

The Tonal Leveling of Taiwan Mandarin: A Study in Taipei

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Adopting Taipei as the representative of Taiwan Mandarin, this preliminary study of Mandarin leveling in Taiwan investigated the tonal leveling of Mandarin between Mandarin-Waishengren and Holo-Benshengren in Taiwan. The results indicated that the tonal leveling of Mandarin between these two ethnic groups started as early as between the first Taiwan-born Mandarin-Waishengren generation and their Holo peers, one generation earlier than the more general patterns suggested by Trudgill (Trudgill 1986, 2004). This leveling has nearly reached its completion in the following generation, taking approximately 30 years.

Four factors were proposed to interpret the rapidity of this leveling – (1) the intensiveness of Waishengren immigration to Taiwan, (2) the exclusive Mandarin-only language policy, (3) the pre-established social order and infrastructure during the Japanese colonial period, and (4) the frequent contacts between Waishengren and Benshengren.

Keywords: leveling, Taiwan Mandarin, language contact, tone

1. Introduction

For six decades, Mandarin has been promoted in Taiwan as the national language. In the past, “Waishengren” was stereotypically aligned to Standard Mandarin and “Benshengren” to non-Standard Mandarin. This language-ethnicity mapping seems to have been blurred in the course of the constant contact between Waishengren and Benshengren; it seems that the Mandarin gap between Waishengren and Benshengren has narrowed over time. Yet, this linguistic narrowing remains at the impressionistic level; a systematic study of it is thus essential. Adopting Taipei as the representative region of standard Taiwan Mandarin,¹ this study aims to explore this language phenomenon, intending to investigate whether Mandarin has been ethnically leveled in Taiwan.

2. Sociolinguistic situation in Taiwan

Taiwan’s linguistic environment has been intertwined with changing governments and immigrants from China. Currently, the people of Taiwan can be ethnically categorized into four groups: Aborigine, Holo, Hakka, and Waishengren, respectively

¹ In terms of the prevalence of Mandarin and various social and political factors, Taipei has been considered the “center” of Taiwan Mandarin. For further elaboration, see 4.1.

accounting for 1.7%, 73.3%, 12%, and 13% of Taiwan’s population (Huang 1993).² All categories but that of “Aborigine” are categorized as subgroups of the Han people, who or whose ancestors migrated from China mainly in two waves of immigration.

The first immigration wave began in the 17th century and lasted for approximately two hundred years until 1895 when China ceded Taiwan to Japan after the Japanese defeated China’s Qing Dynasty in the first Sino-Japanese war (Figure 1). This immigration wave brought the populations and languages of Holo and Hakka to Taiwan from southern China, with the former constituting the majority. The second immigration wave from China lasted for only a few years, between 1945 and 1950. It occurred at the end of World War II, when Japan returned Taiwan to China.³ The government of China, then known as the Republic of China, was ruled by the Nationalist Party (currently known as the Kuomintang or KMT). This immigration wave peaked in 1949, when the KMT retreated to Taiwan after the Chinese Civil War.

Considering language policy as a way to inculcate a “Chinese” identity, the KMT government soon initiated the National Language Movement (NLM) in Taiwan, exclusively promoting Mandarin at the expense of local languages.⁴ Mandarin thus became the national language of Taiwan and has since then been commonly known in Taiwan as “Guoyu”, literally meaning “national language.”

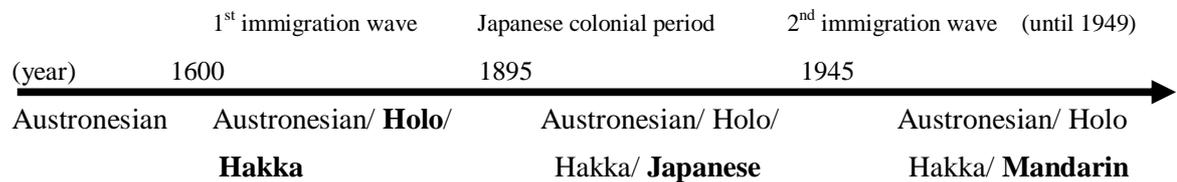


Figure 1. Major languages in Taiwan at different periods (The bold print indicates the newly arrived languages at a certain period.)

It is noteworthy that the suppressed Taiwanese local languages in NLM, mainly Holo and Hakka, are mutually unintelligible with Mandarin. The entire community of Taiwan had to undergo a “group second language acquisition” of Mandarin (Winford 2003:235), at least in the early stages of NLM. The group second language acquisition continued until a language shift toward Mandarin appeared among the young generation in Taiwan, who are native Taiwan Mandarin speakers or even Taiwan Mandarin monolinguals (see Young 1989, Chan 1994, Huang 1993, and Sandel et al. 2006).

² Kubler (1985) proposed different but close statistical data.

³ The legitimacy of the turnover of Taiwan to China at the end of World War II has been controversial, particularly among the Taiwan independence activists.

⁴ For details of the exclusive promotion, see Hsiao (1997).

