The Development of Japanese Ideophones: What We Learn from Korean Monosyllabic Ideophones

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1 Introduction

Ideophonic stems in Japanese are classified into highly iconic monosyllabic stems and more abstract disyllabic monosyllabic stems (Hamano 1998). Monosyllabic ideophonic stems have many properties in common with those in other languages and are considered to have remained relatively constant over time (Hamano 2019). Evolutionally, therefore, monosyllabic ideophonic stems are considered to have preceded disyllabic ideophonic stems. The question, then, is how disyllabic ideophonic stems developed. Addressing this question is significant not only for understanding ideophones. Disyllabic ideophonic stems share many phonological properties with prosaic vocabulary in Japanese, known as Yamato words. Disyllabic ideophonic stems are situated between monosyllabic ideophonic stems and Yamato words. Understanding the development of disyllabic stems, therefore, is likely to shed light on the development of Yamato words as well. In this paper, I demonstrate that the comparison of Japanese

Japanese/Korean Linguistics 27.
Edited by Michael Barrie.

and Korean monosyllabic ideophonic stems points to a developmental path for Japanese ideophones.

The paper is organized as follows. Section 2 explains the structural differences between monosyllabic and disyllabic ideophonic stems in Japanese. Section 3 points out basic similarities between Japanese and Korean monosyllabic ideophonic stems. Section 4 discusses points of divergence between Korean and Japanese. Here I argue that Korean monosyllabic ideophonic stems in the form of CVl structurally correspond to Japanese disyllabic stems in the form of CVrV. On the basis of this correspondence, Section 5 hypothesizes that liquid-final monosyllabic ideophonic stems also existed in Japanese in the past. Section 6 proposes implications of this study to the study of Yamato words.

2 Structure of Japanese Ideophonic Stems

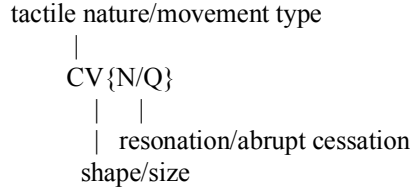
Compared to Korean ideophones, Japanese ideophones are relatively easy to identify. This is because the historical weakening of labial obstruents in Japanese has resulted in the retention of morpheme-initial /p/ only in ideophones. Once we filter out loanwords of recent origin, the remaining p-initial forms are all ideophones. General patterns observed for p-initial ideophones can serve as guidelines for identifying ideophones in general. Applying this methodological constraint, ideophonic stems in Japanese are found to consist of highly iconic monosyllabic stems and more abstract disyllabic monosyllabic stems (Hamano 1998). Some examples of monosyllabic stems are given in (1), and of disyllabic stems in (2). /N/ is a homorganic coda nasal; /Q/ represents a homorganic coda obstruent.

(1)
paN	‘explosion of a tensely stretched surface’
toN	‘hitting of a lax surface’
koN	‘hitting of a hard surface’
paQ	‘sudden appearance’
doQ	‘large amount of objects moving’
guQ	‘sudden push’

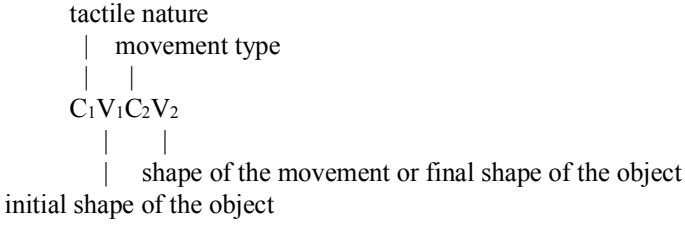
(2)
pata	‘a thin flat object hits a flat surface’
tiku	‘skin is pricked with a needle’
kotu	‘a hard surface is hit’

The contrast in the degree of abstractness between the two types shows up most clearly in how sound-meaning associations are mapped to their structural positions. An obstruent in the onset of a monosyllabic stem represents both tactile and dynamic properties without clearly differentiating

the two. (3) represents the symbolic structure of monosyllabic stems.

