

On the status of a tone merger in Dalian Mandarin

Wei William Zhou

The Ohio State University

This present study investigates the status of a tone merger in Dalian Mandarin,¹ a northern Mandarin variety spoken by about seven million native speakers. Specifically, it attempts to examine the merger of tones *yinping* and *qu* from Middle Chinese and determine the extent to which the two tones have merged.

In the 1960s, it was reported that Dalian Mandarin had four lexical tones (Song, 1963). This is presented in Table 1.

Table 1 Lexical Tones in Dalian Mandarin in the 1960s

	Ping	Shang	Qu	Ru
Yin	312	213	53	
Yang	34			

In more recent years, Liu (2012) and Qiu (2014), who respectively relied on the speech from one native speaker informant, reported only three citation tones in Dalian Mandarin. Since determining lexical tone inventory should be the prerequisite of more complex tone analyses, this study also begins by identifying citation tones in Dalian Mandarin, based on the speech data from a 26-year-old, female speaker reading 96 characters in carrier sentences. The speech of our informant is very representative of Dalian Mandarin, as verified by several native speakers. Moreover, she is from the same area as the informants surveyed in Liu's and Qiu's studies. Three citation tones are identified in this study, as shown in Table 2.

Table 2 Lexical Tones in Dalian Mandarin in this Study

	Ping	Shang	Qu	Ru
Yin	51	412	51	
Yang	24			

From Table 2, it can be seen that the tones for *yinping* and *qu*, which were distinctive in Song's (1963) study, have merged into one tone, namely, /51/. An examination of the pitch and register shows that the two tones are indeed identical. In addition, the length for the two tones (with controlled initials, voicing, and aspiration) also does not differ, contra Liu (2012), who reported that the tones derived from *yinping* were longer in duration than those from *qu*.

Although acoustically undistinguishable in isolation, the tones for *yinping* and *qu* exhibit different tone sandhi behaviors, suggesting that the merger is not complete (see also Liu, 2012). The data for the tone sandhi analyses was obtained from another reading task done by the same speaker reading 64 disyllabic words in carrier sentences. Essentially, when *yinping* and *qu* (51) occur as the first syllable of a disyllabic word and precede another *yinping* tone (51), they undergo a change to become a high-level tone (55). However, when *yinping* and *qu* precede another *qu* tone (51),

¹ For a detailed discussion of tone merger, refer to Lien (1986) and Wang (1987).

they do not undergo any tone sandhi change. Although both this study and Liu's (2012) study have dealt with the tone sandhi phenomenon, the specific configurations of the tone changes appear to be very different, and this will be elaborated upon in the presentation.

In conclusion, it appears that the merging of *yinping* and *qu* is nearly complete, as the two tones do not differ in their pitch, register, and length, but only in their tone sandhi patterning. The merger is likely to have progressed further than a decade ago, as exhibited in Liu's (2012) experiment, since the two tones no longer exhibit a length difference that was present in Liu's study. However, more research is still needed. First-hand data on Dalian Mandarin in the literature is scarce. This study is thus a small contribution in advancing our knowledge of this variety of Mandarin. At the same time, it contributes to enriching our growing understanding of the complexity of sound change and mergers that take place among the Chinese dialects.

References

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Wei William Zhou: zhou.2874@osu.edu