Since the KMT took over Taiwan in 1945, it had governed Taiwan for decades as a province of China despite the fact that KMT lost sovereignty over China as early as 1949. As a result of this background, two terms are prevalent in Taiwan: “Waishengren” literally meaning “external-province person”, and “Benshengren” literally meaning “this-province person,” where “this province” refers to Taiwan. Waishengren refers to the Chinese immigrants in the second immigration wave, as well as their descendants. Benshengren, on the other hand, refers to the descendants of the Holo and Hakka who arrived in the first wave of immigration that began in the 17th century.⁵

Waishengren, composed of people from virtually all dialect areas in China, including Mandarin and non-Mandarin, have often been regarded as the same as Standard Mandarin speakers in Taiwan due to their general association with the KMT government. The Waishengren-Standard Mandarin alignment is an overgeneralization, but not completely illogical. By the time the KMT government retreated to Taiwan, Mandarin had been promoted in China for decades; the numbers of speakers of each Chinese dialect among Waishengren in Taiwan were too small to form a steady speech community, except in their own families. Mandarin has thus become a major marker of Waishengren; it even is regarded as the “new mother tongue” of second generation and younger Waishengren (Hsiao 1997:307).

3. Previous studies

3.1 Dialect leveling

Dialect leveling (hereafter “leveling”), as the term “leveling” implies, refers to “the reduction or attrition of marked variants,” with “marked variants” referring to “unusual” or “minority” forms (Trudgill 1986:98). It is believed that speech accommodation was one of the major factors triggering the process of leveling (Trudgill 1986 and Kerswill 2003). The concept of speech accommodation suggests that in unmarked situations, interlocutors tend to linguistically converge. If such short-term accommodation occurs repeatedly on countless occasions, in which speakers of different but mutually intelligible languages are present, long-term accommodation may appear among the same speakers (Trudgill 1986). The linguistic result of such long-term accommodation may spread in a wavelike way when the original speakers become involved in other groups, thus facilitating a language change.

⁵ The term “Benshengren” is not well defined. It may refer to only Holo due to their demographic predominance.

Given that face-to-face accommodation may be the trigger of the concatenation mechanism leading to leveling, communities with a high degree of contact are most likely to experience it. Mobility is considered one indicator of the degree of such contact (Milroy 2002 and Kerswill 2003). New settlements and new towns may be the implementations of a high degree of mobility; leveling at both of these occasions was reported in previous studies. Kerswill (1996, 2003) reported leveling in the formation of the dialect of Milton Keynes, a British new town. Trudgill (2004), on the other hand, presented an example of leveling in the formation of English of New Zealand, a new settlement. Figure 2 illustrates the concatenation of the mechanisms that may ultimately lead to leveling.

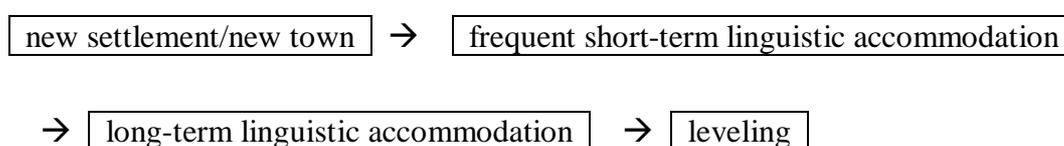


Figure 2. The concatenation of the mechanisms involved in leveling⁶

3.2 Dialect leveling in Taiwan

Kubler (1985) investigated Mandarin in Taiwan and argued that many of the phonological, syntactic, and lexical Mandarin features that were commonly observed and stigmatized in Taiwan were the outcomes of Holo influence on Mandarin. For instance, many Holo speakers in Taiwan merge Mandarin retroflex initials [tʂ], [tʂ^h], [ʂ] with their dental counterparts [ts], [ts^h], [s]. Such mergers were regarded as the results of second language acquisition errors made by Holo people due to the absence of these merged Mandarin segments in Holo.

Kuo (2005) may be the first study that systematically explored the leveling process of Mandarin in Taiwan. Analyzing the historical demographic data of the 1949 Chinese immigration wave and the data of various Chinese dialects, Kuo discounted the previous argument of second language acquisition errors and attributed the absence of retroflexion in Taiwan Mandarin to the small number of retroflex-using dialect speakers in the original Waishengren population. She further suggested that Taiwan Mandarin was the outcome of a koineization process, particularly the leveling process of various Chinese dialects.

In addition to Mandarin, Holo in Taiwan has undergone leveling process as well. The origins of Taiwan Holo can be subcategorized into several mutually intelligible

⁶ The arrows in the figure indicate tendencies, not a cause/effect relationship.

subdialects, with Tsiang-tsiu (漳州) and Tsuan-tsiu (泉州) being the two major ones. These two subdialects have crossed the linguistic boundary between them and mixed in various manners in different locations in Taiwan, generating a variety of the Tsiang-tsiu and Tsuan-tsiu mixture subdialects. The term “Tsiang-Tsuan-lam” (漳泉濫), literally meaning “Tsiang-Tsuan blend,” subsequently emerged, indicating the mixture nature of Holo in Taiwan.

