

## Motivations for consonant epenthesis in nonstandard suffixed forms of Korean nouns

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This study aims to account for variation in which stem-final consonant clusters are resolved in Korean nouns. It particularly sheds light on motivations for nonstandard suffixed forms with an epenthetic consonant. To begin with isolation forms, input stem-final consonant clusters undergo mandatory simplification via deletion, as in (1): / $(C_1)(G)V(C_2)(C_3)$ / [ $(C_1)(G)V(C_{2/3})$ ]. In contrast, suffixed forms show variation when a vowel-initial suffix (e.g., *-i* NOM) is attached, as in (2a-c).

- (1) Isolated: /*talk*/ [tak] ‘chicken’ (Note: no variation)  
(2) Suffixed: /*talk-i*/ a. [tal.ki] ‘chicken-NOM’ (Standard with both consonants)  
~ b. [ta.ki] ‘chicken-NOM’ (Nonstandard I with only one consonant)  
~ c. [tak.si] ‘chicken-NOM’ (Nonstandard II with [s]-epenthesis)

Suffixed forms in the standard variety of Korean preserve both input consonants, as in (2a) [tal.ki] ‘chicken-NOM’ (i.e., fully faithful). In Nonstandard Korean I, as in (2b) [ta.ki] ‘chicken-NOM’, however, only one consonant is preserved from the input (i.e., /k/) while the other (i.e., /l/) is deleted. In other words, the very consonant [k] that remains in isolation form [tak] in (1) also remains in Nonstandard Korean I [ta.ki] in (2b), at the expense of the other consonant /l/. This variety of Korean was discussed in Kenstowicz (1996) with the output-output (OO) correspondence constraint BASE-IDENTITY: isolation forms must be the base to which nonstandard suffixed forms make reference. This constraint is modified and specified in the present study as BASE-IDENTITY-SEG, which requires that nonstandard suffixed forms be identical to the Base *at the segmental level* and have the structure “isolation form + V-initial suffix”. Also related is Steriade’s (2000) *lexical conservatism*, which requires novel forms find a precedent in a listed form. It is the existing isolation form [tak] ‘chicken’ that is the precedent here. For this reason, /*talk-i*/ [ta.ki] is selected for the nonstandard suffixed form ‘chicken-NOM’. On the other hand, \*[ta.li] is ruled out because \*[tal] can never be the isolation form of *talk* ‘chicken’ in Korean.

Even more striking is suffixed forms with non-etymological [s], as in (2c) [tak.si] ‘chicken-NOM’ in Nonstandard Korean II. This is called [s]-epenthesis in this study. [s]-epenthesis has been underestimated and reported as a speech error, which was made by only one Kyungsang speaker in Jun & Lee’s (2007) experiment. However, it was found in the present study that [s]-epenthesis occurs systematically even in contemporary Seoul Korean. It is also phonologically systematic in the environment in which it occurs: the epenthetic consonant [s] appears in onset position of the second syllable in suffixed forms of nouns, which end *with a simplex consonant* (e.g., *kʌp* ‘fear’) and *with complex consonants* (e.g., *talk* ‘chicken’).

**Experiment:** A production experiment was conducted with 20 native speakers of Korean from the Seoul metropolitan area (mean age: 23; range: 19-27). For speech materials, a corpus of modern spoken Korean (Sejong Corpus of Korean (the 4th edition)) was used in order to select nouns that are actually in use in spoken Korean. In this way, six underlying consonant clusters that occur in the stem-final position in Korean nouns were prepared: /ps/, /ks/, /ls/, /lp/, /lk/, and /lm/. Also, there were 12 underlying stem-final simplex consonants: /p/, /p<sup>h</sup>/, /t<sup>h</sup>/, /s/, /k/, /k<sup>h</sup>/, /c/, /c<sup>h</sup>/, /n/, /m/, /ŋ/, and /l/. Excluding nouns that are little or never spoken in contemporary Korean, 29 nouns were selected and used (= 15 nouns with a consonant cluster + 14 nouns with a simple consonant). The experiment consisted of two parts, with two different methodologies (i.e., auditory and visual presentations of the target nouns). In Part I, there were 1,900 nouns (= (4 irrelevant nouns for a training session x 2 repetitions x 20 speakers) + (15 nouns with a consonant cluster x 3 repetitions x 20 speakers) + (14 nouns with a simple consonant x 3 repetitions x 20 speakers)).

