

## Migration, local identity and change in Tianjin tone sandhi

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**Abstract.** Four variable disyllabic tone sandhi patterns are traditionally identified in Tianjin (Li & Liu 1985). The present study focuses on two of these tone sandhi variables, referred to as (FF) and (FL) after their input patterns of ‘falling falling’ (HL.HL) and ‘falling low’ (HL.LL) respectively. The data are drawn from 76 sociolinguistic interviews conducted in Tianjin in 2014-16. In line with other reports (Shi & Wang 2004, Gao & Lu 2003), the study indicates that (FF) has decreased in frequency over time, while (FL) has increased in frequency. But the social motivations for the rise and the decline of these variables have not previously been investigated. I propose that the social motivations of the changes might be interaction of Standardization and Tianjin community’s effort to keep local identity, especially at the period when a large number of migrants rushed into the city. (FF) displays a linear decrease of the local variant in apparent time, probably due to its status as a stereotype (Labov, 1972) of ‘old-fashioned’ Tianjin identity and speech (Han 1993). Different from (FF), (FL) has never been stigmatized, so it is available for ‘recycling’ (Dubois & Horvath 2000) as a positive marker (Labov, 1972) of ‘new’ Tianjin identity.

**Keywords.** Tianjin tone sandhi; migration; local identity; Standardization

**1. Introduction.** Tianjin Chinese tone sandhi rules seem to have undergone changes over time. They may be due to the influences of dialect contact with Standard Chinese (hereafter SC) (Gao & Lu 2003) and with other varieties through education and/or in-migration (X. Wang 2015). But X. Wang (2015) is a study focusing on young Tianjin speakers, and the motivation of the change in Tianjin tone sandhi remains unclear. This paper will investigate the social meaning and motivation of the change in Tianjin tone sandhi, which can be used as a case study to explore how dialect changes under the interaction of standardization and migration in China.

Traditionally four disyllabic tone sandhi patterns have been identified in Tianjin (Li & Liu 1985). The present study focuses on two of these tone sandhi variables, referred to as (FF) and (FL) after their input patterns of ‘falling falling’ (HL. HL) and ‘falling low’ (HL. LL) respectively. (FF) decreased in frequency over time, while (FL) increased in frequency (Shi & P. Wang 2004, Gao & Lu 2003). The present paper is to investigate the social motivations of the tone sandhi changes by analyzing the two variables. I propose that the social motivations of the changes might be interaction of Standardization and Tianjin community’s effort to keep local identity, especially at the period when a large number of migrants rushed into the city.

The first variable is the application versus non-application of HL.HL→LL.HL (FF) in the Tianjin dialect. In this case, when there is a pair of falling tones, the first tone variably becomes a low tone, as shown in (1). In contrast to the first variable, the (FF) tone sandhi is reportedly disappearing from Tianjin, with the young and those of higher socioeconomic status leading the disappearance (Gao & Lu 2003, X, Wang 2015).

(1) HL.HL→LL.HL    *jiaoshou*    “professor”

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The second variable is the application versus non-application of HL.LL→HH.LL (FL), i.e. where a falling tone becomes a low tone when it is followed by another falling tone, as shown in (2). The (FL) tone sandhi was the least frequent among the four Tianjin tone sandhi changes observed in the 1980s (Shi 1988), but it is reportedly applied almost without exception among young Tianjin speakers today (Shi & P. Wang 2004, X. Wang 2015).

(2) HL.LL→HH.LL *jiaoshi* “teacher”

The first research purpose of the present study is to find out whether the changes are from below or from above (Labov 1966). The hypothesis is that the first variable (FF, or HL.HL→LL.HL) is a change from above the level of public awareness, while the other variable (FL, or HL.LL→HH.LL) is a change from below the level of public awareness. Intra-speaker stylistic shifts are used to determine whether a change is above consciousness or below consciousness. Comparing word list style with interview style can capture differences in the speaker’s attention to his or her own speech. The speaker will be paying much less attention to his own speech in interview style than in word list reading style. If a variable is involved in a change from above, the more prestigious variant should appear more frequently in the more careful word list style. If there are no stylistic shifts or the prestigious variant does not appear more frequently in the more careful style, it suggests it is a change from below (Trudgill 1972).

The second research purpose is to investigate the motivations of the changes. The motivations for the rise of traditional Tianjin (FL) and the decline of traditional Tianjin (FF) are not currently well-understood. Both (FL) and (FF) are traditional Tianjin features, but it is unclear why one local feature (FL) increases while the other local feature (FF) decreases under the same social context. I propose that the (FF) change may be caused by the standardizing influence of Standard Chinese. (FF) is a stereotype (Labov, 1972) of ‘old-fashioned’ Tianjin identity and speech, and therefore it decreases under the influence of SC. Unlike (FF), the Tianjin variant of (FL) seems to show a curvilinear distribution with age. Previous studies (Shi 1988, Shi & Wang 2004) suggest that it declined over time like FF, probably also because of the influence from SC, but it has since risen after the decline. The rise of (FL) may be due to its status as a marker (Labov, 1972) related to “new” Tianjin identity. The revival of (FL, HL.LL→HH.LL) in Tianjin dialect may be caused by the city’s history of massive and ongoing in-migration from other areas of Mainland China. The rise of (FL) coincides well with the history of migration to Tianjin. By applying the (FL) rule, natives of Tianjin may be linguistically contrasting themselves with the many migrants who have moved to the city in the last three decades.

