

## The Production of Japanese Geminate /ss/ by Cantonese speakers

Xiaolin Li<sup>1</sup>, Albert Lee<sup>2</sup>, Peggy Pik Ki Mok<sup>1</sup>

[1155068663@link.cuhk.edu.hk](mailto:1155068663@link.cuhk.edu.hk), [alee@alless.s.u-tokyo.ac.jp](mailto:alee@alless.s.u-tokyo.ac.jp), [peggymok@cuhk.edu.hk](mailto:peggymok@cuhk.edu.hk)

The Chinese University of Hong Kong<sup>1</sup>, Tokyo University<sup>2</sup>

First language (L1) plays an important role in the acquisition of second language (L2) contrast. However, how L1 transfers to L2 remains a question. The acquisition of Japanese by Cantonese speakers provides a chance to investigate how L1 transfers. Japanese distinguishes length for both consonants and vowels while Cantonese only has a vowel length contrast /a:/-/ə/. Cantonese does not have consonant length contrast. Nevertheless, /p/, /t/, /k/ are longer as onset, and shorter as coda. Lee & Mok (2017) suggested that L1 transfer might happen at the feature level. Most of the previous studies on Japanese length contrasts focused on the quantity properties. They focused on the duration and the ratio of different segments. The present study would focus on how Japanese length contrast was realized qualitatively. The intensity of /ss/ and /s/ would be measured.

The present work reanalyzed the data of Lee & Mok (2017). There were three groups of participants: native Japanese speakers (N=5), advanced learners (N=12) and beginners (N=8). The present study focused on the production of Japanese short /s/ and long geminate /ss/. Speakers were asked to produce Japanese non-words with either short /s/ or long geminate /ss/. Intensity of /s/ and /ss/ was measured. Repeated-measure ANOVA revealed that speaker had a significant effect on the mean intensity of long geminate /ss/. The native speakers had the highest intensity, following the advanced learners, while the beginners had the lowest intensity. However, repeated-measure ANOVA showed that there was no significant difference among different speaker groups for the intensity of /s/. One-way ANOVA revealed that for beginners, significant difference was found between /s/ and /ss/. The intensity of /ss/ is significantly lower than /s/. However, there was no significant difference between /s/ and /ss/ in intensity for native speakers and advanced learners. The SSANOVA revealed that native and advanced learners' intensity of /s/ and /ss/ overlapped. But beginners' /s/ and /ss/ did not overlap, and the first half of /ss/ was of much lower intensity. The results in present research suggested that beginners might produce a sequence of a stop and a short fricative /s/, or an affricate instead of a long geminate /ss/. Individual differences were also found. Some advanced learners were found to have the same error pattern as the beginners. Though Cantonese speakers were proved to be able to master the quantity property of Japanese length contrast, the present study showed that Cantonese speakers did not fully acquire the quality property of Japanese geminate /ss/ at the beginner stage. L1 Cantonese transfer and pedagogical reasons might be responsible for Cantonese speakers' performance.

Keywords:

Cantonese, L2 production of Japanese, geminate /ss/, quality difference

Reference

Lee, A., & Mok, P. (2017). Acquisition of Japanese quantity contrasts by L1 Cantonese speakers. *Second Language Research*.