

Analysis of the implicational relation between syllabification and phonetic realization in Korean speakers

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Abstract

This study investigated how Korean speakers syllabify two-syllable English words with single intervocalic consonants including liquids, nasals, and obstruents. To that end I conducted a written task and a listening task. As a result, I was able to confirm Koreans show a strong preference for a CV/CVC response in intervocalic nasals and obstruents, but an ambisyllabic response in the intervocalic consonant /l/. These results reflected that the intervocalic constant types were a more important factor in syllabification than vowel lengths and stress positions. Therefore the results could explain the reason for the unnatural pronunciation of Koreans owing to a gap between phonological structure (phonemic level) and phonetic realization.

Keywords

syllabification, syllable boundary, segmentation

1 Introduction

The purpose of this study is that, by experimenting with syllabification of two syllable-words as CVCVC on Koreans, first I will identify the basis of their syllabification on those words. Second, I will find what factor, among vowel length, stress position, and types of intervocalic consonants, mainly affects the phonetic realization of the intervocalic consonant of CVCVC. Finally, I try to find the source of unnatural, nonrhythmic pronunciation of Koreans, which may be caused by the gap between the phonological syllable structure and the phonetic one.

2 Assumption

In the theory of segmentation developed from the late 1980s to the early 1990s, its source was based on the fact listeners had their own characteristic rhythm when they listened to speech sounds. For example, they were syllable-based (Korean), stress-based (English), and mora-based rhythm (Japanese) (Cutler & Norris, 1988; Keiichi(2002)).

The aim of this study may be originated from my assumptions following: first, Koreans will prefer a syllable type with CVC from their native language. Second, Koreans, who embed syllable structure in their syllable-based language, will not be affected by stress position and difference of vowel length. Third, on my prediction regarding syllabification as closely related to pronunciation, there will be a great difference between reading and sound perception of English words. Fourth, Koreans will not have a Syllable-Boundary Rule or ambisyllabic conception in syllable structure (Giegerich, 1992:170, 172). Therefore I will perform two types of experiments for identifying these things.

3 Experiment

I experiment on 34 Korean university students to find how they syllabify two syllable-words including single intervocalic consonants like liquids, nasals, obstruents among a series of two syllable-words. I perform two kinds of tasks on the subjects: one is a listening task, and the other a written task.

3.1 Procedure

Participants were tested on two kinds of tasks. In the written task, they marked a slash before or after, or a wave shape under both the intervocalic consonants of English words like CVCVC. In the listening task, they marked a slash in the same way when listening to those words in a different order. Responses were scored as responses 1 if the intervocalic consonant was placed in the first syllable (e.g., *col/or*), responses 2 if the consonant was placed in the second syllable (e.g., *co/lor*), or responses 1-2 if the consonant was placed in both syllables (e.g., *color*).

3.2 Written Task

Figure 1 shows the proportion of the number of each response type for the written task in English words.

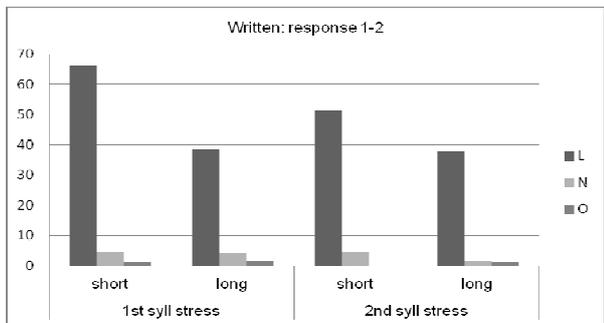
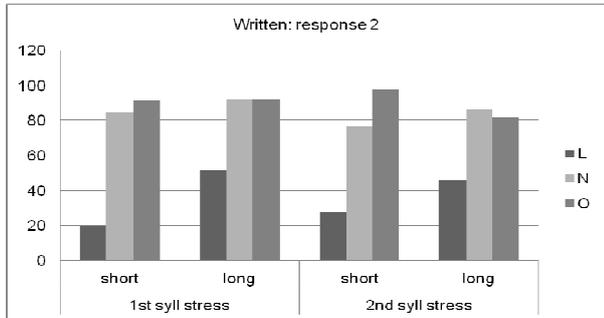
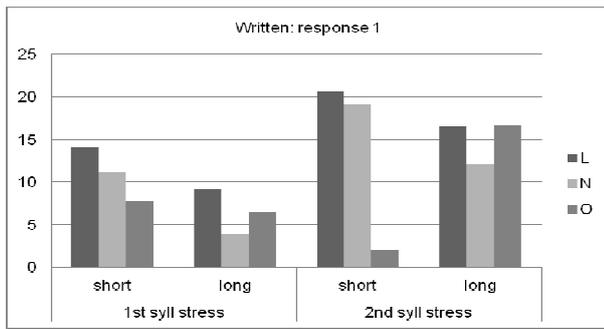