In what follows, I begin by describing the speech community of Tianjin and its distinctive regional dialect (sections 2 and 3). I then introduce attitudes to SC and Tianjin dialect (section 4) and the sociolinguistic variables (section 5). Section 6 is data collection and speaker sample. Social factors (age, social class and gender) are discussed in section 7. The results are reported in section 8, including a discussion and analysis on the results. Section 9 provides some preliminary conclusions and proposed further directions.

**2. Tianjin.** Tianjin is situated in the east part of the North China Plain, just 65 miles to the southeast of Beijing. The permanent residents of Tianjin are about 15.47 million people, of whom approximately one third (5 million) are migrants (Tianjin Statistics Bureau, 2016) from other Mainland cities or provinces who work in Tianjin. Large number of migrants from other Mainland provinces and cities did not arrive in Tianjin until the 1990s.

For official purposes in China, people are categorized as migrants not by how long they stay in a city or province, but by whether they have a *hukou* for the city or province. A *hukou*

is a record in the system of household registration required by law in Mainland China. A household registration record officially identifies a person as a resident of an area and includes identifying information such as name, parents, spouse, and date of birth. People who do not have a permanent *hukou* for Tianjin are officially considered to be migrants, although they may have stayed in Tianjin for decades. From 1950s to 1980s, people were supposed to stay where their *hukou* was, so there were almost no migrants in Mainland China between the founding of the People’s Republic of China and the adoption of the “Reform and Opening-up” economic policy in 1978. Migrants therefore did not start to arrive at all in Tianjin until the early 1980s, shortly after the adoption of this policy, and large numbers of migrants did not start arriving in Tianjin until the 1990s.

My own personal experiences and my fieldwork interviews with Tianjin natives have revealed that they have varying attitudes towards migrants. Some think migrants are necessary to the development of the city, because they usually do the jobs that Tianjin people do not want to do. Some do not like the migrants because they believe that the migrants make the city more crowded, dirty and unsafe. They also think the migrants have taken some opportunities away from the city natives.

Tianjin people are generally reluctant to leave their hometown. I interviewed 76 native Tianjin speakers in the summers from 2014 to 2016. Almost all young speakers said they did not want to leave for other Mainland cities like Beijing or Shanghai even if there might be more opportunities in those cities. All middle-aged and old participants do not want their children to live and work in other cities. The reason the participants gave why they preferred to stay in Tianjin was mainly that they were reluctant to be away from their families. Besides, they thought that it was too competitive to live in Beijing, and the cost of living in Beijing was too high.

These attitudes, both to the external Chinese urban landscape and to the internal city demographics, are important for an understanding of the analyses I will present in the present study.

**3. Tianjin dialect.** Tianjin dialect belongs to the Northern Mandarin group of dialects. It is different from Standard Chinese. The differences between Tianjin and SC are mainly reflected in consonants and tones. Since the present study investigates Tianjin tone sandhi changes, I will only introduce Tianjin tone system.

Although there are 4 lexical tones in Tianjin dialect, and the 4 tones are cognates to the four lexical tones in SC, the pitch values are different between Tianjin dialect and SC, as shown in Table 1. The numbers are Chao numbers (Chao 1968), with 5 indicating the highest tone degree and 1 indicating the lowest tone degree. The letters in brackets are phonological representations.

	Tone1	Tone2	Tone3	Tone4
Tianjin	11/21(LL)	45(HH)	213/13(LH)	53(HL)
SC	55(HH)	35(HH)	214(LH)	51(HL)

Table1 Lexical tones in Tianjin dialect and Standard Chinese

Among the four lexical tones (henceforth T1, T2 etc.), T1 has been taken as the tone that shows the distinctiveness of Tianjin dialect relative to Mandarin, and this feature has been used to judge whether a speaker speaks Tianjin dialect (Han 1983, Li & Han 1991). This criterion has been applied to studies of the presence or absence of Tianjin dialect within the city’s districts (Gao & Lu 2003:346, Shi & Wang 2004:176). Recent acoustic studies (Zhang & Liu 2011, Wang & Lin 2017) indicate that T1 has become 41, which suggests that the

starting point of T1 is higher. But perceptually it is still a low tone, especially compared to the high T1 (55) in SC (X. Wang 2015). Besides, there is a high falling tone (T4) in Tianjin. To distinguish T1 from the high falling T4, I still use LL to represent T1.

Traditionally there were 4 disyllabic tone sandhi patterns in Tianjin dialect (Li & Liu 1985), as shown in (3). Recent acoustic studies (Zhang & Liu 2011, Wang & Lin 2017) show that the sandhi output of (3a) has become T2+T1 among young Tianjin speakers.

(3) The four traditional disyllabic tone sandhi patterns

- a. T1 + T1 → **T3** + T1            cf. T1 + T1 → **T2** + T1 (Zhang & Liu 2011)
- b. T3 + T3 → **T2** + T3
- c. T4 + T1 → **T2** + T1            FL
- d. T4 + T4 → **T1** + T4            FF

(3c) and (3d) are the two variables of the present study. As noted in the Introduction, (3c) has reportedly been increasing in Tianjin, while (3d) is in decline (Shi & Wang 2004, Zhang & Liu 2011).