Although the Tsiang-Tsuan gap has narrowed, the subdialects of Taiwan Holo can still be broadly categorized into three groups: (1) the pro-Tsiang, prevailing in the basin area of Taipei and the western coast of Taiwan, (2) the pro-Tsuan, prevailing on the northern coast and in central Taiwan, and (3) the Mix, prevailing in the plain area of southern Taiwan (Ang 1995). Ang further argues that the Mix is spreading from southern Taiwan to the rest of the island and developing into “Taiwan predominant pronunciation”, or “Tai-uan Iu-se-im” (台灣優勢音) (Ang 1995). The emergence of Tai-uan Iu-se-im implies that Holo in Taiwan is undergoing another leveling process after the various types of Tsiang-Tsuan mixture have been indigenized in Taiwan for hundreds of years (Figure 3).

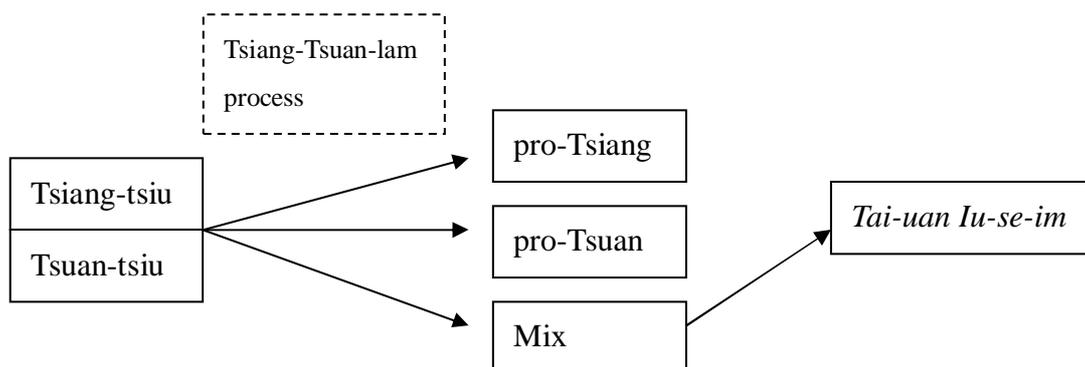


Figure 3. The leveling process of Holo in Taiwan

4. Methodology

4.1 Informants

Forty eight informants, balanced by gender, three ethnicities, and two generations, were recruited for this study. All of them were born and raised in metropolitan Taipei (henceforth referred to as Taipei), and those above 18 were all educated at the college level or higher.

The educational restriction to college and the regional restriction to Taipei were

put in place to maximize the informants' Mandarin nativity. Mandarin has been exclusively promoted in Taiwan's education system. Hsu (1998) suggested that the extension of compulsory education to nine years in 1968 accelerated the language shift toward Mandarin in Taiwan. It was thereby assumed that those who had long remained in the education system—i.e., the well-educated—would be more likely to speak with the native Taiwan Mandarin accent. Well-educated people are not rare in Taiwan. Higher education has constantly prevailed in Taiwan; the percentage of the adult population with a high school or higher education increased from 26% in 1978 to 64% in 2006.⁷ This figure was even higher in Taipei, from 33% in 1976 to 55% in 1991 to 78% in 2006.⁸

Taipei has been considered the “center” of Mandarin due to its strong political link to the KMT government, which introduced Mandarin to Taiwan mainly for political reasons. In fact, Taipei is the area where Mandarin and Holo most frequently interact. In addition to the educational advantage as mentioned in the previous paragraph, the demographic composition in Taipei, compared to other areas in Taiwan, is as well more favorable to Mandarin. The 1956 Population Census indicated that Taipei was where 41% of the Waishengren had settled. The statistic data of Waishengren in Li (1970) also suggested that a large portion of Waishengren resided in Taipei. In 1945, one-third of Waishengren resided in Taipei city, and in 1965, the portion of Waishengren in metro Taipei reached 50%. This demographic composition has made Taipei more Mandarin-friendly than the rest of Taiwan.

The representativeness of Taipei as the center of Mandarin has also been indicated in some linguistic studies. Chen (1991) adopted Taipei informants as representative Mandarin speakers. Ang (1992) even named the variety of Mandarin spoken in Taiwan “Taipei Huayu,” literally meaning “Taipei Mandarin.” Kuo (2005:91) also implied that Taipei would have been a more fitting research site for Mandarin leveling than her own research site of Keelung, if not constrained by the accessibility.

The two generations of informants in the current study were determined according to their years of birth: the first generation was born between 1951 and 1960 (henceforth the older group), and the second between 1981 and 1990 (henceforth the younger group). In 1956, the KMT government, under the NLM, implemented a full-scale “Speak Mandarin Movement,” strictly designating Mandarin as the only language allowed in government and schools, and on public occasions. The current study thus assumed that those who were born in the year 1951, including Waishengren, were the first generation that natively learned Mandarin in Taiwan; their elementary school education started almost immediately after the initiation of this exclusive

⁷ Source: Ministry of the Interior, Taiwan.