Figure 1: Written task for English words

3.3 Listening Task

Figure 2 shows proportion of the number of each response type for listening task in English words.

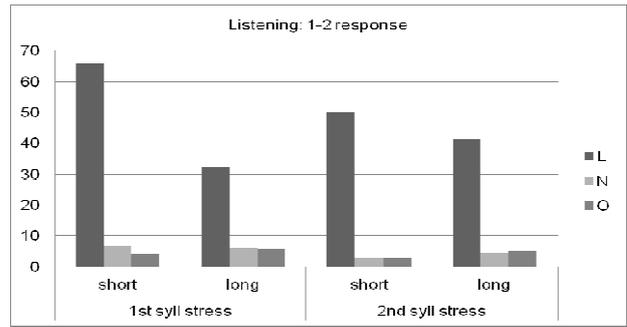
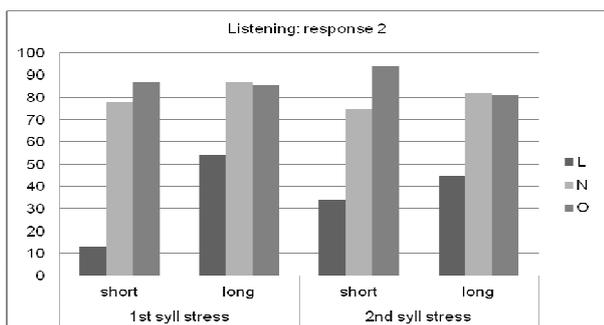
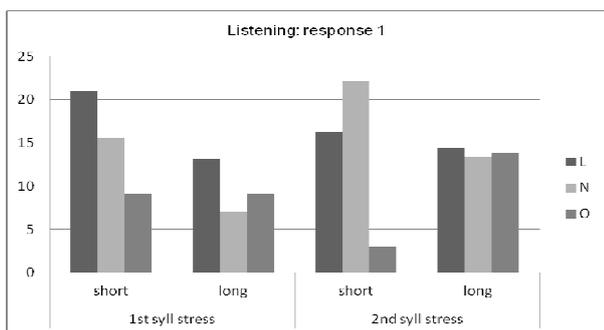


Figure 2: Listening task for English words

4 Results and Discussion

With the written and listening tasks, the results have provided some insights in segmentation as follows:

- In responses 1 rate of 1st syllable stress, it showed L(liquids)>N(nasals)>O(obstruents) in short vowels of the listening and the written tasks and L>N(O) in long vowels, but in short vowels of 2nd syllable stress of listening, N>L>O; in long vowels L>N,O; but in the written task each L>N>O, L,O>N. That is, the order of preference was like this: consonant types> short vowels> long vowels. This meant Koreans have no knowledge of vowel length in syllabification.

- In responses 2 rate of 1st syllable stress, it showed a strong tendency of having O>N>L in short vowels of the listening and the written task, but N>O>L in long vowels of the two types of tasks. In 2nd syllable stress, both types of tasks showed O>N>L. These clearly showed that Koreans have a strong tendency following the MOP (Maximum Onset Principle) as in their native language.

- In responses 1-2 rate, both of the two tasks showed a preference of L>N>O. One very interesting thing was that the intervocalic consonant /l/ was almost regarded as an ambisyllabic consonant to Koreans regardless of vowel length and stress position.

From the results of 1-2 responses, I see that Koreans have a strong tendency in preference of syllable structure like this: CV(C)> VC> V.

References

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