(3)


In disyllabic ideophonic stems, on the other hand, an obstruent in the initial onset represents the tactile nature of an object, and an obstruent or liquid in the second onset the nature of the movement. (4) represents the symbolic structure of disyllabic stems.

(4)


This means that identical consonants mean different things depending on where they appear. Table 1 summarizes the meanings of obstruents and the liquid /r/. It shows, for instance, that /t/, as the onset of a monosyllabic stem, means that a non-tense surface is hit. Note, however, that in a disyllabic stem, /t/ refers to the non-tense nature of a surface in the first onset, and to the action of hitting in the second onset. Interestingly, the liquid /r/, which can only appear in the second onset, means that the movement is fluid; it does not have a tactile meaning.

	Monosyllabic	Disyllabic	
	Onset: tactile quality and movement	First onset: tactile quality	Second onset: movement
p/b	tension of a surface; explosion of an expanded surface; whistle	tensely stretched surface	explosion
t/d	hitting a non-tense surface	non-tense surface	hitting; coming into contact
k/g	hitting a hard surface; sound coming out of a hollow space	hard surface	hollow space; up-down or in-out movement
s/z	moving over a smooth surface	fluid body, smooth surface	friction
r			fluid movement

Table 1: Symbolic differentiation of positions in Japanese ideophonic stems

As a result of these positional differentiations, identical combinations of consonants create totally different meanings if they appear in reverse order. Thus, the following ideophonic stems mean completely different things.

(5) suku smooth surface + upward movement = vigorous growth
kusu hard surface + friction = chuckling

Likewise:

(6) toku non-tense surface + outward movement = liquid coming out of a bottle
kotu hard surface + hitting = hitting a hard surface

The positional differentiation in disyllabic ideophonic stems observed above is highly abstract and language-specific. So far, such a pattern has not been reported for ideophones in other world languages. Then how did such disyllabic ideophonic stems come about? Simple concatenation of two monosyllabic stems could not have produced highly linguistic and abstract disyllabic stems. This paper proposes that Korean ideophones provide critical cues as to how this happened. In order to do so, we first need to establish that there are structural correspondences between Korean and Japanese

ideophones despite overwhelming dissimilarities. This is the topic of the following section.

3 Similarities between Korean and Japanese Ideophones

The Korean language is well known for its abundant ideophonic expressions and might be considered to provide the most logical starting point for comparative studies involving Japanese ideophones. Nevertheless, it has not been systematically compared with Japanese ideophones, probably because Korean ideophones and Japanese ideophones seem quite dissimilar on casual inspection.

The most pervasive aspects of Korean ideophones are three-way contrasts between plain, tense, and aspirated obstruent series (Kim 1977), vowel harmony (Kim-Renaud 1976), and reduplication (Kim 1997). Setting aside reduplication, which is universally observed, the other two features are not shared by Japanese. The consonantal contrasts are irrelevant in Japanese, and Korean vocalic symbolism seems to be the exact opposite of Japanese vocalic symbolism.

The ideophones of the two languages are unlike each other in terms of structure, too. Unlike Japanese ideophonic vocabulary, Korean ideophonic vocabulary is very complex phonologically and is not transparently reducible to a few simple templates like CVN and CVCV. Compounding this problem is the extremely fluid nature of the boundary between ordinary lexicon and ideophones in Korean. The above-mentioned phonological symbolisms affect even ordinary lexical items extensively, deriving subtle variations such as *kamah-ta* 'pitch black' vs *kkamah-ta* 'pitch black', *noluta* 'yellow' as opposed to *nwuluta* 'yellow', *nolusulum-hata* 'light yellow' as opposed to *nwulusulum-hata* 'light yellow', *kankan-hata* 'salty' as opposed to *kenken-hata* 'salty' (Aoyama 1990). It therefore looks difficult to identify core ideophonic vocabulary separate from ordinary vocabulary in Korean. Probably due to all these differences, serious attempts at meaningful comparison of the ideophones of the two languages have not been attempted.