⁸ Source: Taipei City Statistical Abstract 2007. http://w2.dbas.taipei.gov.tw/NEWS_WEEKLY/abstract

Mandarin policy. In fact, the effect of “Speak Mandarin Movement” was observed in Hsu (1998) in that the informants born after 1951 employed Mandarin more frequently than their peers in the same generation but born before 1951. The younger group of informants in the current study, on the other hand, was chosen to represent the first descendent generation of the older generation.

As to the ethnicity of the informants, among Benshengren, only Holo were recruited, since the Holo group has been demographically and linguistically predominant in Taiwan. Among Waishengren, only those speaking Mandarin (hereafter “Mandarin-Waishengren”) were recruited,⁹ despite the fact that Waishengren actually originated from both Mandarin and non-Mandarin areas in China.

The informants’ ethnicities were further subcategorized according to the degree of inter-ethnic marriage, as follows: (1) both parents are Mandarin-Waishengren (henceforth M×M); (2) the father is Mandarin-Waishengren and the mother is Holo (henceforth M×H);¹⁰ (3) both parents are Holo (henceforth H×H).

All informants, except the H×H older group, were, on a self-report basis, native Mandarin speakers. In general, the older H×H informants, whose first language is Holo, can manage Mandarin (nearly) natively, as it has been the only language in the education system and the dominant language in public domains.

4.2 Examined variables

Two tonal variables were examined: neutral tone realization and tonal range. Given the general link between Waishengren and Mandarin—particularly among the older generation Waishengren—and the discussions regarding Taiwan Mandarin and China Mandarin in previous studies (such as Kubler 1985), the current study was conducted based on the following hypothesis: the older one is and the higher his/her Waishengren ethnicity is, the more likely his/her phonological performance corresponds to China Mandarin, or so-called Standard Mandarin.

⁹ This limitation on Mandarin-Waishengren was practically and linguistically determined. Among the Chinese languages, acoustic studies and data on various varieties of Mandarin, including both Standard and non-Standard Mandarin, are, compared to those of other Chinese dialects, relatively comprehensive. This comprehensiveness of previous studies practically offered more references and better legitimacy on the phonological variable selection of the current preliminary study of Mandarin leveling. The second concern was dialectally and sociolinguistically motivated. Mandarin, despite its various varieties and wide geographical distribution in China, is considered a relatively homogeneous system, compared to other Chinese dialects (Zhan 1991:94). This relative homogeneity could, to a certain degree, simplify the linguistic complication of the current research. Sociolinguistically, Mandarin had been granted exclusively predominant status in Taiwan. This promotion of Mandarin controversially but effectively turned nearly every person in Taiwan younger than fifty into a fluent or native speaker of Mandarin.

¹⁰ This is the most common type of Waishengren-Benshengren intermarriage in Taiwan.

Neutral tone is an essential feature of Standard Mandarin and most Mandarin dialects (Norman 1988:149). However, its frequency was observed to be greatly reduced in Taiwan Mandarin (Kubler 1985 and Duanmu 2000). Kubler (1985:107) ascribed this frequency reduction of neutral tone to its absence in Holo, one of the major local languages in Taiwan. The current study examined whether, among the remaining neutral tones in Mandarin, the frequency discrepancy exists between Mandarin-Waishengren and Holo people in Taiwan.

As to tonal range, both Fon and Chiang (1999) and Tseng (1999) indicated tonal discrepancy between Taiwan Mandarin and “Putonghua”, or Standard China Mandarin, generally used interchangeably with Standard Mandarin. Fon and Chiang (1999) investigated the tonal system of Mandarin and discovered that, instead of the five-way distinction found in Chao Yuen-ren’s system, Taiwan Mandarin demonstrated a narrower four-way distinction. They further suggested that the tonal values of the four tones in Putonghua were “55, 35, 214, 51” from T1 to T4 and those in Taiwan Mandarin were “44, 323, 312, 42.” Tseng (1999) systematically studied the phonological systems of Putonghua and Taiwan Mandarin. One of her findings indicated that Putonghua demonstrated a wider tonal range than Taiwan Mandarin. Inspired by these findings, the current study examines whether Mandarin-Waishengren realizes a wider tonal range in Mandarin than Holo.

4.3 Stimuli and data analysis

Reduplicated terms, including seven reduplicated verbs¹¹ and eight reduplicated kinship terms,¹² were adopted as the carrier terms of neutral tone. The adoption of reduplicated terms was determined under two concerns. The remaining neutral tones in Taiwan Mandarin are more likely to be realized in the second syllable of reduplicated terms, as they have been so taught in school. The second concern was a technical one. The two identical syllables in a reduplicated term can provide a decent environment for observing contrastive effects if the second syllable is tonally neutralized; any possible intervening effects could then be minimized.

The other phonological variable, tonal range, was examined in the Tone 4 (T4) syllables that appeared in the carrier sentences on the reading list. It was assumed that this high-falling tone, as its tonal value of “51” in Chao’s system indicated, covered

¹¹ The seven reduplicated verbs are: *xie-xie* (歇歇, ‘to take a rest’), *shuo-shuo* (說說, ‘to talk’), *xiang-xiang* (想想, ‘to think about’), *zou-zou* (走走, ‘to take a walk’), *shi-shi* (試試, ‘to try’), *kan-kan* (看看, ‘to take a look’), and *chang-chang* (嚐嚐, ‘to taste’).