**4. Attitudes to SC and Tianjin dialect.** In my personal experience of living in Tianjin, Tianjin people generally think SC is more prestigious than Tianjin dialect, but Tianjin dialect makes them feel intimate, cordial and warm. All the interviewees said they would use SC in school, job interviews and other formal situations, while they would speak Tianjin dialect with their families, relatives, and friends. Some young participants told me their parents wanted them to speak SC instead of Tianjin dialect because their parents thought SC can make speakers sound better educated and from a higher social class. Some middle-aged and old speakers said they did not want their children or grandchildren to speak Tianjin dialect, so they did not speak Tianjin dialect with their children or grandchildren. To speak SC is more helpful for their children to get a good position in the society. But Tianjin dialect is not viewed entirely negatively. It's considered masculine, and some people find that attractive (X. Wang 2015).

People from other areas of Mainland China, especially people from Beijing, tend to find Tianjin dialect interesting and amusing. I heard Beijing people said: “Tianjin Hua, zhen dou”. *Hua* means dialect, and *zhen dou* means amusing. Overall, Tianjin dialect has the connotation of less educated and informal and it is generally less prestigious compared to Standard Chinese.

**5. Sociolinguistic variables.** The variables of the present study are FL and FF. Each has two variants. The two variants of FL are given in (4) and the two variants of FF are shown in (5).

(4) (FL) variable

Non-application (SC) variant: HL+LL

Application variant (Tianjin) variant: **HH**+LL

(5) (FF) variable

Non-application (SC) variant: HL+HL

Application variant (Tianjin) variant: **LL**+HL

When the FL rule shown earlier in (3c) applies, the HL tone of the first syllable becomes HH tone. This is called the application variant. When the FL rule doesn't apply, the HL tone of the first syllable remains unchanged, and therefore HL is the non-application variant. When the FF rule described earlier in (3d) applies, the HL of the first syllable becomes LL, and therefore LL is the application variant. When the FF rule does not apply, the HL tone of the first syllable remains unchanged, and therefore HL is the non-application variant. Since

neither sandhi rule is present in the grammar of SC, the non-application variants of both variables are therefore more overtly prestigious than the application (traditional Tianjin) variants.

**6. Data collection and speaker sample.** The field methods adopted in this study are sociolinguistic interviews including a word list reading, with a purpose of obtaining different styles of speech so as to study intraspeaker variation as well as interspeaker variation. The data come from 73 native Tianjin speakers in Tianjin, China, interviewed in the summers of 2014 - 2016.

The interviews lasted about 45-65 minutes for each speaker. Both I and participants spoke Tianjin dialect. After the interview, the speakers were asked to read 114 words in Tianjin dialect. All the words were written on cards, one card per word. The cards were presented in random order to every speaker to avoid any persistence effect (Woods, 1986). 20 words contained the variable context for (FF) and 20 words contained the variable context for (FL). All 40 tokens of (FL) and (FF) from the wordlist were included in the analysis.

The 76 speakers for the present study were chosen from the 6 inner-city “central” districts through random or convenience sampling. Most young speakers were recruited from Tianjin Normal University. Although Tianjin Normal University attracts students from across China, I only interviewed students who were from Tianjin itself. Two smaller samples of 17 middle-aged speakers (35-65 years old), and 17 older speakers (> 65 years old) were recruited from among my personal friends, or friends of friends. The age and gender distributions of the participants are given in Table 2.

	Total	Middle class		Working class	
		Male	Female	Male	Female
Young (<35)	42	9	13	10	10
Middle-aged (35-65)	17	4	4	4	5
Old (>65)	17	4	4	5	4
Total	76	17	21	19	19

Table 2: Entire participant sample by age, social class and gender (N=76)

Participants were well-balanced for gender and social class. Although young speakers outnumber middle-aged and old speakers, each cell by age, social class and gender has at least four participants.

**7. Social class and gender.** In addition to intra-speaker stylistic variation, speaker gender and especially social class provide further clues as to whether a change can be considered ‘from above’ or ‘from below’ (Labov 1990). Besides, by examining evidence from age, social class and gender, it is possible to reach some preliminary conclusion about the social motivation of the changes in (FF) and (FL).

7.1. SOCIAL CLASS. The role of social class has occupied a central place since sociolinguists first approached the study of language change. Labov (1966: 328) introduced the terms ‘change from above’ and ‘change from below’ principally to distinguish changes that are above public awareness from those that are below awareness. There is often also an association between awareness and social class. Speakers in the upper classes typically use the variant more frequently when a sound change is above the level of awareness. When the sound change is below the level of awareness, speakers in the lower classes use the variant more frequently. Sociolinguistic prestige is also related to social classes. The variants used more by higher social classes tend to have higher sociolinguistic prestige.

China’s Communist history and the present-day speed of its economic

transformation make it difficult to determine a speaker’s social class. I chose to classify participants mainly based on their occupation, education and income.

