

Chapter 1

Introduction

1.1 Background and Motivation

Mandarin has been enforced in Taiwan for over fifty years and is the official language of Taiwan. It is also the first language of many new generations in Taiwan (H. J. Hsu, 2006). During the past five decades, the language has been changing, and the change has been observed by many linguists (Kubler, 1985; Cheng, 1990; Tse, 1992; Tsao, 2000). These observations suggest that Taiwan Mandarin (TM thereafter) is somewhat different from the “standard” Mandarin, which is based on Beijing Mandarin. The change includes the dimensions of syntax, semantics and phonology (including segmental and suprasegmental). These changes may result from the regional separation of Taiwan and the Mainland, other languages’ influences in the Taiwan society (e.g. Taiwanese, Hakka) and the change of time (Kubler, 1985; Cheng, 1990; Lo, 1991). The majority of Taiwanese population (about 80%) was thought to be a main factor that influences Taiwan Mandarin (Kubler, 1985; Cheng, 1990; Fon & H. J. Hsu, 2004).

Studies have proved that TM has its own features in phonology. Tse (1998) has found a segmental change in Taiwan Mandarin. He found that many young people in

Taiwan do not distinguish between the retroflex consonants [tʂ], [tʂʰ], [ʂ] from their non-retroflex counter parts [ts], [tʰs], [s]. In addition, two tonal changes of TM were observed: the simplification of the third tone and the disappearing of the neutral tone (Kubler, 1985). Kubler states that the third tone turns from [214] to [21] in most situations and that the neutral tone in Beijing Mandarin can hardly be found in TM now. Recently, more tonal changes were found in TM. Fu (1999) has found a “rising” tone of T3 spoken by certain speakers in Taichung County¹, which is different from other people in non-central Taiwan. The special tonal patterns of Taichung people were also noticed by some researchers (S.Y. Hsu, 2004; H. J. Hsu, 2004). S. Y. Hsu (2004) has observed that some Taichung speakers, especially those whose first language is Taiwanese (Tw hereafter), perform a lower-registered T1 (33), a falling T2 (31) and a rising T4 (535). Among these tonal variations, the falling T2 by Taichung speakers was also found by H. J. Hsu (2004). These studies show that there are indeed tonal variations in TM, but the factors causing such tonal variations are yet to be determined.

Lo (2004) has firstly investigated TM tonal variation from the language background perspective. He found that certain southern-Min speakers tend to perform a falling T2 of TM, but non-southern-Min speakers do not. The falling pattern corresponds to what S. Y. Hsu (2004) has observed among the Taichung Tw-TM bilinguals. Moreover, Lo’s finding implies that Taiwanese may influence the shaping

¹ Taichung County is a central county of Taiwan. She especially investigated the young speakers in the “Tanzi” area.

of the T2 variation. But it is still unknown whether the T2 variation occurs within a particular region or within a broader range of TM speakers. We are curious about where the T2 variation occurs.

The present study will hence be conducted as a follow-up study of the previous studies on T2 variations. We will explore this issue through a larger-scaled phonetic experiment, which has not been conducted by previous studies. Furthermore, since previous studies have not examined the performance of TM monolinguals on T2, nor confirm among speakers of different language backgrounds, i.e. TM monolinguals and Tw-TM bilinguals, this study will thus investigate the types of T2 variations and compare the variations in the two language backgrounds

The aim of this study is to determine whether TM has systematical variations among speakers with different language backgrounds. Results of this study may provide more precise description to the T2 variation and suggest a broader hypothesis for further research into the variation of Taiwan Mandarin and Mandarin Chinese.

1.2 Literature Review

1.2.1 The tonal system of Mandarin Chinese

There are four lexical tones in Mandarin. The four tones are Tone 1: high-level tone, Tone 2: high-rising tone, Tone 3: low-dipping or low tone and Tone 4: high-falling tone. According to Chao (1930, 1968), Mandarin tonal system can be represented by the tonal graph and the five-scaled pitch² value as shown in Table 1.