¹² The eight reduplicated kinship terms are: *ba-ba* (爸爸, ‘father’), *ma-ma* (媽媽, ‘mother’), *ge-ge* (哥哥, ‘older brother’), *jie-jie* (姊姊, ‘older sister’), *di-di* (弟弟, ‘younger brother’), *mei-mei* (妹妹, ‘younger sister’), *jiu-jiu* (舅舅, ‘uncle’), and *po-po* (婆婆, ‘mother-in-law’).

the majority, if not the entirety, of one's tonal range in Mandarin; the highest pitch point was realized at the onset and the lowest pitch point at the offset. Guo (1993:183-185) and Lin (1989:158) also showed that T4 covered the full tonal range of Mandarin speakers from China.

4.4 Procedure

The informants were asked to read a list of carrier sentences, each of which consisted of eight or nine syllables.¹³ The seven reduplicated verbs and eight reduplicated kinship terms were placed in the final positions of the carrier sentences in order to avoid coarticulation effects from the following sounds. To minimize the possible bias of impressionistic description, the speech data were all acoustically analyzed by *Praat*,¹⁴ an acoustic analysis software.

Neutral tone realization was examined on its fundamental frequency (f_0). Conventionally, Standard Mandarin neutral toned syllables are considered weakly stressed ones, the virtual tones of which depend on the tones of the preceding syllables. However, neutral tone in Taiwan Mandarin tends not to be realized in a neutral manner, but as a low falling tone (Hsu 2006) (Figure 4).

As to the tonal range variable, since pitch tends to drift downwards over an intonational phrase, the current study sampled T4 syllables at two different positions in the carrier sentences—sentence-initial and sentence-medial positions—to decrease this reduction effect on the validity of the measured tonal range. For instance, in the sentence, *xing4hao3 yi2lu4shang4 you3 ni3 ban4sui2* (幸好一路上有你伴隨。‘It is fortunate to have your company all the way.’), the first syllable *xing4* and the fifth syllable *shang4* were sampled for tonal range.

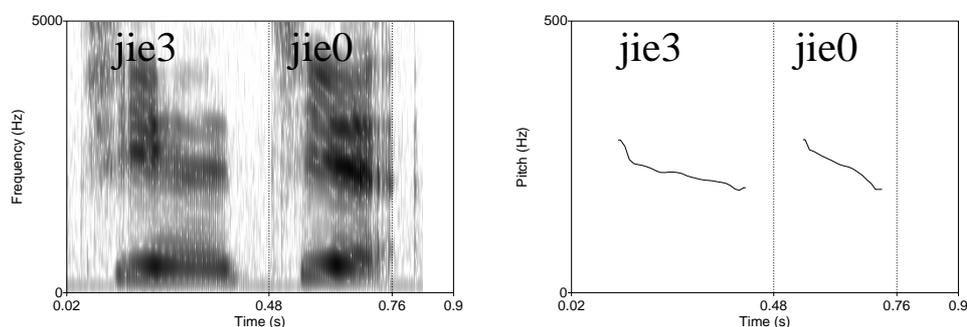


Figure 4. An example of the spectrogram and the tonal contour of the term *jie3jie0* (‘older sister’) in Taiwan Mandarin

¹³ Here is one example of the carrier sentences: *Kuai jin dao wu li qu xiexie.* (快進到屋裡去歇歇。‘Enter the house to take a rest.’)

¹⁴ See www.praat.org.

The tonal range of an informant was obtained by measuring and averaging the pitch range between the initial and the end points of the sampled syllables (Figure 5). One hundred and four T4 syllables, including 51 sentence-initial and 50 sentence-medial ones, were examined for each informant.

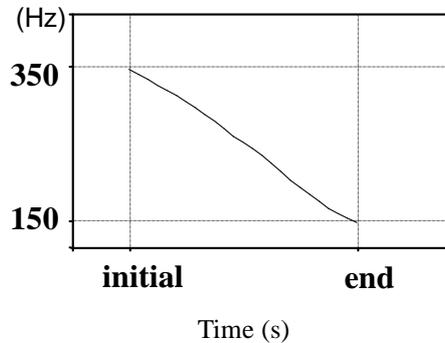


Figure 5. An example of the tonal range measurement of a T4 syllable

5. Results

A Stimuli Type (2) × Age (2) × Gender (2) × Ethnicity (3) mixed four-way repeated measure on the frequency of neutral tone realization was performed.¹⁵ The results showed that Stimuli Type and Age effects were significant [Stimuli Type: $F(1, 36) = 1129.09, p < .05$; Age: $F(1, 36) = 8.00, p < .05$]. Neutral tone was more likely to be realized in reduplicated kinship terms than in reduplicated verbs; older speakers adopted more neutral tones than younger speakers. Ethnicity and Age did not show significant effects. No significant interaction effect was observed.