All speakers are classified into two classes: Working class and Middle class. This was done mainly based on my intuition, also consulting the classification system of Li (2013). I put factory workers, skilled workers, hairdressers, drivers and vendors into the Working class. Office workers, government employees, technical personnel, nurses, teachers, administrative personnel, doctors, lawyers and businessmen are put into the Middle class. Since all the Young participants are undergraduates and not yet in the workforce, they were classified by their parents’ social class.

A participant was classified as belonging to the Middle class only when he or she satisfied criteria for education and income as well as occupation. The basic education requirement for middle class categorization, following Li (2013), was graduation from high school. As for income, Li (2013) classifies as middle class any participant whose income is higher than the average income of the residential area. The current study follows this criterion. The distribution of social classes is shown in Table 3.

	Middle class	Working class	Total
Young (<35)	22	20	42
Middle-aged (35-65)	8	9	17
Old (>65)	8	9	17
Total	38	38	76

Table 3: Entire participant sample by age and social class (N = 76)

7.2. GENDER. Women on average use forms that more closely approach those of the standard variety or the prestigious variant than those used by men. This is because other things being equal, the social pressures on women to use prestigious forms are usually higher than on men (Trudgill 1995). On the other hand, the pressure to continue using less prestigious variants as a signal of group solidarity and personal identity will tend to be stronger on men than on women (Trudgill 1995).

The situation is the same in China. ‘Good’ women are expected to be gentle and virtuous, and these values are reflected in Chinese people’s attitudes to women’s language use. For example, in the interviews, more than one participant mentioned that it was bad if a girl spoke Tianjin dialect, but it was not so bad if a man spoke Tianjin dialect. The relation between non-standard variants (Tianjin) and gender will therefore be considered in the interpretation of results.

Gender usually interacts with other social categories, as shown in e.g. Eckert’s (2000) study of Detroit teenagers, among many other studies. In this paper, I will deal with how gender interacts with social class and age. Given the generalizations in the literature about women’s greater use of standard forms, I expect that female participants will use more the more standard variant (non-local and more prestigious) of (FF), since (FF) is proposed to be a stereotype. Gender was reasonably well-balanced across age and social class in the present study, as shown in Table 4.

	Total	Middle class		Working class	
		Male	Female	Male	Female
Young (<35)	42	9	13	10	10
Middle-aged (35-65)	17	4	4	4	5
Old (>65)	17	4	4	4	5
Total	76	17	21	18	20

Table 4: Entire participant sample by age, social class and gender (N=76)

**8. Analyses and results.** The data were coded impressionistically for presence or absence of FF and FL tone sandhi. The reliability of this coding was verified through acoustic analysis of a subsample of the data. 3040 tokens of (FF) and 3040 tokens of (FL) were extracted from the interviews and word lists, and were coded for the application or non-application of the relevant rule, for a total of 6080 tokens in the final analysis.

8.1. AGE DISTRIBUTION OF THE TWO VARIABLES. The application frequency of the local (FF) sandhi variant is much higher among older speakers than middle-aged speakers and young speakers, while the application frequency of the local (FL) sandhi variant is much higher among young and middle-aged speakers than old speakers, as shown in Figure 1 and Figure 2. This echoes Gao & Lu (2003) that (FF) was disappearing, and Shi & Wang (2004) that (FL) was rising.