However, a different approach to the identification of core ideophonic vocabulary is possible for Korean. I consider monosyllabic ideophones as the core in any language. This assumption is useful when embarking on comparative studies of ideophones. Monosyllabic ideophones are easier to identify, and every language has monosyllabic ideophones. Monosyllabic ideophonic stems share many common phonological and symbolic features across languages; yet they also differ in interesting manners exhibiting language-specific adaptations. I will demonstrate that careful and disciplined comparison of Japanese and Korean monosyllabic ideophones reveals an area of meaningful comparison, which provides clues as to the development of disyllabic ideophonic stems in Japanese. We next turn to similarities between

Korean and Japanese monosyllabic ideophonic stems.

An exception within the tradition of Korean ideophonic studies, Lee (2002) has focused on monosyllabic ideophones and their segmental symbolisms. His study was motivated by the fact that their structural simplicity affords ease of identifying sound-meaning associations. While, as we will see later, I depart from his decision to regard only those ideophonic stems that can stand alone as monosyllabic, his characterization of what he considers monosyllabic ideophonic stems in Korean is highly informative. His study, along with my own study of Korean and Japanese monosyllabic ideophones, reveals the following correspondences.

Many Korean and Japanese ideophones are onomatopoeic and find a close match in each other. For instance:

(7)	Korean	Japanese	
	ppi	pii	'whistle'
	kwu	kuu	'pigeon cooing'

Beyond such lexical correspondences, certain phonemes have similar symbolisms in Korean and Japanese. First, on the basis of forms such as the following, /h/ is considered to depict breathing or laughter in both languages.

(8)	hi	'laughter indicating self-gratification' (Korean)
	hwuk	'breathing out with lips rounded' (Korean)
	ha	'cheerful laughter' (Japanese)
	haaQ	'breathing out with mouth wide open' (Japanese)

Second, the nasal coda is associated with the sense of resonance in many languages including Czech, English, and Japanese (Fidler 2014, Hamano 2019). Korean also exhibits this sound symbolism. The velar nasal coda /ŋ/ appearing in Korean monosyllabic ideophonic stems corresponds to Japanese monosyllabic ideophonic stems' nasal coda /N/. Both of them typically appear in expressions representing resonant sounds, as in (9).

(9)	twuŋ	'drum sound' (Korean)
	k^hwaŋ	'cannon sound in the distance' (Korean)
	doN	'drum sound' (Japanese)

The third notable correspondence involves the velar occlusive coda /k/ in Korean and the homorganic occlusive coda /Q/ in Japanese. These coda sounds mean that a movement or sound abruptly comes to a complete stop, as in (10).

(10) t^hak ‘sound of a hard object being hit or bursting’ (Korean)
sak ‘sound of cutting paper, cloth, etc. in an instant’ (Korean)
giiQ ‘creaking sound’ (Japanese)

The types of monosyllabic ideophonic stems shown in (9) and (10) are the most central to the current discussion. A striking, though hitherto unnoted, fact about these two garden-variety monosyllabic types is that the onset obstruents in them depict both the texture of the surface and the movement of the object in Korean as well. This is summarized in Table 2.

	Onset: tactile quality and movement
p/pp/p^h	tension of a surface; explosion of an expanded surface; whistle
t/tt/t^h	hitting a (hard) surface
kk/k^h	hitting a hard surface; sound coming out of a hollow space
s/ss	moving over a smooth surface

Table 2: Symbolisms of onset obstruents in Korean monosyllabic stems

This is remarkably similar to the left column of Table 1 that has been put together for Japanese.

