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Cross-modal Mapping in L1 Korean and L2 English Sound Symbolism and L2 Learners' ...

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ABSTRACT

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We have investigated whether the association of sounds and shapes is observed in Korean L1 ideophones and L2 English words and pseudowords. First, we found that the linkage between shapes and sounds emerges in a limited scale with respect to Korean L1 ideophones and vowel harmony. This finding may stem from the fact that light/dark vowel distinction relating to Korean vowel harmony differs from the common vowel distinction based on front/back dimensions observed across languages. Second, in lexical decision task and explicit association test, we have shown that the correlation of visually and auditorily presented sounds and shapes takes place with regard to stop/fricative distinction. Moreover, the number of consonants contained within the words predicted the robustness of the association of the consonant type and shapes. Furthermore, it was found that round shapes were preferred for back rounded vowels and spiky shapes were associated with front vowels in L2 English. Thus, the presence or strength of the bondage of shapes and sounds might differ according to L1-specific phonological rules, L2 sound types or the type of behavioral task.

KEYWORDS

sound symbolism, Korean vowel harmony, cross-modal correspondence, sound-shape association, lexical decision task, explicit association test

1. Introduction

Sound symbolism refers to the extensive, symbolic correspondence between sound (form) and lexical meaning (Childs 2015: 287). It is a comprehensive umbrella term couching onomatopoeia and mimetic words. It has long been treated as a marginal case to linguistic studies because it is traditionally put aside as the showcase of non-arbitrary relations between form and meaning in the view of structural and generative traditions (Saussure 1916, Hockett 1982). However, numerous recent studies have revealed that the iconic connection between sound and meaning not only facilitates lexical acquisition at early stages but the learning of novel or new words (Imai, Kita, Nagumo and Okada 2008, Laing 2014. Nygaard, Cook and Namy 2009).

Sound symbolism has been observed across languages such as English, French, German, Hebrew, Korean, Japanese, Mandarin, Polish, Spanish, Zulu, etc (Akita, Imai, Saji, Kantartzis and Kita 2011, Childs 2015, Imai and Kita 2014). It is classified into many kinds according to the type of correspondence between a linguistic form and its meaning: (i) onomatopoeia, i.e., natural sound-linguistic sound correspondence (e.g., bow-wow, cock-a-doodle-do, meow), (ii) the bouba-kiki effect (Köhler 1947), i.e., sound-shape correspondence (e.g., “maluma” for the round shape vs. “takete” for the spiky shape), (iii) ideophone, i.e., sound-movement mapping (e.g., *kete* “chatter”-*khete* “babbble”-*gede* “chatter loudly”, Zulu; Van Rooyen et al. 1976).

1.1 Korean Sound Symbolism: Vowel Harmony

It is well-known that vowel harmony is observed in sound-symbolic or mimetic words such as onomatopoeia and ideophones as illustrated in (1). In these words, dark vowels /i, ɨ, u, e, ə/ contrast with light vowels /a, o, ɛ/: dark vowels co-occur with dark vowels whereas light vowels are accompanied by light vowels. (Note that the opposition of /e/ and /ɛ/ is still observed in vowel harmonic words in orthography although these two vowels have undergone merge at phonemic level in Modern Korean (e.g., “데굴데굴” /tekultekul/ vs. “대굴대굴” /tɛkultɛkul/, Lee 1994). However, vowels such as /i, ɨ/ co-occur either with light or with dark vowels. For this reason, these are called neutral vowels and have been handled as exceptions to vowel harmony as exemplified in (2) (Park 2007). As in (2a), when the vowel in the first syllable is one of these neutral vowels, all the other following vowels are dark vowels in the domain of vowel harmony and the neutral vowel seems to function as dark one. In contrast, when the second vowel is a neutral vowel, the ambient vowels are either dark or light within the domain of vowel harmony as in (2b).

1.2 English Sound Symbolism

1.2.1 English sound and ...

A growing number of previous corpus studies have shown that English lexicon is composed of more systematic sound-meaning correspondences than the conventional expectation (Farmer et al. 2006, Monaghan et al. 2014). This seems to lead to the conjecture that sound-meaning mapping is not exclusively arbitrary in English. The units of sounds which match specific meanings in sound symbolism vary from features and phonemes to sub-morphemic phonaesthemes.

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2. Behavioral Experiment: Visual Lexical Decision Tasks and Explicit Association Test

2.1 Participants

Thirty-one undergraduates at Daegu University in Korea took part in the two blocks of the lexical decision tasks and one block of explicit association test and were paid an appropriate amount of compensation. They are native speakers of Korean who studied English as major or minor in college. The average period of receiving English education at formal school system was 11 years. Their self-rating English proficiency was 4.7 out of 10 point-scale and their mean TOEIC score was 630. They had normal vision and reported no vision impairment.

Table 1. Prosodic Effects of …

	Native	Korean
Dur0	PP = Ft-m > Ft-f	PP > Ft-m = Ft-f
Dur1	none	none
Dur2	PP > Ft-f, PP = Ft-m, Ft-f = Ft-m	PP > Ft-m = Ft-f
F1-ons	none	none
F1-off	none	none

*"none" represents no significant differences among three prosodic positions.

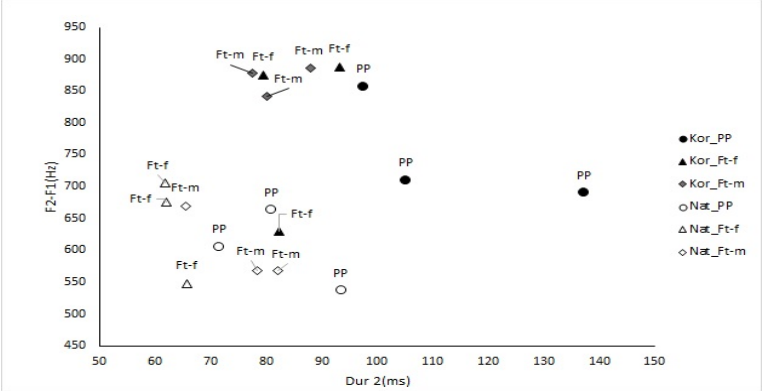

Figure 4. Dur2 and Values of (F2-F1) at the Offset

5. Conclusion

While considering …

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Appendix A

Title of Appendix A

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Appendix B

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