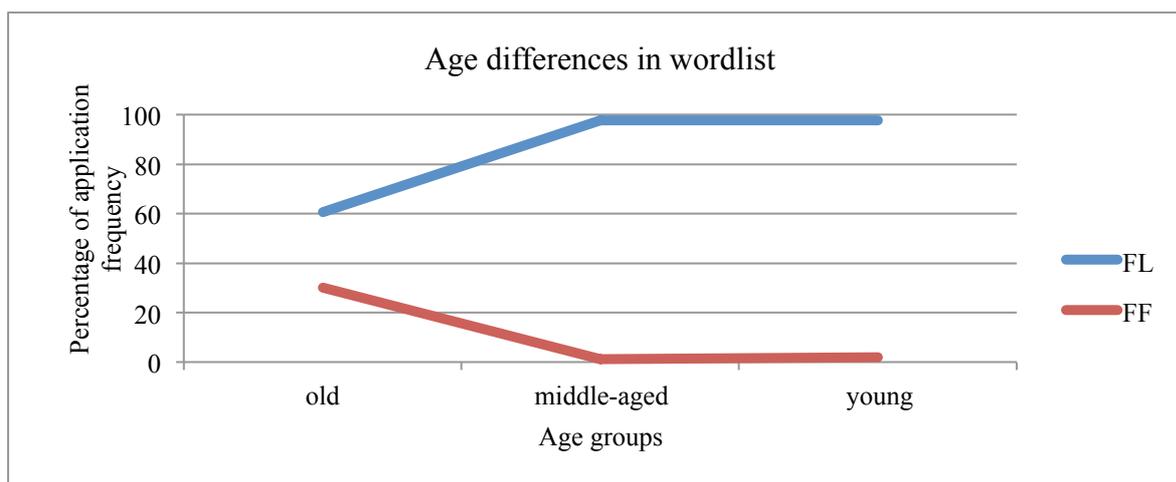


Figure 1 Age differences of (FF) and (FL) in wordlist

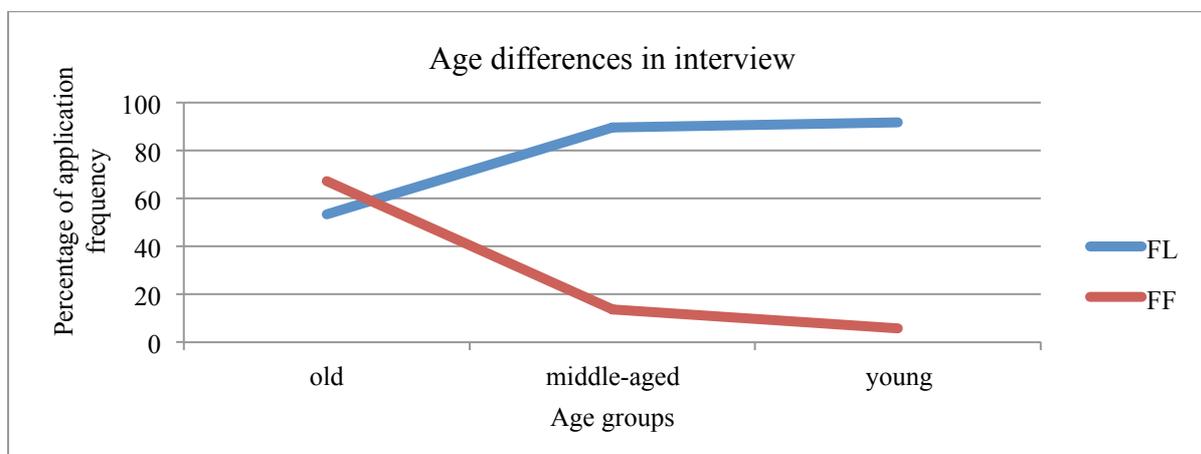


Figure 2 Age differences of (FF) and (FL) in interview

Multiple regression analyses indicate that age difference is significant in both (FF) and (FL) ( $P < 0.05$ ). In (FF), the application frequencies among old speakers are significantly higher than those among young and middle-aged speakers, which indicate that the application of the local variant is decreasing. In (FL), the application frequencies among young and middle-aged speakers are significantly higher than those among old speakers, which suggest that the application of the local variant is on the rise. This is in line with Shi and Wang's (2004) finding that FL is virtually categorical among young people. Their study was conducted more than 10 years ago, and the young speakers in their study have become middle-aged in recent years. Old speakers exhibit much lower rates (about 50-60%) of FL tone sandhi application and much bigger variations. The tendency is the same in both wordlist style and interview style.

8.2. SOCIAL CLASS DISTRIBUTION OF THE TWO VARIABLES. The distribution of (FF) by age, social class and style is given in Table 5.

Age	Social class	Wordlist	Interview
Young(<35)	Middle class (22 speakers)	4/440 (0.91%)	19/440 (4.3%)
	Working class (20 speakers)	13/400 (3.3%)	21/400 (5.3%)
Middle-aged(35-65)	Middle class (8 speakers)	6/160 (3.8%)	21/160 (13.1%)
	Working class (9 speakers)	6/180 (3.3%)	49/180 (27.2%)
Old(>65)	Middle class (8 speakers)	29/160 (18.1%)	58/160 (36.3%)
	Working class (9 speakers)	55/180 (30.6%)	122/180 (67.8%)

Table 5 (FF) by age group, social class and style

Multiple regression analyses indicate that there is no significant difference between middle class and working class among Young speakers in both styles ( $p > 0.05$ ). There is no significant difference between middle class and working class in Middle-aged group and Old group in wordlist reading style ( $p > 0.05$ ), but there is a significant difference between the two social classes for the Middle-aged group and Old group in the interview ( $p < 0.05$ ).

Working-class speakers in these two groups show a strong degree of style-shifting between interview style and word list style. In contrast, middle-class speakers exhibit much less style-shifting. Since the non-application form (i.e. the SC, non-local form) is more prestigious, and related to better education and higher socioeconomic position, the working class speakers may want to sound better than they actually are. When they are careful about their speech, they successfully avoided the non-prestigious variant (the local one), with application rates almost as low as those of the middle class in wordlist. But in interview, they cannot pay equal attention to their speech and the non-prestigious variant appear much more frequently in their speech than in the speech of the middle class speakers. Social class differences in language tend to minimize in wordlist style, as shown in Trudgill (1972). The discrepancy between wordlist style and interview style found in FF echoes his finding.

Multiple regression analyses suggest that both the middle class and working class use (FL) at similarly high rates ( $p > 0.05$ ). The Old speakers in both social class groups use (FL) at similarly low rates ( $p > 0.05$ ). So social class is not a significant factor affecting the application of (FL).

