

The future development of the neutral tone in Taiwan Mandarin: another neutralization?

In Standard Mandarin, the four lexical tones are neutralized in unstressed positions. The pitch of these neutral-tone syllables depends on the preceding lexical tone. However, in Taiwan Mandarin (TM), the neutral-tone syllables do not behave like those of Standard Mandarin. The pitch of the neutral-tone syllables in TM has a mid-low pitch target (Li 2005; Huang 2011), which is similar to Tone 3 (low tone). This study presents two pieces of evidence suggesting that the neutral tone in Taiwan Mandarin will be likely to merge with the low tone in the future.

A perception test was conducted to examine whether the difference between Tone 3 and the neutral tone spoken by four TM speakers is perceptible by the TM listeners. 40 TM-speaking subjects were asked to identify words, choosing between the three minimal pairs recorded by four TM speakers: *jia-zi* (rising-low) ‘clip’ vs. *jia-zi* (rising-neutral) ‘60 years’, *du-zhe* (rising-low) ‘reader’ vs. *du-zhe* (rising-neutral) ‘reading’, and *zuo-zhe* (falling-low) ‘author’ vs. *zuo-zhe* (falling-neutral) ‘sitting’. The results show that the subjects had difficulty correctly distinguishing the pairs. Out of the twelve pair instances (four TM speakers producing three pairs), only three of them were distinct for the listeners. The neutral tone and the low tone are merging together slowly: some items are faster than others, and some speakers are faster than others.

Another piece of evidence comes from a production test (the wug test). 12 TM-speaking subjects were asked to attach productive neutral-tone suffixes (*-zhe* ‘DUR’, *-le* ‘PERF’, *-de* ‘POSS’, *-men* ‘PL’) to obsolete syllables with made-up pronunciations. Interestingly, one subject applied Tone 3 Sandhi (Tone3 + Tone3 → Tone2 + Tone3) when the neutral-tone suffixes attached to the obsolete syllables with Tone 3. The fact that the neutral-tone syllables triggered Tone 3 Sandhi shows that this subject merged the neutral tone with Tone 3 phonologically. This finding suggests that the perceptual similarity between Tone 3 and the neutral tone has already caused some TM speakers to merge the two tones. It is likely that the two tones will eventually merge in TM given enough time.

Huang, Karen (2011). An acoustic study of neutral-tone syllables in Taiwan Mandarin. *the Fifteenth College-Wide Conference for Graduate Students in Languages, Linguistics, and Literature* Honolulu: University of Hawai'i.

Li, Jennifer (2005). The preliminary study about neutral tone: dialect effect between North Official Mandarin speakers in China and Taiwan Mandarin speakers (A). *Journal of the Acoustic Society of America* 117, 2457-2457.