Differences do exist, of course. The plain/tense/aspirated contrasts do not exist in Japanese. In addition, Korean alveolar obstruents can be used to refer to a hard surface. The sense of hardness seems to depend more on the tenseness of the obstruents than their articulatory position. In fact, there do not seem to exist monosyllabic ideophonic stems with plain /k/ in onset position in present-day Korean. Lee (2002) reports that there is none. Aoyama (1990) contains only one item, *kwaŋ* (dull sound of a large metallic object). Incidentally, this differentiates monosyllabic and disyllabic stems in Korean. There are many disyllabic ideophonic stems with plain /k/ in initial position, as in the case of *kemcek-kemcek* ‘slightly large dark spots are scattered here and there’, *kwucil-kwucil* ‘dirty and damp’, *kwusul-kwusul* ‘rice is cooked right’ and many, many more. In any case, this difference confirms the observation that despite overwhelming similarities, monosyllabic ideophonic stems also contain language-specific symbolisms. In the following section, I will turn to the points of more serious and revealing divergence between the two languages.

4 Divergence between Korean and Japanese Ideophones

Although unnoticed so far, Korean and Japanese monosyllabic ideophones also exhibit an interesting structural difference. This difference cannot be observed if one only looks at those ideophones that can appear in stand-alone forms as Lee (2002) does. When we examine all monosyllabic ideophones in Korean, we notice that there is one extremely important class of monosyllabic ideophones that sets Korean apart from Japanese. This is *l*-final monosyllabic ideophones, as exemplified below.

(11) pal 'trembling'; ppal 'sweating profusely'; p^hol 'water boiling';twul 'coiling, rolling over'; ttul 'heavy wheel rolling down'; kkol 'sound of partially obstructed water'; k^hil 'chuckle'; swul 'water or flour flowing out, calm wind'; cwal 'water gushing'; cil 'glossy surface'; hwul 'bird flapping the wings, jumping lightly'
wal 'water flowing rapidly'

This class of ideophones is unique to the Korean language; it is not attested in Japanese. That is, such monosyllabic stems find no monosyllabic counterparts in Japanese. However, peculiarly, *l*-final monosyllabic ideophonic stems find closest counterparts in Japanese disyllabic stems such as the following, which have /r/ in the second onset.

(12)	buru-buru	trembling (Japanese)
	koro-koro	sound and manner of an object rolling (Japanese)
	tyoro-tyoro	small quantity of water flowing (Japanese)

Note that the liquid coda /l/ in Korean and the liquid /r/ in the second syllable of Japanese ideophonic stems both mean various fluid movements such as rolling, trembling, running, and flowing.

The peculiarity of *l*-final stems does not stop there. *L*-final stems have various other peculiar properties in comparison to those ending with /k/ or /ŋ/. These features also support the view that *l*-final ideophones are structural counterparts of Japanese ideophonic stems with /r/ in the second syllable.

First of all, while those ending with /k/ or /ŋ/ can be used independently, those ending with /l/ are used only fully reduplicated (Lee 1992) or partially reduplicated. This morphological restriction indicates that *l*-final ideophonic stems are less iconic. In a way, this justifies Lee's (2002) decision to define monosyllabic ideophonic stems as those that can stand alone.

Second, the meaning of 'fluidity' contributed by /l/ characterizes the whole movement rather than the final aspect of a movement or sound, whereas /ŋ/ and, in particular, /k/, somewhat like aspectual suffixes,

characterize the last phase of a movement or sound. The fact that the coda /l/ is less like an aspectual suffix than /ŋ/ and /k/ is also clear from the fact that while /ŋ/ and /k/ cannot be reduplicated, /l/ can be copied to form partially reduplicated forms, as in (13).

(13)	pelulu	'trembling for fear' (c.f. pel-pel)
	p^holulu	'small quantity of water boiling' (c.f. p^hol-p^hol)
	talulu	'sound of a small object rolling on a flat surface' (c.f. tal-tal)
	twululu	'rolling back, rolling over' (c.f. twul-twul)
	cilulu	'glossy surface' (c.f. cil-cil)
	cwalulu	'water gushing' (c.f. cwal-cwal)
	colulu	'small quantity of water flowing' (c.f. col-col)
	hwululu	'bird flapping the wings, flaring up' (c.f. hwul-hwul)
	walulu	'water gushing out' (c.f. wal-wal)

This is reminiscent of the reduplication pattern observed for Japanese ideophones such as batataQ (<bata), gatataN (<gata), and bururuN (<buru), which Nasu (2006) reports, as well as Korean ideophones such as asasak (<asak) and ototok (<otok), which Kim (2006) reports. The coda /l/ in these monosyllabic ideophonic stems thus is a more integral part of the stem than /k/ or /ŋ/. In this respect, too, *l*-final monosyllabic ideophonic stems are different from the garden-variety monosyllabic stems.

