

Prosodic marking of focus in Korean learners of Mandarin

JUN LIU^{1,2}, JING WU¹ & YONG-CHEOL Lee¹

¹Cheongju University (Korea), ²Liaocheng University (China)

1748046227@qq.com, wuqionganqi@163.com, soongdora@gmail.com

We conducted a production experiment using phone number strings to examine whether Korean learners of Chinese produce a native-like prosodic marking of focus. We found that both advanced and intermediate groups did not produce clear prosodic effects of focus nor noticeable post-focus compression, when directly compared to Mandarin native speakers. This study demonstrates that both advanced and intermediate groups had a strong negative prosodic transfer, derived from their first language (L1), although this negative transfer is known to decrease as their language proficiency increases [1]. This study also suggests that due to the interaction between tone and intonation [2], focus prosody in a tone language is not quite easy to acquire for non-tonal language speakers. Finally, the current study underlines that, as established in previous studies (e.g., [3]), post-focus compression is hard to transfer between languages.

Although both Mandarin and Korean are characterized by on-focus expansion and post-focus compression [4], the two languages differ greatly in at least two fundamental ways in focus marking. First, Mandarin is a tone language, and its prosodic focus is realized through expanding a pitch range conforming to its tonal structure [5]. Second, the degree of prosodic modulation of narrow focus, relative to broad focus, is shown to be greater in Mandarin than in Korean [6]. According to the Contrastive Analysis Hypothesis [7] for language learning, characteristics similar to L1 are easy to acquire, but those different from L1 are harder to acquire. Therefore, given that Mandarin and Korean differ considerably in terms of how prosodic focus is encoded, we posit that Korean learners of Mandarin will face a challenge in producing a native-like prosodic marking of focus. Furthermore, considering the interaction effect between tone and intonation, a tone language is acquired more slowly than a non-tone language. Accordingly, we also posit that even advanced Korean learners of Mandarin will differ quite from native speakers, showing negative prosodic features, particularly for post-focus compression.

100 ten-digit phone number strings were used in the form of (NNN)-(NNN)-(NNNN). The strings were randomly generated so that (1) each digit (0-9) appears equally often in each position of each digit string and a combination of every two digits appears equally often in each digit string. Two groups (advanced and intermediate) of Korean learners of Mandarin (2 females and 3 males in each group) produced the target stimuli embedded in two focus conditions: neutral and corrective focus. The neutral-focus stimuli were recorded in isolation as a background reading. In the corrective-focus condition, the same sequences were designed in a Q&A form, in which speakers made a response by correcting only one incorrect digit in the question (“No, Mary’s number is 787-412-4699”). Five native Mandarin speakers were also recruited for control data.

Among the four tone types in Mandarin, we only selected tone 1 and tone 4 digits (tone 1: 1, 3, 7, 8; tone 4: 2, 4, 6) for further analysis because the other tone digits are not sufficient among the ten digits (0-9) in a digit string. Our basic analysis was to make a direct comparison between broad focus and corrective focus by observing pitch patterns for each focus condition. Figure 1 displays time-normalized pitch contours of tone 1 and tone 4 in the two focus conditions. The pitch contours were averaged over the digit strings (389-343-4492 for tone 1, 637-686-7664 for tone 4), produced by five speakers in each group. In the figure, “target” refers to a focus position, the area shaded in gray represents post-focus positions, and the dotted line indicates a phrase boundary, demarcated by hyphens in the digit string (NNN-NNN-NNNN).

Figure 1 illustrates that corrective focus shows a higher pitch peak in the focus position and a lower pitch valley in the post-focus positions in the native group. However, both advanced and intermediate groups exhibit no such clear indication of prosodic changes in the focus and post-focus positions. The results demonstrate that even the advanced group produce neither clear on-focus expansion nor post-focus compression although their performance seems slightly better than the intermediate group, suggesting that the interference of L1 was evident in their L2 prosody for both groups. Finally, we view that, due to the interaction of tone and intonation in Mandarin, Korean learners of Mandarin seem to have particular difficulty in the acquisition of on-focus expansion and post-focus compression.

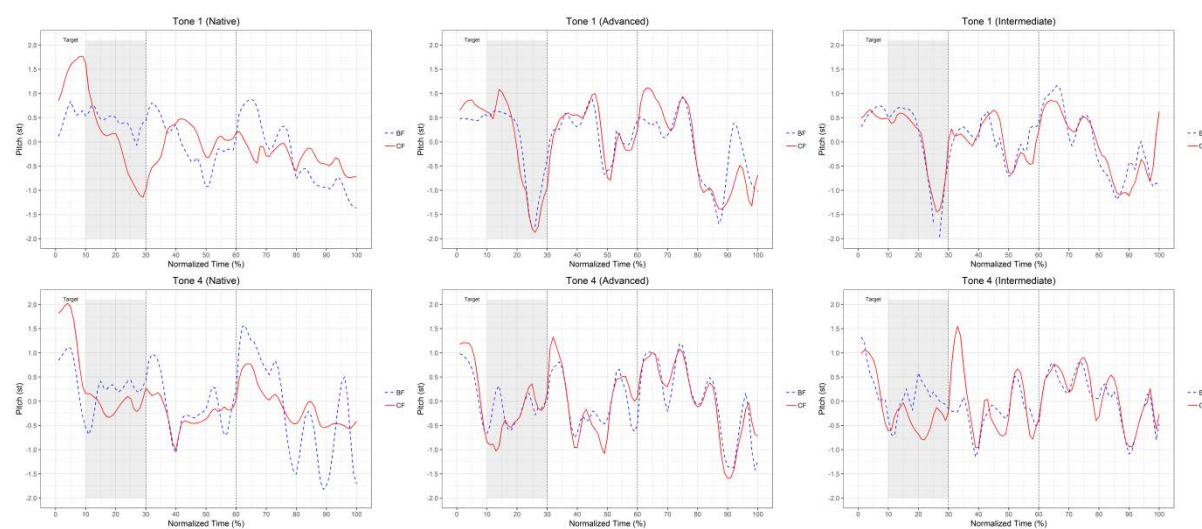


Fig. 1 Time-normalized pitch contours of the digit strings (389-343-4492 for tone 1, 637-686-7664 for tone 4) produced by five speakers of each group in the two focus conditions, separated by tone and language group.

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