8.3. GENDER DISTRIBUTION OF THE TWO VARIABLES. Gender distribution of (FF) in each age group is given in Table 6.

Age	Gender	Wordlist	Interview
Young (<35)	Male (19)	14/380 (3.7%)	26/380 (6.8%)
	Female (23)	3/460 (0.65%)	14/460 (3%)
Middle-aged (35-65)	Male (8)	2/160 (1.3%)	12/160 (7.5%)
	Female (9)	3/180 (1.7%)	32/180 (17.8%)
Old (>65)	Male (8)	53/160 (33.1%)	92/160 (57.5%)
	Female (9)	39/180 (21.7%)	88/180 (48.9%)

Table 6 (FF) by age group, gender and style

Multiple regression analyses indicate that there is no significant difference in gender in both styles ( $P>0.05$ ) in all the three age groups. Middle-aged women are using more of the non-prestigious variant than their male counterparts, which is opposite of what we see in the other two age groups and opposite of the prediction that male tend to use more non-prestigious variant. The reason is that there is an outlier in the middle-aged group. The application frequency of participant #78, a retired worker, is 10% (2/20) in wordlist and 65% (13/20) in interview. Without # 78, the application frequency of middle-aged women is lower than men in both styles.

Turning now to (FL), Table 7 shows the application frequency of (FL) for male and female participants by age group. Multiple regression analyses indicate that the differences between male and female are not significant in both groups in both styles ( $P>0.05$ ), which suggests that gender is not a significant factor affecting the application of (FL).

Age	Gender	Wordlist	Interview
Young (<35)	Male (19)	370/380 (97.3%)	330/380 (86.8%)
	Female (23)	437/460 (95%)	400/460 (87%)
Middle-aged (35-65)	Male (8)	155/160 (96.9%)	148/160 (92.5%)
	Female (9)	172/180 (95.6%)	160/180 (88.9%)
Old (>65)	Male (8)	65/160 (40.6%)	52/160 (32.5%)
	Female (9)	88/180 (48.9%)	77/180 (42.8%)

Table 7 (FL) by age group, gender and style

8.4. STYLISTIC VARIATIONS OF FF AND FL. Intra-speaker stylistic shifts are affected by the attention the speaker paid to the speech (Labov 1972) and also the person to whom he is speaking (Bell 1984). Change from above tends to have proportionally more prestigious form in the more careful speech while the change from below typically has no such pattern. Stylistic variation could also reflect socioeconomic differences of different speakers as shown in Labov (2001).

By comparing interview and wordlist, I can find out whether the application rates of the Tianjin variant of (FF) are different in different styles. If the prestige, non-local SC variant appears more frequently in the more careful style consistently, we have good reason to propose that it is a change from above. If the prestige variant does not appear more frequently in the more careful style, or it appears more frequently in the less careful style, we tend to suggest that it is a change from below.

As we have seen in Tables 5 and 6, the non-prestigious local variant of (FF) appears more frequently in interview style than in wordlist style. The overall distribution of (FF) in the two styles are given in Table 8.

	Wordlist	Sd	Interview	Sd
All the 76 speakers	114/1520 (7.5%)	2.636	264/1520 (17.3%)	4.725

Table 8 (FF) by style, all speakers (n=76)

The stylistic distribution of FF suggests that FF is a change from above and the change might be caused by the rising overt prestige of the non-Tianjin, SC variant and the falling out of favor of the local Tianjin variant. Overall, the frequency of the Tianjin application variant is much lower in word list reading style than in interview style, and this difference is significant ( $p < 0.05$ ). This is true for both men and women, and in every social class and age group, suggesting that the entire community has evaluated the Tianjin (FF) variant negatively for some time. Speakers are more careful about their speech in word list reading style than in interview style (Labov 1966). Because they are more careful in the word list reading style, they use more of the prestigious variant in the word list than they do in the less careful interview style. The intra-speaker stylistic shifts suggest that speakers are aware (at some level) of the differences of the two variants, and therefore that FF is at least somewhat above consciousness.

Now turn to the stylistic distribution of (FL), as shown in Table 9.

Age group	Wordlist		Interview	
	App / N tokens	SD	App / N tokens	SD
Total (76 speakers)	1287/1520(84.7%)	4.12	1167/1520(76.77%)	4.53

Table 9 (FL) by age and style

Multiple regress analyses suggest that there is significant difference between wordlist style and interview style ( $P < 0.05$ ). Besides, the application frequency of FL in wordlist style is higher than the frequency in interview style in each age group, also indicates the tendency that the local variant appears more frequently in wordlist than in interview is consistent.

I cannot firmly conclude that the Tianjin (FL) sandhi pattern really is more frequent in wordlist style or interview style: the intra-speaker difference for each individual is either non-existent or very narrow, and so the overall higher rate of the pattern in wordlist style could be an artifact of the small speaker and token sample size. What is clear, however, is that speakers do not actively avoid the Tianjin variant of (FL) in their most formal (i.e. word list) style. If they were aware of the change toward the local variant and considered the local (FL) sandhi pattern to be undesirable, the frequency of the more prestigious SC variant would be higher in the word list reading style than in interview. This is not the case.

Assuming (FL) is indeed a nearly completed change, and it is below the level of speaker awareness, then it is perhaps not surprising that there is now very little gender differentiation for (FL) in Young and Middle-aged groups, with all speakers applying (FL) 86-100% of the time.

In Old group, the gender differences in both styles are much bigger than in Young and Middle-aged groups. One tentative interpretation of these data is that in this generation, a change from below toward increasing use of (FL) was occurring, led (as expected – see e.g. Labov 1990) by women from a low social class. Men and the middle class women lagged behind. The reason is the application rates of the two working class women are both high.