Table 1. Average neutral tone realization frequency of each informant subgroup

| | Ave. Frequency of Kinship Terms (total: 8 terms) | | | | Ave. Frequency of Reduplicated Verbs (total: 7 terms) | | | |
|-----|---|------|---------------|------|--|------|---------------|------|
| | older group | | younger group | | older group | | younger group | |
| | Female | Male | Female | Male | Female | Male | Female | Male |
| MxM | 6.50 | 6.00 | 7.25 | 4.75 | 2.50 | 0.25 | 0.75 | 0.50 |
| MxH | 7.25 | 6.00 | 7.50 | 6.25 | 2.00 | 0.75 | 0.50 | 0.25 |
| HxH | 6.50 | 6.75 | 4.50 | 6.25 | 1.25 | 1.50 | 0.00 | 1.00 |

An Age (2) × Ethnicity (3) two-way¹⁶ ANOVA was conducted on tonal range.¹⁷ The results showed that all effects were significant [Age: $F(1, 3546) = 813.31, p$

¹⁵ For the average neutral tone realization frequency of each informant subgroup, see Table 1.

¹⁶ The gender variable was not examined for tonal range, as the significant difference, even observed, is very likely, at least, biologically caused.

¹⁷ For the average tonal range of each informant subgroup, see Table 2.

< .05; Ethnicity: $F(2, 3546) = 22.24, p < .05$; Age \times Ethnicity: $F(2, 3546), 25.06, p < .05$]. The tonal range was wider in the older group (40.63 Hz) than in the younger group (17.64 Hz).

Table 2. Average tonal range of each informant subgroup

| | Average Tonal Range (Hz) | |
|-----|--------------------------|---------------|
| | older group | younger group |
| MxM | 45.74 | 16.86 |
| MxH | 43.17 | 18.35 |
| HxH | 32.98 | 17.71 |

A Tukey's post-hoc analysis was performed on Ethnicity. A significant difference between the HxH group and the MxM/ MxH groups was observed; the tonal range of the latter was larger than that of the former. There was no difference between the MxM group and the MxH. As to the Age \times Ethnicity interaction effect, the post-hoc ANOVA on older speakers showed that the effect of ethnicity was significant [$F(2, 1773) = 30.74, p < .05$]. Tukey's post-hoc analysis further showed a significant difference between the HxH group and the MxM/ MxH groups, while no significant difference was observed between the MxM group and the MxH group (Figure 6).

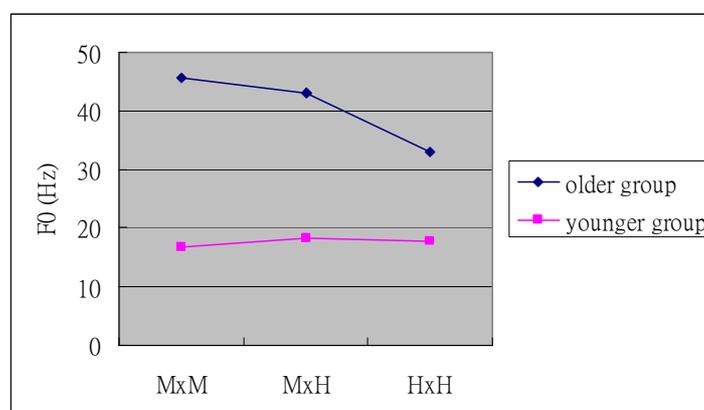


Figure 6. Age \times Ethnicity interaction on tonal range

This Age \times Ethnicity interaction result indicated that in the MxH subset of the older group, Waishengren-ness outperformed Holo-ness in tonal range realization. In other words, the older MxH group, albeit of the dual ethnicity, tends to behave more like Waishengren than Holo in terms of tonal realization. As for the younger group, no significant ethnicity effect was observed, indicating that the ethnicity of younger people in Taipei can hardly be identified via their tonal performance of Mandarin.

6. Discussion

6.1 Tonally leveled Taiwan Mandarin

The results of the current study showed that the significant effect of ethnicity was observed only on one of the two tonal variables, i.e., tonal range; a wider tonal range was observed in the older group and the Mandarin-Waishengren group (Figure 6). No significant ethnic gap was observed in neutral tone realization. These results imply that Mandarin leveling between Mandarin-Waishengren and Holo in Taipei may have started as early as the 1950s, shortly after the arrival of Waishengren, and that the leveling appears to be reaching its completion.

In fact, previous studies, though not specifically adopting the term “leveling”, had mentioned or implied this phenomenon. Chang (1998) pointed out that in Taiwan, it was highly unlikely to identify a young speaker’s native language in terms of his or her Mandarin accent, especially among those who were younger than 30 or 40 years old and those in the urban areas of northern Taiwan. Tseng (2003) described that the manifestation of her second-generation Waishengren identity via her Mandarin accent was weakening, because the number of people that could recognize her by her accent had decreased.