However, there is one more characteristic that even decisively separates *l*-final ideophones from the other types. As in Japanese, the meaning of movement is included in the initial obstruent of garden-variety monosyllabic ideophonic stems in Korean. Interestingly, initial obstruents in *l*-final stems do not carry the meaning of movement, which is expected of the garden-variety types. Instead, the initial obstruents only refer to the tactile nature of the object. The meaning of movement is carried by /l/. For example, *tal-tal* 'rolling of a small object on a hard surface' has the meaning of 'hard surface' but does not have the meaning of 'striking' expected of /t/. Likewise, *pal-pal* 'trembling' does not have the meaning of 'explosion' at all. The consonantal symbolisms of *l*-final ideophonic stems are summarized in Table 3.

	Onset: tactile quality	Coda: movement
p/pp/p^h	tensely stretched surface	
t/tt/t^h	hard surface	
kk/k^h	hard surface	
s/ss	fluid body, smooth surface	
l		fluid movement

Table 3: Symbolic differentiation of positions in *l*-final ideophonic stems

The above discussion clarifies that Korean /l/ in ideophonic stems, like Japanese /r/, is specialized as a symbolic unit for representing movement and that its presence suppresses any iconic association between the initial obstruent and the meaning of movement. This symbolic differentiation of positions is precisely what characterizes Japanese disyllabic ideophonic stems (Hamano 1998). In fact, Table 3 appears very much like the right two columns of Table 1. Thus, Korean ideophonic stems with the form CVl, while monosyllabic, correspond to Japanese disyllabic ideophonic stems with the form CVrV. The match suggests how Japanese disyllabic stems developed, to which we turn in the following section.

5 Development of Disyllabic Stems in Japanese

Monosyllabic ideophonic stems are universally observed. On the other hand, the disyllabic template is unique to Japanese. However, monosyllabic and disyllabic stems are not unrelated: they have a common iconic base. Yet, it is unlikely for Japanese disyllabic ideophonic stems to have evolved out of simple concatenation of two monosyllabic stems. How did they evolve? What was the link between the two types?

From the comparison of Korean monosyllabic stems and Japanese monosyllabic and disyllabic stems, we can hypothesize the following two scenarios regarding the origin of Japanese disyllabic ideophonic stems, in which *l*-initial stems serve as the link.

In one scenario, we assume that the two languages are related. Garden-variety monosyllabic stems, which have a nasal or occlusive coda, appeared before liquid-final monosyllabic stems. Those with the form CVr or CVl then appeared in the ancestral language of Korean and Japanese with the coda liquid having the sense of movement, resulting in the suppression of the meaning of movement in the onset; the onset carried only tactile senses at this point. After the two languages split, nothing further happened to CVr or CVl forms in Korean, except that if the Korean coda liquid was originally /r/, it changed to /l/ possibly after the 15th century as proposed by So (2008). In Japanese, this pattern then developed into the CVrV pattern because of the

then canonical syllable structure CV. The pattern was then generalized, and C_1VC_2V forms where C_1 was specialized for marking the tactile nature and C_2 for marking the meaning of movement emerged.

In the second scenario, the appearance of those with the form CVr or CVl happened independently in the two languages. In Japanese, this pattern then developed into the CVrV pattern because of the then canonical syllable structure. The rest of the change was the same as above. This scenario requires a universally motivated parallel evolution.

Note that the mechanism within Japanese for the development of disyllabic stems is the same in either scenario. In other words, this conclusion about the development of Japanese disyllabic ideophonic stems from monosyllabic stems does not require Japanese and Korean to be genealogically related. However, if the presence of *l*-final monosyllabic ideophonic stems with clear symbolic differentiation of positions turns out to be limited to Korean, one would be inclined to use it as evidence of genealogical relationship between Japanese and Korean. This possibility is yet to be explored of course.

