

Japanese consonant quantity contrasts by Hong Kong L2 learners: Preliminary results

Albert Lee^{1,2} and Peggy Mok²

¹Department of Speech, Hearing and Phonetic Sciences, University College London

²Department of Linguistics and Modern Languages, Chinese University of Hong Kong

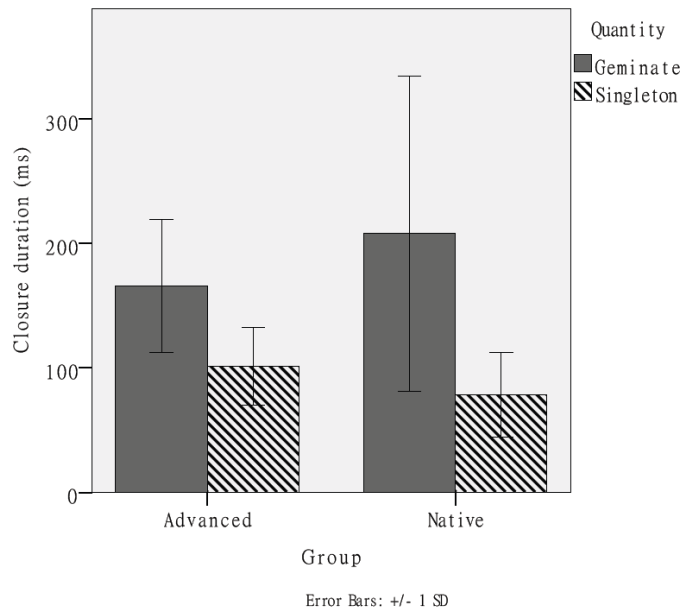
Consonant quantity distinctions in Japanese are difficult to Chinese learners. In Japanese, the distinction between singleton vs. geminate (*kita* ‘came’ vs. *kitta* ‘cut’) has been extensively reported in the research literature (e.g. [1], [2]). Mandarin learners of Japanese have been found to manifest inconsistent timing control in the production of this distinction, which is deemed related to the lack of phonemic quantity contrasts in Mandarin.

The acquisition of quantity contrasts by Cantonese speaking learners, however, is much less understood. Although there are no geminate sounds in the phonology of Cantonese, it has unreleased obstruent codas (e.g. /sɛp/ ‘濕’, /sɛt/ ‘失’, /sɛt/ ‘失’), which when followed by another homorganic obstruent, could result in a geminate. The presence of obstruent codas thus begs the question of whether Cantonese speaking learners of Japanese would distinguish *kita* vs. *kitta* better than their Mandarin-speaking counterparts, who do not have these codas in their L1. We conducted a production study with four native speakers of Japanese as control, 10 advanced learners in their final year of BA Japanese Studies programme, and 10 beginners who are in their first year of the same programme. Both learner groups are native speakers of Hong Kong Cantonese. All participants produced 18 real Japanese words and 12 non-words that contrasted in consonant quantity (CV.CV vs. CV.CCV) in three speech rates and repeated each word three times.

Preliminary results from ongoing analysis revealed interesting patterns in an advanced learner’s production, as summarized below:

<i>Measurements</i>	<i>Previous studies</i>	<i>Our results</i>	
Stop closure duration (Singleton:Geminate)	1:2.8 (Han, 1992)	Native (N=2)	1:2.18~3.12
		Advanced (N=1)	1:1.42~1.78
Effect of germination on duration of surrounding vowels (V1 and V2)	V1 – 11% longer; V2 – 9% shorter (Han, 1994)	Native (N=2)	V1 – 4~30% longer; V2 – 3~10% shorter
		Advanced (N=1)	V1 – inconsistent effect; V2 – inconsistent effect.

Results show that the advanced learner being analyzed was capable of making quantity distinctions in terms of closure duration, albeit to a smaller extent compared to the native speakers. However, the expected effect of gemination on the duration of surrounding vowels was absent in the advanced learner, supporting Maddieson’s [5] typological observation that geminates are only preceded by shorter vowels, to which Japanese was the only known exception. More data from advanced learners and beginners will become available later to shed light on the relationship between proficiency and the acoustic properties of Cantonese learners’ production of Japanese singleton consonants vs. geminates.



REFERENCES

- [1] Y. Hirata, "Effects of speaking rate on the vowel length distinction in Japanese," *J. Phon.*, vol. 32, no. 4, pp. 565–589, Oct. 2004.
- [2] K. Idemaru and S. Guion-Anderson, "Relational timing in the production and perception of Japanese singleton and geminate stops," *Phonetica*, vol. 67, no. 1–2, pp. 25–46, Jan. 2010.
- [3] M. Kurihara, "中国語北方方言話者の日本語長音の知覚特徴," *Gengo Kagaku Ronshu [言語科学論集]*, vol. 8, pp. 1–12, 2004.
- [4] X. Ren, "中国人日本語学習者の促音の知覚について," *Meikai Japanese Lang. J. [明海日本語]*, vol. 16, pp. 93–95, 2011.
- [5] I. Maddieson, "Phonetic cues to syllabification," in *Phonetic linguistics: Essays in honor of Peter Ladefoged*, V. A. Fromkin, Ed. Orlando, FL: Academic Press, 1985, pp. 203–221.