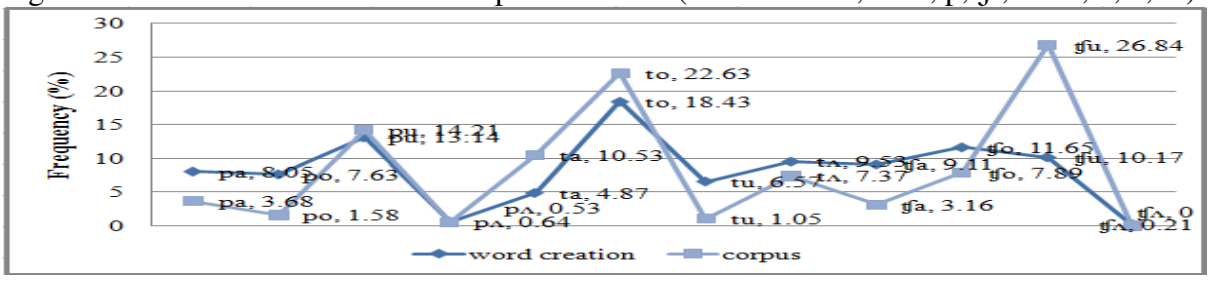
Syllable-internal template: Evidence from Korean consonant insertion

Behavioral experiments have shown that Korean speakers tend to group C_1 and V, rather than V and C_2, as a unit in a syllable of C_1VC_2, contrary to prediction that V and C_2 will form a sub-syllabic unit on the basis of the traditional syllable structure, onset + rime which sub-hierarchically consists of nucleus V and coda C (Lee 2006; Chen *et al*. 2004). I argue that this seemingly language-specific property of Korean cannot be simply attributed to an abstract representation of a syllable, which is usually dubbed as "body (= onset + nucleus) + coda." Rather, I suggest that there is a sub-syllabic template that requires interdependency between C and V, not V and C, to which speakers of the language make reference in their behavior.

Based on the data of total reduplication with a consonant inserted (CI) as in oson-**t**oson 'on good terms,' oŋki-**ʧ**oŋki 'densely,' asak-**p**asak 'with a crunch,' ʌŋki-**s**ʌŋki 'sparsely spaced; shaggy' (reduplicants underlined), I propose that Korean speakers are implicitly aware that onset and nucleus are more tightly connected than nucleus and coda at the sub-syllabic level. The experimental results in which the native speakers of Korean were asked to create words with reduplicative forms of VC_1VC_2-$\underline{\mathbf{C}VC_1VC_2}$ (**C** = CI) showed a tendency that identical pairs of CI and C_1 are likely to be followed by identical Vs (Zuraw 2002). The participants preferred to insert a C that is identical to C_1 when the resulting output forms came to have two identical substrings of CV. The number of identical pairs of CI and C_1 was even greater when the two nucleus Vs are identical than when Vs are non-identical. It was more likely there to be identical Vs in the cases in which CI and C_1 are identical (78.31%), than in the control cases (41.13%).

This finding that existing Vs affect the choice of CIs indicates an intimate relation between onset C and nucleus V, which is also shown in the CV combination patterns in the lexicon and experiment. The CV combination pattern in the experiment approximately replicates that of the corpus (Figure 1), whereas any other combinations of segments do not show such replication.

Figure 1. CV combinations in the reduplication data (VCVC-bases, C=/t, p, ʧ/, V=/a, o, u, ʌ/)



Onset C and nucleus V must be sub-syllabically related, and I argue that the native speakers' behavior does not only mirror what exists in the lexicon for CV combinations, but it in fact reflects the speakers' phonotactical knowledge of the sub-syllabic template.

The sub-syllabic template for onset and nucleus can capture the speakers' behavior in choosing a CI that eventually will result in two identical strings of CV, and furthermore in having the same patterns of CV combination in the experiment as those of the corpus. That is, the lexical statistics of CV combinations, which seemingly coincide with their corresponding combinations in the experiment, does not exercise force in the choice of CIs. Rather, it is the phonotactic probabilities in speakers' mind that affect the choice of CIs. Speakers remember frequent reduplicated forms whose CV combinations are also in store for them to use in creating new reduplicated forms, which means that more frequent forms are more influential in creating new forms. For instance, Figure 1 shows that the speakers in the experiment chose /pu/, /to/, /ʧo/ most frequently, among other CV combinations of pV, tV, ʧV, respectively,

which actually is confirmed by the fact that the most frequent single reduplicated forms with pV, tV, ʧV are ult^{h}ung-**p**ult^{h}ung, oson-**t**oson, oŋki-**ʧ**oŋki (closely after umul-**ʧ'**umul and aki-**ʧ**aki) in the corpus. This implies that the most frequent CV combinations, not the entire CV combinations, have more impact on phonotactics.

The research of this paper shows that lexical statistics may provide the basis for the phonotactics of language, which cannot be absolutely determined but rather, probabilistically determined. In addition, the fact that speakers' behavior is influenced by the sub-syllabic CV template in such a language as Korean typologically predicts that the template of CCC in a language like Arabic or Hebrew will also affect its speakers' behavior. Indeed, it was confirmed that Arabic native speakers, given nonce verb forms, rated a form containing identical Cs the worst and a form containing no hormoganic Cs the best in a wordlikeness rating experiment, which shows that Arabic speakers are implicitly aware of the restriction imposed on the CCC template (Frisch and Zawaydeh 2001). This paper not only identifies a source for preferring specific consonants as CIs in the consonant insertion of reduplication, but it also incorporates and supports the idea for the sub-syllabic CV constituency for the Korean language, whose argument has not been utilized to explicate any other linguistic behaviors, despite its solid intuition.

Selected References

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