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COMPARATIVE STUDY OF SOUND VARIATION IN TAINAN AND CHANGHUA SUBDIALECTS OF TAIWAN SOUTHERN MIN: CHECKED TONE, TONE SANDHI AND MANDARIN INFLUENCE

Key words: Taiwan Southern Min, Taiwanese subdialects, sound variation, sound change, language contact, tone sandhi, checked tone.

Introduction. This study explores the tonal evolution and “contact-induced” sound changes of the Southern Min dialects in Southern Taiwan within the framework of the “lexical diffusion” [1; 3; 8] theory. A cross-generational comparative analysis of the phonetic systems of Changhua and Tainan (Baihe) regional subdialects focuses on the variations in the lexical tones of the two regions.

Research on Taiwan Southern Min dialects in the past 30 years has discussed dialects’ classification, division and ongoing evolution. Ang [14] uses the “flood effect” theory to explain the process of Taiwanese language integration. He believes Taiwan Southern Min has experienced three stages of flood effect since the Qing Dynasty. After integrating the Zhangzhou and Quanzhou dialects and the influence of Taiwan Mandarin, a “General Taiwanese dialect” was formed close to the “hybrid dialect” of the Southern Minzhou region. Moreover, this General Taiwanese dialect “has had a strong diffusion effect on various local dialects.” [14, 144]. Chen [10, 426] emphasized that some areas in Taiwan, especially historically complex cities such as Taipei, Tainan, and Changhua, have sub-dialectal innovative characteristics that are significantly different from the General Taiwanese dialect and have developed new phonetic “variants”, which may evolve into “changes” over time.

Our research is based on the previous surveys exploring phonetic characteristics in Changhua County [9; 10; 15; 17] and Tainan County

[11; 9] in the past decade and focuses on tonal variations. Tainan County belongs to the “prominently Zhang-based mixed dialect area” of Southern Minzhou [14], but it also has regional characteristics and sound change tendencies. The dialect division in Changhua County is more complicated, with each area showing the characteristics of old and new subdialects.

In addition to the regional sound changes in native speakers, we also observe the phonetic features of Mandarin influence among young Taiwanese speakers. These data can be found in Hsiao’s studies [4; 6] about the phonological influences in the “new generation” of Taiwanese speakers (born in the 1980s or later), which he calls Mandarin-influenced Taiwanese (M-Taiwanese) and explains accent formation or tone sandhi variations from the constraint-based perspective of Optimality Theory.

Research Method and Data Collection. First, we designed a Taiwanese vocabulary questionnaire based on Chen [10], Tu [15], and Hsiao [6] Taiwanese tone change research, as well as other materials.

The study’s respondents are three generations of one family: 18 adults and 2 teenagers aged 14 and 16. Since the two children had very low Taiwanese proficiency, their data could not be used. The main research subjects include: 4 older adults over age 65, 7 middle-aged and older people aged 50-65; 3 middle-aged people aged 35–50, and 4 young people under age 35.

There are 6 Taiwan Southern Min native speakers from Changhua County (Erlin, Hsiushui and Chutang Townships) and 7 Taiwan Southern Min native speakers from Baihe District, Tainan. The other 5 are native Taiwan Mandarin speakers born in Taipei and Taichung. Three of the brothers born in Taichung are descendants of parents from Baihe, Tainan and Erlin, Changhua. However, they were mostly exposed to the Baihe subdialect at a young age, so their data is included in the Tainan region. Another speaker born in Taipei with Changhua County parents is included in the Changhua region in our analysis. One more speaker, born in Taipei, was exposed to the Taipei subdialect as a child but communicated in Taiwanese during 6 years of residency in Taichung as an adult. The data of this speaker is included in the Taipei + Taichung area for comparison.

We recorded most of the audio data using a Zoom H2N microphone in Taipei, Taichung, and Erlin, Changhua from May to June 2024. The other part of the data was recorded remotely by the speakers reading according to the survey word list. One of the elderly speakers cannot read, so her grandson would read to her and explain word by word. Finally, all the audio data was edited and analyzed using Ableton Live, Melodyne and Praat.