² The five-scaled pitch was also proposed by Chao (1930).

These four tones have been regarded as the standard Mandarin tones by many researchers (Chao, 1968; Cheng, 1973) and were supported by acoustic evidences (Brotzman, 1964; Dreher & Lee, 1966; Wang & Li, 1967 (cited in Cheng, 1973); Tseng, 1990; Xu, 1997).

Table 1 Chao's (1968: 26) tonal representation system of Mandarin Chinese

Tone	Graph	Pitch	Description
T1	┘	55	High-level
T2	↑	35	High-rising
T3	↘	214 or 21	Low-dipping or low
T4	↓	51	High-falling

Besides the four lexical tones, Mandarin has several kinds of tone sandhi. The most salient one is the Third-tone sandhi: the T3 [214] (full-shang) becomes [21] (half-shang) before T1, T2 and T4 and [35] before T3 (Chao, 1968; Cheng, 1973; Lin & Wang, 1995). In other cases, for example, in the utterance-final position, T3 is pronounced as [214], as shown in (a).

(a) "Standard" T3 (Yin, 1990)

[214] → [21] / ___ Tⁿ (n ≠ 3)
 → [14] ~ [35] / ___ T³
 → [214] elsewhere

But Yin (1990) has stated a change in TM: T3 changes to [21] instead of [214]. The allotones are reduced into [14] or [35] which only appear before another T3, and [21] in other environments, as shown in (b).

(b) T3 (change in process) (Yin, 1990)

[21]→ [14]~[35]/ ___T³

→[21]/ elsewhere

Some of the Beijing Mandarin speakers change the T4 [51] followed by another T4 into [35]. A T2 [35] in the middle of a three-word phrase also tends to be pronounced as [55] when preceded by T1 [55] or T2 [35] and followed by T2 [35] or T4 [51] (Lin & Wang, 1995).

1.2.2 Rising T2 in Taiwan Mandarin

In the Mandarin tonal system presented above, Tone 2 is described as a high-rising tone with the [35] tonal value. This description is agreed by many researchers (Tseng, 1990; Brotzman, 1964; Dreher & Lee, 1966; Wang & Li, 1967 (cited in Cheng, 1973); Xu, 1997) and is long-time viewed as a standard tone in Mandarin since Mandarin was practiced in Taiwan from 1945 (Kubler, 1985). However, the description of T2 mainly depends on the pronunciation of Beijing speakers, essentially representing Beijing Mandarin. From the over 50-year separation from the mainland, this description of T2 can no longer represent the T2 in modern Taiwan Mandarin.

Fon (1997), Fon & Chiang (1999) have observed that TM T2 is more like dipping rather than the “standard” rising T2 in Beijing Mandarin. They found, by examining the production of a Taiwanese and Taiwan Mandarin (Tw-TM thereafter) bilingual, a ratio of over 85% dipping contour and relatively low percentage of falling

and rising contour of T2. They therefore proposed that the dipping contour has become an overall type of TM T2. The dominant contour of TM T2 is actually dipping. However, their proposal may be only partially correct from the following points of view.

First of all, the “dipping” phenomenon is natural for a rising tone. If a tone needs to rise, it needs to drop to a lower point of the tonal register in order to rise. Besides, this “dipping” phenomenon is not unique to TM only. An earlier study by Ho (1976) on Beijing Mandarin also found the natural phenomenon. She noted that the rising T2 has a dip, located at the initial 15% duration of the nucleus. The dipping phenomenon is common in her study, but is still viewed as a feature of a normal rising tone. Second, perceptually, the dipping T2 and the rising T2 do not have much difference. Lin & Wang (1995) have reported that Mandarin tones can be perceptually identified by the five-scaled value. In the five-scaled value, T2 can be described as the tonal values of [35], [25], [325] and [425]. These tonal values including the dipping [325], [425] are within the normal range of Mandarin T2. Hence, the dipping contour is thus considered as a normal pattern of the rising T2. Third, though the data in Fon’s studies is quite substantial, it is too arbitrary to represent the production of Taiwan Mandarin by taking solely one subject’s data. Fon’s finding can only represent the production of T2 by a certain bilingual³ in Taiwan. Moreover, the dipping contour of T2 found by Fon is regarded as a normal contour of T2, not a variation in the present

³ In her study, the subject is a female aged 24 who lives in Taipei, the capital city of Taiwan.

study.

