic specificity can be a useful concept for explaining ideophone verbalization. In both Japanese and Korean ideophones, the classes of too-high semantic specificity and too-low semantic specificity cannot be verbalized. Taken together, the generation map of verbalization in Figure 1 below summarizes the formation Japanese and Korean ideophones.



**Figure 1** Semantic specificity and syntactic realization in Japanese and Korean ideophones

A few Korean ideophones which in mimic cries of animal cannot be verbalized. In Japanese ideophones, however, they can function as verbs in combination with *iu* 'say' (e.g. *Kaeru-ga kerokero-it-ta* 'The frog was croaking.' (J), \**Kaykwuli-ka kaykwul-kely-ess-ta* 'The frog was croaking.' (K)).

The ideophones that represent a static event can be a nominal-adjective attached with a copula in Japanese (e.g. *Reitoositu-no sakana-ga katikati-da* 'The fish in the freezer has frozen solid') but function only as adverbs in Korean (e.g. *Nayngtongsil-uy sayngsen-i kkongkkong el-ess-ta* 'The fish in the freezer has frozen solid.').

There are some notable differences between Japanese and Korean. First, many Korean ideophones indicate too-high t-values. For example, *kkamccak* ‘surprise’ is collocated with the verb *nolla-ta* ‘surprise’ and has the highest ranking with a t-value of 53.696. This suggests a high semantic specification and conventional use in certain ideophones.

Second, Korean ideophones have many idiomatic expressions (75 items) (Kim 2007; Kwon 2010; Lee 2010; Park 2010), as in (13).

- (13) *Park senswu nun macimak kyengki eyse phelphel nal-ass-ta.*  
 PSN player TOP final math LOC IDEO fly-PST-DEC  
 ‘Park player played *tremendously* in the final match.’

As shown in (13), *phelphel* denotes flying vigorously. However, in an idiomatic expression, it represents a brilliant exploit in a particular field. These phenomena can be observed over a wide range and seem to be irrelevant to semantic specificity. Alternation of the vowel (e.g. {*phelphel/phalphal*/*\*phwulphwul*/*\*pholphol*} *nal-ass-ta*) and consonant (e.g. {*phelphel*/*\*pel-pel*/*\*ppelppel*} *nal-ass-ta*) seem to be highly restricted and morphological (e.g. *\*phelphephel nal-ass-ta*). Indeed, it is impossible to remove *phelphel* from a sentence (e.g. *\*Park senswu-nun macimak kyengki-eyse phelphel nal-ass-ta*). In other words, the unit does not allow for other variations and may be considered a ‘quasi-verbal’ expression.

These findings on idiomatic expressions are not only strong evidence for highly lexical integration of Korean ideophones, but also suggest that morphosyntactic integration and the meaning of ideophones are closely related to each other.

## 6 Concluding Remarks

This paper investigates whether semantic specification can be applied to the explanation of the syntactic realization of the following verbal and adverbial usages: (i) ‘quasi-verbal’, (ii) ‘predicative-verbal’, and (iii) ‘deideophonized’. The classes of too-high and too-low semantic specificity reveal that (i) and (iii) exhibit prohibit verbalization. Taken together, these results suggest that ideophones that represent too-high and too-low semantic specification are less morphosyntactically integrated. The results implicate the relevance of ‘semantic specificity’ in the syntactic typology of ideophones.

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