

Geminate perception of English-like words by Japanese native speakers:
Differences in the borrowed forms of “chapter” and “Chaplin”
Itsue KAWAGOE (Kyoto Sangyo University)
Akiko TAKEMURA (National Institute for Japanese Language and Linguistics)

It is well known that loanwords from English to Japanese contain geminate consonants where no counterparts can be found in the input word. A typical example is the word “cap”, which is borrowed as “kyappu” with a geminate consonant. At first glance, consonant gemination seems to take place where a lax vowel followed by an unvoiced plosive. However, a closer examination of the data reveals that it is not always the case for words with this same segmental string. Words like “chapter” and “doctor” are borrowed as “chaputaa” and “dokutaa” with no geminate consonants, while words like “Chaplin” and “mattress” are borrowed as “chappurin” and “mattoresu” with a geminate consonant.

The occurrence and non-occurrence of a geminate consonant in these loanword pairs has been discussed from the structural point of view (Arai & Kawagoe(1998)), where the difference in the pair “chapter” and “Chaplin” is considered to result from the difference of the syllable structure: a closed first syllable in the former (chap.ter) vs. an open one in the latter (Cha.plin).

We examine this issue first by testing the perception of geminates by native Japanese listeners in English-like nonsense word pairs such as “pepkin” and “peplin” produced by an English speaker. The statistical results show a significant difference of geminate perception between such pairs, so we then ask if this perceptual difference comes from the structural difference or not.

If the syllable structure is responsible for the occurrence and non-occurrence of a geminate, then exchanging the final strings (italicized parts) of “pep*kin*” and “pep*lin*” by splicing the recording and recombining the pieces to create an artificial pronunciation should produce the same perceptual difference of geminate consonants as we find in the original pairs. If the perceptual results after this manipulation are different from the original pairs, then, we may well conclude that not the syllable structure but some phonetic quality of the strings is responsible for the occurrence or non-occurrence of geminates in these pairs.

Reference

Arai, Masako and Itsue Kawagoe (1998) “Consonant Gemination and Syllable Types in English: A Perceptual Test of Nonsense Words”. *Journal of the Phonetic Society of Japan* 2-3, 87-92.