6.2 Taiwan Mandarin—leveled faster

Trudgill (2004) referred to a situation where “there is no prior existing population speaking the language in question” as a “tabula rasa” situation (p.26). Southern Hemisphere Englishes, such as Australian English, New Zealand English, and South African English, can be considered the results of dialect contact of the tabula rasa type—the contact of multiple varieties of English brought into these new settlements by immigrants from Britain. He further suggested that the formation of a new dialect out of such dialect contacts and a mixture situation took 50 years (p.23), roughly corresponding to three generations.

The concept of tabula rasa has been observed in Taiwan on two occasions. A tabula rasa situation was in evidence when Holo and Mandarin were introduced in the first and second immigration waves respectively, though these two languages developed in different patterns. As stated previously, Holo in Taiwan, despite its 300-year history and the constant contact among its subdialects, can still be broadly categorized into three regional varieties. Further leveling of these three varieties is ongoing.

Mandarin, on the other hand, has experienced a faster leveling process. At the time

when the large-scale migration from China occurred in the period between 1945 and 1949, various varieties of Mandarin, both native and non-native, began contacting each other in Taiwan—particularly in Taipei. The results of the current study demonstrated that Taipei Mandarin—unlike New Zealand English with its 50-year formation pace or Taiwan Holo with its 300-year transition—was tonally leveled in a period of 30 to 40 years, from 1951 to sometime in the 1980s. In other words, Taipei Mandarin, which is widely considered the Standard Taiwan Mandarin, was not only leveled, but also leveled in a relatively rapid manner.

6.3 Four possible factors of the rapid leveling

The current study suggests four factors that may have accelerated the leveling of Mandarin in Taiwan: (1) the intensiveness of Waishengren immigration, (2) the exclusive Mandarin-only language policy, (3) the pre-established social order and infrastructure of the Japanese colonial period, (4) the constant contact between Waishengren and Benshengren.

The British migration to the Southern Hemisphere in the 19th century and the first migration wave from China to Taiwan in the 17th century both occurred in a gradual and lasting manner, while the second wave of Chinese migration to Taiwan was virtually an intensive group relocation. Simply speaking, the former two migrations may be comparable to a “trend” and the latter to an “event.” If the course of history is analogized to a line, a “trend” occupies a portion of the line, while an “event” merely a point on that line.

Figure 7 illustrates the annual population growth rates of Taiwan since 1947. Salient gaps between annual growth rates and natural growth rates are observed in the years 1947, 1948, and 1949, indicating a large-scale migration to Taiwan in these three years. Lin (2004) also reported this migration boom. He stated that Waishengren accounted for less than 1% of Taiwan’s population before 1945, and that among the 640 thousand Waishengren surveyed in the first official Taiwanese census conducted in 1956, 550 thousand, i.e. 86%, had migrated to Taiwan before the year 1950. As stated in section 4.1, a large portion of the Waishengren population has settled in Taipei since their migration to Taiwan after World War II.

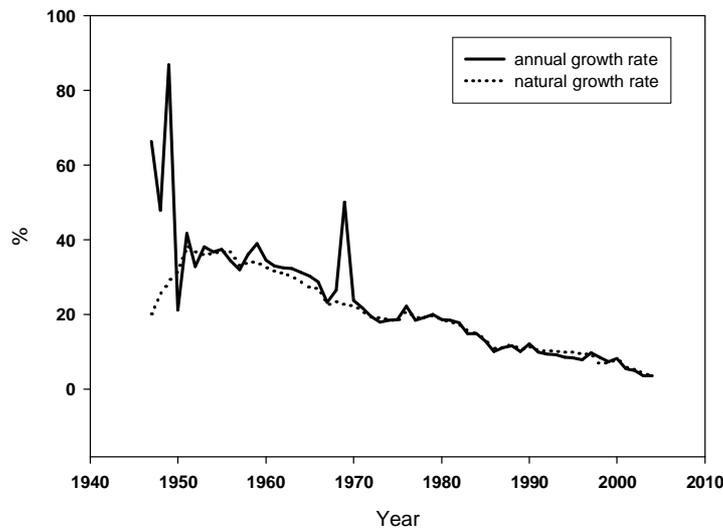


Figure 7. The annual growth rate and natural growth rate of the population of Taiwan^{18, 19}

Different migration patterns may have brought different linguistic influences to the new settlement. The linguistic impact accompanied by gradual and long-term migration may be attenuated by its chronicity. Intensive and large-scale migration, on the other hand, is more likely to maintain, if not strengthen, the migrant language in the new settlement. Kloss (1966) also suggested that numerical strength was a favorable factor to migrants’ language maintenance. In addition to the numerical strength, the maintained migrant language may even rapidly diffuse if given a friendly environment. The second migration from China to Taiwan can be considered just such an intensive migration. The KMT’s long-term Mandarin-only policy then created a friendly, even privileged environment for Mandarin.

This language policy actively pushed the people of Taiwan to learn and speak Mandarin as their only language. As described previously, NLM exclusively promoted Mandarin as the only official language; only Mandarin was allowed in the education system and at official occasions. As a result, Mandarin has penetrated into various domains of Taiwan, including private ones. Even the Benshengren adults who originally had no Mandarin capabilities must acquire this language for their careers or simply for daily life. The entire community of Taiwan has thus undergone a “group second language acquisition” of Mandarin (Winford 2003:235).