With a small sample of 17 speakers, it is hard to draw strong conclusions about how the change occurred in this group. However, the big differences between different speakers

indicate that the change in (FL) is in progress in this group. Besides, the overall application rates of 45% (153/340) in word list reading and 37.9% (129/340) in interview suggest that the application of (FL) is low among old speakers, which is in agreement with Shi and Wang (2004). The age difference over the application of (FL) does exist between Young and Middle-aged speakers on one side and the Old speakers on the other, which confirms that the change in FL is in fact taking place in Tianjin.

## 8.5. DISCUSSIONS.

8.5.1. A CHANGE FROM ABOVE OR A CHANGE FROM BELOW? As show in 8.4, the stylistic variations support the hypothesis that the ongoing disappearance of (FF) is a case of “change from above” (Labov 1966) and the rise of (FL) is a case of “change from below” (Labov 1966). In (FF), the application frequency of the local non-prestigious variant is significantly lower in the more careful wordlist style than in the interview style, which suggests that speakers consciously avoid the non-prestigious variant in their more careful wordlist style. In (FL), the application frequency of the local non-prestigious variant is significantly higher in the wordlist style, which suggests that speakers at least not consciously avoid the less prestigious variant in their more careful style.

A well-known example of change from above is Labov’s (1966) characterization of the increasing frequency of post-vocalic [r] in New York City. New Yorkers gave clear positive evaluations of the [r] variant when they were asked to evaluate the presence or absence of consonantal /r/ in postvocalic position in words such as *car*, *card*, *four*, etc (Labov 1972). Here Tianjin speakers refer to T1, the local variant of (FF), as the most salient feature of Tianjin dialect. And they agree that people speaking SC sounds better educated and from a better social class.

Changes from above typically also originate outside of the speech community. That is presumably the case here, where the Tianjin tone sandhi pattern is being replaced by the SC non-application of the pattern. There is also a common – but not predictable -- relationship between change from above and social class. When a sound change is above the level of awareness, people from higher social class typically tend to use the more prestigious form more frequently. This is the same as the change in FF. The middle class tends to use the prestigious non-local variant more frequently than working class, especially among the middle-aged and old speakers.

8.5.2. FF: A DECREASING STEREOTYPED FEATURE OF TIANJIN DIALECT. The present study confirms Gao and Lu’s (2003) report that (FF) is disappearing from Tianjin, with the young and those of higher socioeconomic status leading the disappearance. FF is a stereotyped feature of Tianjin dialect, and may be unattractive to young people, perhaps because of the old-fashioned connotations.

Qualitative evidence supports the inference that FF is a non-prestigious stereotype of Tianjin speech. FF is a stereotype because the application variant LL carries the publicly mentioned ‘low’ tone: the most salient feature of Tianjin dialect. In the interview, I asked the participants which of the following four words is most Tianjin-like: *ma* (T1) means ‘mom’, *ma* (T2) means ‘hemp’, *ma* (T3) means ‘horse’ and *ma* (T4) means ‘scolding’. All the participants said *ma* (T1) without hesitation. So the participants are aware of the fact that Tone 1(LL) carries most salient features of Tianjin dialect. And T1 (LL) is the application variant of FF. Tianjin speakers do not like the connotations like ‘rude’ and ‘less educated’ connected with Tianjin dialect, so they try to avoid the bad connotation which is related to the stereotype FF. This is perhaps the main reason why FF is becoming obsolete. The fact that the pitch value of T1 has changed from 21 to 41 as indicated in Zhang & Liu (2011) and

Wang & Lin (2017) also support the view that T1 is avoided by Tianjin speakers.

8.5.3. FL: A NEW MARKER OF TIANJIN IDENTITY IN A PERIOD OF MIGRATION? As we have seen, the Tianjin variant of FL tone sandhi was reported to occur only at a low frequency in the late 20<sup>th</sup> century (Shi 1988), but later studies, including the present study, show that it now occurs almost categorically in the speech of young and middle-aged speakers. It is natural to ask what has caused this reversal in the frequency of FL, particularly since Tianjin speakers never mention it and there are no gender differences or stratification by style or social class in the speech of those under 65 years old. Is this change similar to the curvilinear changes (i.e. language change reversals that exhibit a v-shape age distribution in apparent time) observed in the well-known Martha's Vineyard study (Labov 1972) and in the more recent Cajun community study by Dubois and Horvath (2000)?

Labov observed that the characteristic centralization of (ay) and (aw) (/ay/ and /aw/) on Martha's Vineyard was returning after a period of decline. He suggested that the increase in centralization was closely related to people's attitudes towards the island. Because the fishing industry declined, the Vineyarders depended increasingly on summer tourism. But on the other hand, they viewed the summer trade as a threat to their island identity. Labov argued that centralization, subconsciously, means 'Vineyarder'. People who considered themselves to be belonging to the island tended to use centralization more than people who did not. The centralization of (ay) and (aw) marks the speaker's island identity, and therefore can be used to resist the challenges to their native status. The rise in centralization occurred because the challenges had become much sharper in the past two generations.