These nouns were auditorily presented to prevent participants from being affected by spelling. In Part II, there were 660 nouns (= (3 irrelevant nouns for a training session x 2 repetitions x 20 speakers) + (3 nouns with a consonant cluster x 3 repetitions x 20 speakers) + (6 nouns with a simple consonant x 3 repetitions x 20 speakers)). The nouns were visually presented also to minimize the spelling effect. In both Parts I and II, participants were asked to say the given nouns in suffixed forms by using the conjunctive suffix *-iran* ‘and’: for example, *san sokii hilk-iran tol* ‘soil in the mountain and stone’. This particular conjunctive suffix was used in this study to show that variation with [s]-epenthesis occurs beyond the noun paradigms where vowel-initial case markers (e.g., *-i* NOM and *-il* ACC) are attached to nouns, as reported in other previous research.

**Results:** Dominantly observed was Standard Korean forms, as expected, as in (2a) and Nonstandard Korean I forms, as in (2b). It is also notable that Nonstandard Korean II with [s]-epenthesis, as in (2c) was consistently found for nouns with the consonant clusters /lp/ and /lk/, as in *jalp-iran* [ja.lp.si.raŋ] ‘eight and’ (.56%) and *talk-iran* [tak.si.raŋ] ‘chicken and’ (5.90%). [s]-epenthesis also occurred for nouns with the single consonants /p/, /k/, and /k<sup>h</sup>/, which are not coronal or sonorants, as in *kapp-iran* [ka.p.si.raŋ] ‘fear and’ (8.33%), *cukk-iran* [cu.k.si.raŋ] ‘porridge and’ (1.67%), and *puak<sup>h</sup>-iran* [pu.ak<sup>h</sup>.si.raŋ] ‘kitchen and’ (6.67%). The results contradict the previous analysis that views [s] as a one-time speech error (Jun & Lee 2007). In fact, even speakers from the Seoul metropolitan area consistently speak in Nonstandard Korean II by inserting [s] in phonologically systematic contexts. In sum, [s]-epenthesis occurs both in nouns *with a stem-final consonant cluster* and in those *with a stem-final simplex consonant*.

**Discussion:** As shown in various examples above, [s]-epenthesis consistently occurs in onset position of the second syllable (e.g., /talk-iran/ [tak.si.raŋ] ‘chicken and’) in Nonstandard Korean II. This is required by another OO-correspondence constraint CORR-σ-ROLE (Aguero-Bautista 1998 in Kenstowicz 2005): “... [I]f x and y are corresponding segments then x and y have the same syllabic analysis (onset, nucleus, coda).” This constraint is renamed as BASE-IDENTITY-SYL in the present study since it applies *at the suprasegmental level* in order to have the syllabic profile of the isolation form be preserved in the suffixed form. In other words, the non-etymological consonant [s] is inserted in order to preserve the coda consonant [k] in [tak] ‘chicken’ also in the coda position of the Nonstandard Korean II form, as in [tak.si.raŋ] ‘chicken and’. Thus, in Nonstandard Korean II, BASE-IDENTITY-SYL (the suprasegmental level) dominates BASE-IDENTITY-SEG (the segmental level) whereas in Nonstandard Korean I, the constraint ranking is the opposite. In addition to the position, it is worth discussing the quality of the epenthetic consonant. [s] is epenthesized due to the analogy from the dominant pattern in suffixed forms of nouns with a stem-final coronal obstruent. Various stem-final coronal obstruents are neutralized to [s] for most of the time (e.g., /soth<sup>h</sup>-e/ [so.se] (the most frequent variant)~[so.ch<sup>h</sup>e]~[so.te] ‘pot-DAT’) (Jun 2010). /s/ itself is also a frequent input onset consonant in Korean according to a dictionary study (Shin 2010), which supports the status of [s] as a highly probable epenthetic consonant. To conclude, consonant epenthesis is motivated by the interaction between the Base identity effect at the suprasegmental level and the frequency effect for the segmental choice.

**References:** Aguero-Bautista, C. 1998. Cyclic and identity effects in Spanish diminutives and augmentatives. Jun, J. & Lee, J. 2007. Multiple stem-final variants in Korean native nouns and loanwords. Jun, J. 2010. Stem-final obstruent variation in Korean. Kenstowicz, M. 1996. Base Identity and Uniform Exponence: Alternatives to cyclicity. Kenstowicz, M. 2005. Paradigm uniformity and contrast. Shin, J. 2010. Phoneme and syllable frequencies based on the analysis of entries in the Korean dictionary. Steriade, D. 2000. Lexical conservatism and the notion base of affixation.