This exclusive language policy also created a promising environment for dialect

¹⁸ Source: Department of Population, Ministry of Interior, Republic of China (Taiwan) <http://www.ris.gov.tw/ch4/static/st20-0.html>

¹⁹ The peak in the year 1969 indicates a household registration reformation which de-militarized the household system.

leveling, as it simplified the language environment and highlighted Mandarin as the most prominent model to pursue. Children could thus avoid the confusion caused by a high degree of linguistic heterogeneity, as Trudgill (2004) suggested.

The linguistic homogeneity of Mandarin might have been undermined to a certain degree, since in the early days of the Mandarin movement, many Mandarin teachers themselves, like their students, learned Mandarin as a second language and thus spoke non-Standard Mandarin. Nevertheless, the norm of Standard Taiwan Mandarin was not easily blurred in Taiwan, since it was not only imposed through education, but also through the mass media, including radio and TV, which spread this language norm in an even more commanding manner.

In addition, the pre-established social order and infrastructure in Taiwan may have favored the rapid leveling of Mandarin. At the time when the KMT government began its rule in Taiwan, Taiwan had been colonized by Japan for five decades, during which time the fundamental social order and infrastructure had been established and modernized.

The Japanese colonial government in Taiwan initiated a series of modernization policies and projects. Although the foremost goal of modernization was to create a favorable environment for Japan, the modernized systems, including infrastructure projects and various policies, had a profound influence on Taiwan's subsequent development. The infrastructure projects, including the north-south railway in Taiwan, postal service, telecommunications and others, made the entire island of Taiwan into a single economic entity and allowed resources to flow freely from various regions of Taiwan. A modern education system was established during the colonial period as well. It consisted of primary, secondary, vocational, and normal schools, as well as limited sources for higher education. In other words, physically, Taiwan was by no means a completely new settlement when the KMT government arrived. Due to the established and mature social order, including the education and transportation systems, Mandarin could be efficiently promoted and diffused.

Finally, the constant interaction between Waishengren and Benshengren may also contribute to Mandarin's rapid leveling. Siegel (1985) criticized that many studies of koineization, i.e., "a contact-induced process that leads to quite rapid, and occasionally, dramatic (linguistic) change" (Kerswill 2000:669), ignored the idea that "koine is a new compromise variety resulting from integration or unification of the speakers of the varieties in contact" (p.369). Trudgill (1986:126) also pointed out that "accommodation in face-to-face interaction" activated the language mixing that led to the formation of a new dialect. Simply speaking, personal contact has been believed to be one major factor of language change, as illustrated in Figure 2. In Taiwan, such personal contacts and interactions between Waishengren and Benshengren have been

active.

Certain ideological gaps and conflicts may exist between some Waishengren and Benshengren in Taiwan at the macro level; some Waishengren residence aggregation, such as villages for military dependents, or “Juancun”, indeed exists in Taiwan. However, compared to other ethnic conflicts in the world, most of the Waishengren-Benshengren gaps may be considered minor ones. No strict ethnic isolation policies, such as Apartheid in South Africa, were ever imposed in Taiwan. In general, Waishengren and Benshengren have been constantly in contact at nearly all levels of daily life, particularly at the micro level.

7. Conclusion

This study reported the tonal leveling of Taiwan Mandarin between Mandarin-Waishengren and Holo-Benshengren. This leveling process has taken approximately 30 years, nearly reaching the completion in two generations, faster than the more general patterns suggested by Trudgill (1986, 2004).

To interpret the rapidity of this leveling, this study proposed four factors – (1) the intensiveness of Waishengren immigration to Taiwan, (2) the exclusive Mandarin-only language policy, (3) the pre-established social order and infrastructure development in the Japanese colonial period, (4) the frequent contacts between Waishengren and Benshengren.

In fact, these four factors are as well applicable in other areas in Taiwan, though to various degrees. Further study can focus on the Mandarin leveling in these regions where Mandarin has not been viewed in such a privileged manner as in Taipei due to ethnic, linguistic, and social factors. Investigations such as these will lead to a more comprehensive understanding of the formation of Taiwan Mandarin.

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台灣華語的聲調等化現象—從台北華語看起

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謝國平

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本研究分析台灣兩個世代與兩個族群間的華語聲調表現。結果顯示，官話外省人及閩南本省人之間的華語聲調差異，於一九五零年代，即已開始等化，並於大約兩個世代之內完成，較 Trudgill 所提出的三個世代早了一個世代 (Trudgill 1986, 2004)。

本研究提出四項社會因素，解釋台灣華語的等化過程何以能在較短時間內完成。第一項因素為二次戰後由中國至台灣短暫但大量的移民型態，第二項因素為過去獨尊華語並壓制本土語言之政府語言政策，第三項為日治時期已建立之社會秩序與制度，第四項則為外省人與本省人之間的頻繁接觸。

關鍵詞：台灣華語、等化、語言接觸、聲調