Similarly, in a study of three generations of ethnic Cajuns in a rural area of Louisiana, Dubois and Horvath (2000) reported on a 'recycling' of French-derived features in the Cajun variety of English. The older generation used many French-derived Cajun features in their English, and the middle-aged generation dramatically decreased their use of all of these features. But some of the Cajun features revived among the young generation. The fall and rise of the Cajun features are all related to the socioeconomic development of the area. Industrialization and urbanization brought some fundamental changes in southern Louisiana. Getting a better job meant speaking English. In addition to this economic reason, the middle-aged speakers were aware of the stigma attached to Cajun English. In contrast, the young speakers are influenced by the so-called "Cajun Renaissance", and they are proud to be Cajuns. Besides, they are able to profit from the important economic benefits of display of Cajun culture associated with tourism. Dubois and Horvath (2000) argue that the Cajun features increased among younger Cajun speakers because the use of Cajun variants has become a sociolinguistic marker of Cajun identity, just as the use of traditional Martha's Vineyard variants marked island identity.

The reason why FL revived in recent years instead of other times is proposed to be because Tianjin people, just like Vineyarders, felt the threat to their local features and culture when a huge number of migrants rushed into the city after the "Opening-up and Reform" policy of 1978. Although the "Opening-up and Reform" policy was adopted in 1978, main in-migration to Tianjin did not appear until 1990s. The rise of (FL) coincides well with the migration history to the city. Crucially, this in-migration would have coincided with the Tianjin residents born after 1950 entering their 20s and 30s. These Tianjin speakers would have been competing with migrants for jobs. Tianjin people felt the pressure of keeping their identity more fiercely than any other time.

This is illustrated by some comments made by participant (#12), a young male undergraduate in Tianjin Normal University. He talked about how Tianjin was going to keep its culture and tradition and expressed his worries. He said Tianjin was different from

Beijing, which has profound culture background. Although there were much more migrants in Beijing, Beijing people did not have to worry about keeping their culture and identity because Beijing was too rich in its cultural deposits to worry about being lost. Tianjin was not so rich and profound in its culture, and it was difficult to keep Tianjin identity and culture with so many migrants came, together with their cultures. What he said represents some Tianjin young people's worries, although not all of them expressed this so clearly.

But why is FL selected as a new marker of Tianjin identity and not one of the other non-salient Tianjin tone sandhi patterns? This is probably related to the application variant. The application variant of FL is Tone 2 (45), which is very similar to Tone 2 in SC (35). Both are high rising tone, and most Tianjin speakers are unaware of their differences. Since there is no FL tone sandhi in SC, this tone sandhi can mark their Tianjin identity. At the same time, the application variant is not a salient feature of Tianjin dialect and therefore it does not carry the bad connotations like LL does. So Tianjin speakers use FL to mark their Tianjin identity, but do so in a way that is not markedly linguistically different from the standard variety. This is something of a 'having their cake and eating it' scenario, whereby Tianjin speakers can distance themselves from sounding highly local and traditional, while actually preserving a traditional feature. In this sense, the revival of FL among young Tianjin speakers is somewhat like the recycling of the local features observed in Labov (1966) and Dubois and Horvath (2000). The young members of the communities want to keep their identities.

To summarize, the revival or 'recycling' of FL in Tianjin appears to be a case of change from below the level of public awareness. It may be the result of social resistance to both the influence of SC, and to the in-migration of non-Tianjin natives in the last 35 years. Although SC is overtly considered a better form of language, it is unattractive for the expression of local Tianjin identity.

**9. Conclusions and future directions.** The results of the study confirm the changes in FF and FL. FF is becoming obsolete as young and middle-aged speakers almost do not have it, while its application frequency is still pretty high among older speakers. FL shows an opposite change direction. It is on the rise as young and middle-aged speakers have it almost without exception, while its application among old speakers remains low.

The correlation between FL and social factors is quite straightforward, while the factors affecting FF are not so. Age is the only social parameter has significant effect on FL. Other socioeconomic parameters like gender and social class have not shown significant effects on the application of FL. The correlation between FF and other social factors is more complicated. In FF, the differences between wordlist style and interview style are much bigger among working class speakers than middle class speakers. The social class differences have a tendency to be minimized in wordlist style. This is in agreement with the results in Trudgill (1972) in the study of the urban British English of Norwich.

The changes in the two variables are different. FL is rising, while FF displays a steady linear decrease. FL rises probably due to its status as a marker (Labov, 1972), positively related to "new" Tianjin identity. FF displays a linear decrease of the local variant due to its status as a stereotype (Labov, 1972) of 'old-fashioned' Tianjin identity and speech. The application variant of FF is T1 (LL), which is a stereotype and carries the bad connotation of Tianjin dialect. This explains why it does not rise like FL does.

But there are some questions need further study. First, what happened to the two variables in the past? The changes in these two variables are almost complete among young speakers, which indicates that the changes do not start from this generation. The changes among middle-aged speakers and old speakers are not complete. By studying the middle-aged

and old groups in more details, we probably could infer what happened in the past, which should be done in future study.

Second, the rising of (FL) coincides well with the immigration history of Tianjin, and therefore I propose that the rise of (FL) is related to Tianjin people's efforts to keep their local identity when they are facing the Standardization and increasing migrants. But this proposal need further evidence like speakers attitudes to migrants and the correlation between the attitudes and the application frequencies of (FL).

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