The tone analysis mainly refers to 6 characteristics: (1) the tonal value of Yang Ru base tone; (2) the tonal value of Yang Ping tone sandhi; (3) the tonal value of Yin Ping base tone; (4) the tonal value of Yin Shang tone

sandhi; (5) the distinction between Yin Qu and Yang Qu base tone; (6) whether the stop codas of the checked syllables in Yang Ru base tone are dropped.

Results and discussion

1. Yang Ru base tone: The high checked tone T5 in Baihe and Changhua is the variant with the highest average value. However, there is a downward trend in the younger generation; the original high-checked tone has consistently evolved in the direction of T32. The young generation also presents some Yang Ru tones with unclear tonal values, but their tonal contour mainly demonstrates a short tone + stop coda.

2. Yang Ping tone sandhi: Most Baihe and Changhua are mid-level T33, while Erlin also demonstrates a T21 tone value. However, Hsiushui and Erlin speakers do not show the Yang Ping tone sandhi low-level T11 tone value found in Chuang's [17] survey. Therefore, the T21 tone and T11 might belong to the same type of Yang Ping tone sandhi feature.

3. Yin Ping base tone: Both Baihe and Changhua pronounce the T55 tone value. Tu [15] found out that the "Yin Ping base tone has been mixed with the Yang Shang base tone in the Quanzhou city subdialect and is pronounced as mid-level T22", but this phenomenon was not found in the Hsiushui speaker who belongs to the new Quanzhou city subdialect in our survey.

4. Yin Shang tone sandhi: Baihe and Changhua both have a T55 tone value, but the elderly respondent from Erlin demonstrates a mid-level T33, perhaps influenced by other regional accents.

5. Yin Qu and Yang Qu base tone: Baihe and Changhua speakers show the distinction between Yin Qu T21 and Yang Qu T22 but also have T32 and T33 tone values. Despite age, most speakers pronounce “拜” as T32 or T53, which is probably a Mandarin influence. Tu's [15] survey found that “the Quanzhou city dialect still retains some features of the ancient Quanzhou dialect where Yin Qu and Yang Qu tones are not distinguished.” The Hsiushui Township speaker in our survey, who belongs to the new Quanzhou city subdialect, did not show this feature. Among the young Baihe speakers, the distinction between Yin Qu and Yang Qu is unclear, and the tonal values are mixed. For example, “大”, “斷”, “五”, “八” and “入” are all pronounced as T21. Although a young speaker from Erlin differentiates between Yin Qu and Yang Qu tones, the tonal values are mixed. For example, “棍”, “四” and “意” are all pronounced as T32.

6. Yang Ru base tone stop coda loss: Most of the young speakers show that the glottal stop coda of the Yang Ru base tone syllables is lost to varying degrees, including some of the [-p], [-t], and [-k] coda. The prolongation of the [-p], [-t], [-k], and [ʔ] coda syllables also affects the transformation of the Yang Ru checked tone into a level tone.

In addition to the change in tone, the young people from Baihe and Changhua also showed other aspects of Mandarin influence. During the survey, speakers generally skipped the Taiwanese words they were unfamiliar with or could not recollect. However, some speakers still tried to read them based on their language intuition, which produced an interesting "M-Taiwanese" effect. For example: 勞保 laopao; 陣 tsūn; 縛 pūn, hūk; 滑 wa [214]; 傳 duān.

Conclusion. Taiwan Southern Min lexical tone research in Baihe District of Tainan County and Changhua County reflects contemporary Taiwanese evolution and emerging phonological variations. The field study results are generally consistent with the previous surveys of southern Taiwanese subdialects. In terms of tone, the most competitive variant is T32, and the phenomenon that young people read the short checked tone Yang Ru with stop coda as a mid-long T33 may also be a competitive variant. Merging with the mid-tone has become the mainstream of tone variation. Young people also demonstrate low sensitivity to the tonal value (or pitch) of Yang and Yin checked tones and are prone to tone confusion because they did not learn Taiwanese at school and only have a clear concept of the four tones in Mandarin. The spectrogram of the speaker's voice shows that although the pitch of the checked tones is inconsistent, they have the characteristics of short tone shape.

Due to time constraints, this study collected less phonetic material, but it is hoped to provide reference content for the future dialectology, historical phonetics and sociolinguistic research.

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