1.2.3 T2 variations in Taiwan Mandarin

The real T2 variations were found by some researchers. Lo (2004) has found a falling contour of T2 spoken by the southern-Min speakers⁴. He found that in phrase-final and sentence-final positions, some of the southern-Min speakers would produce a falling contour of T2, while the “non-southern Min” speakers perform a normal rising contour. This observation was also acoustically confirmed by Lo as shown in Figure 1 and 2.

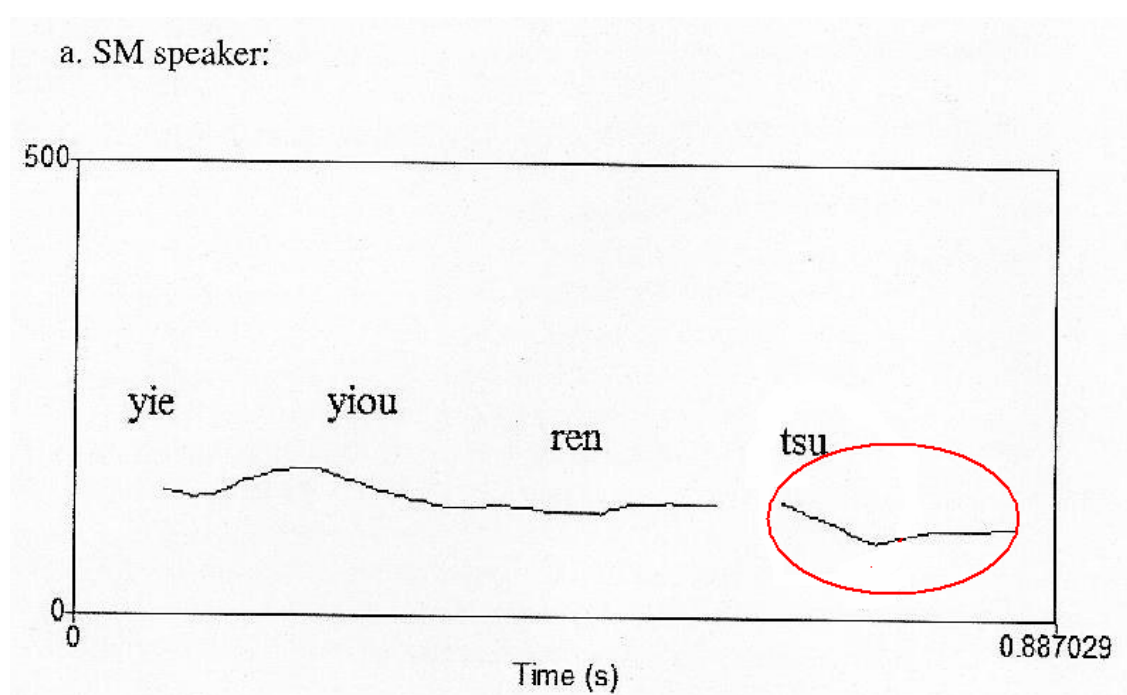


Fig. 1 The sentence “yie³ yiou³ ren² tsu²” (“There is also the human species”) by Southern-Min speakers

⁴ In his study, a person whose first language is the southern-Min is defined as the southern-Min speaker.

⁵ “ren² tsu²” (human species) is a type of roles in games.