6 Concluding Remarks

This paper has clarified the similarities between Korean *l*-final monosyllabic ideophonic stems and Japanese disyllabic ideophonic stems having /r/ in the second onset. The comparison of these two types suggests that /r/ in the second onset of Japanese disyllabic ideophonic stems originated in the coda liquid of monosyllabic stems, which had the sense of movement. This is why /r/ is limited to the second coda in ideophonic stems.

The current analysis gives a new perspective from which to look at the distributional constraint that restricts /r/ to non-initial positions in Yamato words. Criticizing LeBrune (2014), Pellard (2016) argues that there is no historical or phonological basis for /r/ to have appeared as an unmarked consonant inserted in vowel hiatus position. I agree with him on this point, but I have to point out a critical omission on the part of Pellard, too. That is, strangely, neither Pellard nor LeBrune refers to the fact that ideophonic stems and Yamato words share the same distributional constraint on /r/. A purely phonological explanation is unable to account for the existence of the constraint in ideophonic disyllabic stems. I contend that the distributional constraint is easier to explain if /r/ in Yamato stems traces its origin to the hypothesized ideophonic coda liquid.

References

Aoyama, Hideo. 1990. *Tyoosengo Syootyoogo Ziten* [Dictionary of Korean Ideophones]. Tokyo: Daigakushorin.

Fidler, Masako Ueda. 2014. *Onomatopoeia in Czech*. Bloomington: Slavica.

Hamano, Shoko. 1998. *The Sound-Symbolic System of Japanese*. Tokyo: Kurosio Publishers.

Hamano, Shoko. 2019. Monosyllabic and disyllabic roots in the diachronic development of mimetic expressions in Japanese. *Iconicity and Language and Literature* 16*: Ideophones, Mimetics and Expressives*, eds. Kimi Akita and Prashant Pardeshi. 57-75. Philadelphia: John Benjamins.

Kim, Hyung-Soo. 2006. Underlying bases for reduplicated and sound symbolic words in Korean: The so-called emphatic suffixation revisited. *Journal of Linguistics*, 31: 207-232.

Kim, Jin-Hyung. 1997. An optimality-theoretic approach to reduplication in Korean ideophones. *Language Research*, 33: 737-752

Kim, Kong-On. 1977. Sound symbolism in Korean. *Journal of Linguistics,* 13: 67–75.

Kim-Renaud, Young-Key. 1976. Semantic features in phonology: Evidence from vowel harmony in Korean. *Chicago Linguistic Society* 12: 397–412.

LeBrune, Lawrence. 2014. The phonology of Japanese /r/: A panchronic account. *Journal of East Asian Linguistics* 23: 1-25.

Lee, Jin-Seong. 1992. *Phonology and Sound Symbolism of Korean Ideophones*. Ph. D. dissertation, Indiana University.

Lee, Young-Kil. 2002. A study of the meaning of consonants in Korean monosyllabic symbolic words. *Journal of Modern British & American Language & Literature* 20: 249-266.

Nasu, Akio. 2006. Atarasii onomatope-no koozoo: Jisyo-ni notte inai katati no bunpoosei [The structure of newly coined ideophones: the grammaticality of forms not found in dictionaries]. *Nihongogaku* 25: 37-45.

Nasu, Akio. 2015. The phonological lexicon and mimetic phonology. In *Handbook of Japanese Phonetics and Phonology*, ed. H. Kubozono, 253-288. Berlin: De Gruyter Mouton.

Pellard, Thomas. 2016. Why /r/ is not a special, empty consonant in Japanese. *Journal of East Asian Linguistics* 25: 351-383.

So, Shin-Ae. 2008. The phonetic value of the syllable final liquid (/ㄹ/) of Middle Korean and its change: Drawing on dialectal data and written documents. *Journal of Korea Linguistics* 53: 35-64.