

Accent-epenthesis interaction in Kyungsang Korean loanwords: Phonetics or Phonology?

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Accentuation of Kyungsang Korean (KK) loanwords is generally predictable in words consisting of only light syllables, following a default accent pattern where the penultimate syllable is accented (Kim 1997). However, epenthetic vowels tend to resist accent in KK loanwords (Kenstowicz and Sohn 2001; Broselow 2008; Rhee and Kim 2003). The failure to accent an epenthetic vowel in penultimate position (e.g. pé^hsí^hí 'best', sí^htí^hró 'straw') cannot be attributed to the presence of the vowel /i/ because the lexical high back vowel in native words may be accented in this position (e.g. sí^hsí^hró 'for oneself', hí^hríta 'to flow'). I present evidence that the different behavior of epenthetic vowels and lexical vowels also cannot be attributed to acoustic differences between lexical and inserted vowels. Rather, it must be explained as a phonological process independent of phonetics.

Several previous studies reported that epenthetic vowels in other languages were phonetically different from lexical vowels: for example, English speakers produce inserted schwas as transitional, which are shorter in duration and lower in F1 than lexical schwas (Davidson 2006). Gouskova and Hall (to appear) also found that epenthetic and lexical vowels in Lebanese Arabic are acoustically distinct for some speakers: epenthetic vowels are either shorter in duration or backer (lower in F2) or both.

In an experiment designed to test whether information concerning the status of epenthetic vowels is available in the KK acoustic signal as in English and in Lebanese Arabic, six KK speakers were asked to produce two types of forms: (1) English pseudo-words containing illegal consonant clusters written in English (e.g. cafda [kap^hí^hda], bofda [pop^hí^hda]), and (2) Korean words containing the same consonants separated by an intervening lexical vowel (e.g. ap^hí^hda 'to be sick', kop^hí^hda 'to be hungry'), written in Korean. Subjects did not accent the epenthetic vowels 93% of the time. Duration and the first two formants (F1, F2) of the target vowels, inserted vowels and lexical vowels, in 900 tokens (50 test words × 6 subjects × 3 reps) were measured using *Praat* (Boersma and Weenink 2005). The results showed that none of the differences between epenthetic and lexical vowels in F1, F2 or in duration was significant ($p > 0.05$) as given in Table 1.

The finding that epenthetic vowels were identical phonetically to lexical vowels suggests that epenthetic vowels in KK are true vowels rather than transitional vowels. Given the fact that complex codas are never possible in Korean phonology, whereas certain types of complex codas are permissible in English and in Lebanese Arabic, this finding also suggests that distinct native phonology may generate language-specific phonetics and force Korean speakers to produce epenthetic vowels as real. Therefore, the unaccentability of epenthetic vowels cannot be ascribed to acoustic properties. It must be explained by phonological grammar.

Table 1: ANOVA results of production of epenthetic Vs vs. lexical Vs

| | epenthetic Vs in nonce words | | lexical Vs in native words | | F(1,4) | p |
|----------------|------------------------------|--------|----------------------------|--------|--------|-------|
| | mean | s.d | mean | s.d | | |
| F1(Hz) | 398.50 | 45.61 | 409.06 | 49.33 | 1.70 | 0.262 |
| F2(Hz) | 1492.49 | 127.42 | 1532.24 | 121.75 | 0.92 | 0.391 |
| V duration(ms) | 41.21 | 5.67 | 37.67 | 4.92 | 4.46 | 0.102 |

ep:N=243;lex: N=247, Computed using alpha = .05

Selected References

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