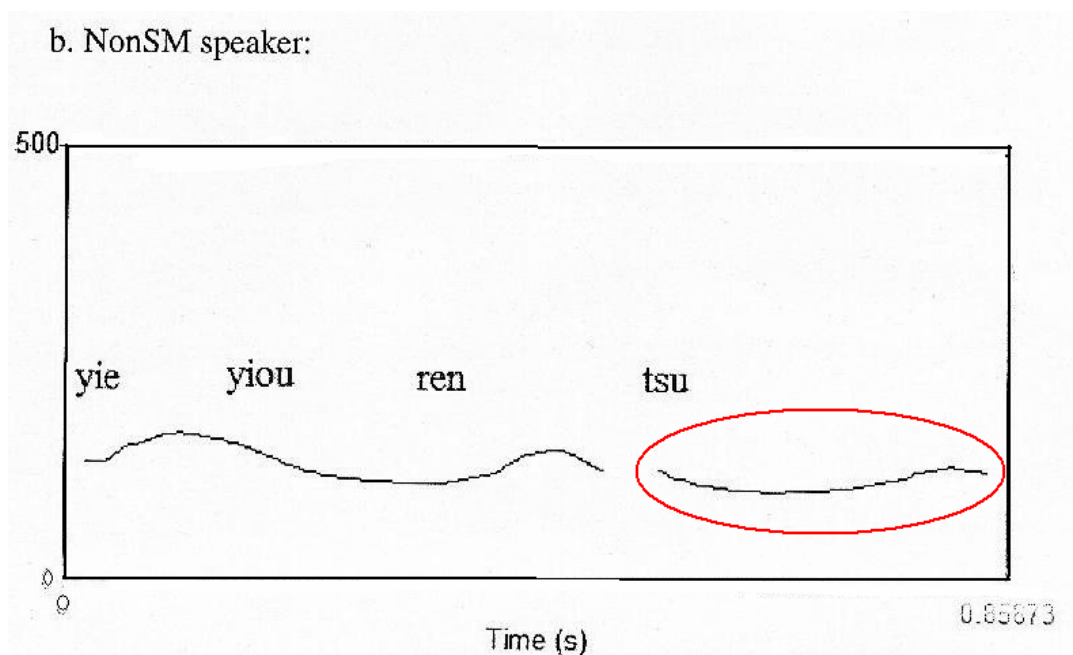


Fig. 2 The sentence “yie3 yiou3 ren2 tsu2” (“There is also the human species”) by non-Southern-Min speakers

The different contours of the same word “tsu” are clearly seen from the speakers of different language backgrounds. Although the reason for this difference is unknown, Lo has provided the perspective of language background on T2 variation. His initial findings of the variation between SM speakers and non-SM speakers shed light on the research of T2 variation in TM. However, this finding lacks a larger-scaled experimental investigation to support it. Besides, Lo did not describe the language proficiency of the southern-Min speakers, nor did he depict the language background of the “non-southern-Min” speakers. Obviously, more specific language backgrounds need to be clarified.

H. J. Hsu (2004) has found a regional tonal difference of T2 between the speakers in Taichung, a central city of Taiwan, and Taipei, a northern city that is also the capital of Taiwan. She explored the final T2 of the Tw-TM bilinguals in the two

cities and found that Taichung speakers perform a falling T2, while those in Taipei, a dipping T2. Mandarin T2 spoken in Taichung has merged with T3 (mid-falling). Hence, she proposed there is a regional difference of T2 in Taiwan. TM is no longer homogeneous. H. J. Hsu's finding is inspiring in that she not only investigates T2 variation from the aspect of region difference, but also confirms Lo's finding on the falling variation of T2. The results may imply several issues. First, TM indeed has its inner varieties. The varieties may exist among different regions of Taiwan, but the reason of the varieties is still unknown. Second, the shape and register of T2 has changed in some speakers in Taiwan. It turns from rising to falling, high to low register. This salient change of T2 totally challenges the traditional tonal prescriptions.

However, she only explored one language background. But as revealed in Lo's study, the variation T2 could be related to other factors, such as different language backgrounds, rather than merely the regional difference. Therefore, a comparable study between different language backgrounds is desirable.

To pursue along this line, we have conducted two small scaled pilot studies in investigating T2 variations. The first study (S.Y. Hsu, 2005) found that some young Tw-TM bilinguals of young ages perform more than one kind of T2 variations. Besides the falling contour, there are also rising-falling and rising-falling-rising contours. The tokens of the variations are not so many, but the result predicts there might be other types of the T2 variation.

The second study (S.Y. Hsu, 2005) examined the contours of T2 between two language backgrounds: TM monolinguals and Tw-TM bilinguals. The subjects are two male Taichung bilinguals and two male Taipei monolinguals. Results found that the bilinguals have more falling contours than the monolinguals. Moreover, the final position shows more T2 variations than the initial position in both language backgrounds. Among those T2 variations, falling tone occurs the most often, level tones the second. The results not only predict there might be difference between different language backgrounds, but also confirm the position-final effect on T2 variations. Thus, the variations of T2 are obvious and need to be investigated in a larger scale.

1.2.4 Illustrations of T2 variations in TM

Based on the previous studies, we could generalize three possible patterns of the contour of TM T2: rising, dipping and falling, with the first two which are regarded as a normal type and the falling tone a T2 variation. The tonal shapes of these three contour types are given in Figure 3.

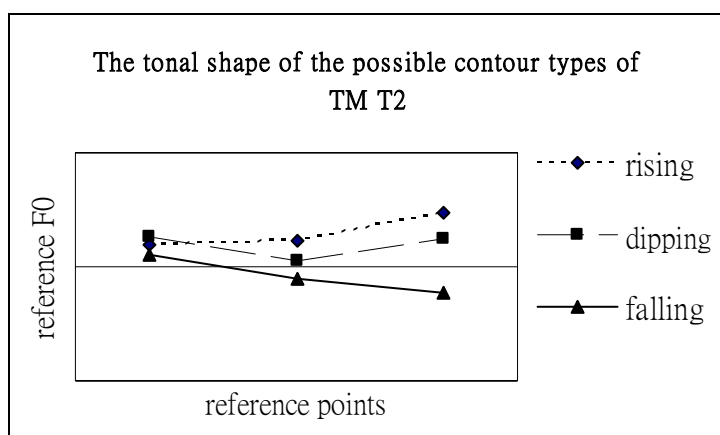


Fig. 3 Possible contour types of TM T2

Some may argue that the falling contour of a rising or dipping tone appearing at phrase or sentence-final position is not a unique, but common phenomenon of intonation decline at the end of declarative sentences. Many studies have confirmed this final decline on different tone languages. Vance (1976) investigated the interaction between tone and intonation in Cantonese and suggested that intonation may have a lowering effect on sentence-final tones in Cantonese. Connell et al. (1983) proposed that both the shape and the register of a tone can be affected by intonation, especially in sentence-final positions. However, in Lo (2004) and H. J. Hsu (2004)'s findings, different groups of TM speakers perform distinct contours of T2 at sentence-final positions. This suggests that there must be stronger factors that cause the T2 variation.

1.3 Research Questions

Based on the above studies, this study aims to examine the T2 variations in TM by asking the following questions:

1. What is the T2 variation? What kinds of tonal patterns could be found in T2 variations?
2. Does the T2 variation occur more in the Tw-TM bilinguals than in the TM monolinguals?
3. What are the other factors that influence the T2 variation? (Region, gender, and

other linguistic variables?)⁶

1.4 Thesis Organization

This thesis is organized into five chapters. Chapter 1 presents the background and motivation, the literature review and the research questions of this study. Chapter 2 provides details of the methodology, including the subjects, variables, materials, procedures, measurements and categorizations. Chapter 3 shows the results of the statistical analysis and the features of T2 observed in this experiment, and Chapter 4 interprets and discusses the findings from the experimental data. Chapter 5 will summarize the findings of the thesis and explain the limitation of this research.

⁶ These factors will be reviewed and discussed in 2.3 Variables.