Retrogression of Retroflexion in Mandarin Speech

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1. Introduction

This study investigates the feature of retroflexion in Mandarin, and the tendency of younger generations of Mandarin speakers to lose this feature in their speech. The change is evident in the frequent substitution of nonrhotic consonants for rhotic ones in the parllance of Mandarin youths. This change in progress away from the standard is proliferating in both Taiwan and Mainland China, despite the political and geographical separation of the two nations. It appears that Southern dialects of Chinese are forcing both dialects of Mandarin in the same direction, albeit Southern Min has altered Taiwanese Mandarin to a greater degree. Also, the emergence of a new standard of Mandarin in Taiwan in lieu of the Peking dialect, as suggested by Kubler (1981), is supported by this report.

2. Historical and Linguistic Background

The emerging Standard Taiwanese Mandarin is mainly influenced by Southern Min, a dialect of Chinese spoken by 71% of the population in Taiwan. It is also known as Fukiene, Amoy, Taiwanese and Hokkien. Speakers of S. Min emigrated from Fujian several centuries ago. Mandarin was not introduced in Taiwan until 1945 when the language was imported by new immigrants from the mainland. Mandarin was promoted as the acrollect by the Nationalists in 1949 after their exile from the mainland. Figure 1 shows the location of Taiwan relative to Mainland China, and the various dialects of Chinese are partitioned on the map as well (Kratochv, 1968).

![Figure 1: Distribution of Chinese Dialects](image)
Most dialects of Chinese are mutually unintelligible. Northern Mandarin, as spoken by the populace of Peking, is viewed universally as Modern Standard Chinese (MSC). The major concentration of S. Min in China is found in the province of Fukien, located across the channel from Taiwan.

3. Survey Population

Eighteen native speakers of Mandarin were interviewed. All informants speak English to some degree. The social variables being investigated are geographical origin and age. The informants were classified Taiwanese (T) or Mainlanders (M), and the age division was Under 30 (−) and Over 30 (+). Each cell contains five members, except M−, which contains three members. Gender was not considered to be a factor in the analysis. See Figure 2 for informant statistics.

<table>
<thead>
<tr>
<th>Category</th>
<th>(sr)−1</th>
<th>Total (sr)</th>
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Category: T/M = Taiwan/Mainland (sr)−1: the number of nonaphetic tokens
+−: over/under 30 Total (sr): all tokens, i.e. (sr)−0 + (sr)−1
# indicates individual Index: calculated index scores
−w: average of the individual indices Sex: Male or Female
Copula: index score calculated for Sharpening in the Copula
Elsewhere: index score calculated for Sharpening elsewhere

Figure 2: Sharpening Indices by Age and Origin

1. Due to a surplus of possible Taiwanese informants and a deficit of Mainland informants, it was not possible to obtain the gender ration desired. However, an analysis of the correlation of sex and Sharpening might yield interesting results. Kubler (1981) states that the Taiwanese male will adapt more readily to the use of Mandarin, due to compulsory military service. Females are less likely to utilize Mandarin regularly, and they use Southern Min to a greater degree. An obvious consequence would be higher Sharpening indices among the females. A further study might be done to test this theory.
4. **Linguistic Variable**

The voiceless retroflex fricative (IPA symbol [ʃ], referred to as [sr] herein) is investigated to verify the incipient disappearance of retroflexion from Mandarin. Rhotic s, (sr)–0, is tabulated with its nonrhotic counterpart [s], (sr)–1, when it is substituted for the rhotic s. The change will be referred to as Sharpening, since the distinction between sharp (nonrhotic) and rounded (rhotic) consonants is made in another Chinese phonological phenomenon.~\(^1\)

5. **Protocol**

Data elicitation was accomplished through tape recordings of the informants’ voices. The interviews were conducted in Mandarin. Most questions in the interview were oriented towards their personal linguistic background and casual conversational topics.

6. **Sharpening**

The graph in Figure 3 illustrates the correlation between age and origin. The ordinate represents the Sharpening index and the abscissa represents age. The scores for Sharpening were calculated individually, then averaged to derive the group scores. This prevents a speaker with a substantially larger number of tokens from dominating the results.

![Figure 3: Sharpening by Age and Origin](image)

Three conclusions may be deduced from Figure 3. Speakers from Taiwan utilize Sharpening more often than those from Mainland China. In addition, the 30+ age group outperforms the 30– age group in the use of the standard variant. Thirdly, there exists a striking parallel in the progress of Sharpening in both locales. Each of these will be dealt with below.

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2. The distinction between sharp and rounded consonants is made by scholars and opera singers, to distinguish the rhotic s from the nonrhotic s before high front vowels, for instance. In Modern Standard Chinese, the differences are neutralized, and both kinds of fricatives become palatalized, becoming the same phone. Only students of archaic Chinese and opera singers use rhotic and nonrhotic forms instead of the palatalized variants.
To further support these claims, the tokens for each informant were divided into two categories. (s) tokens in the Copula environment (the verb "to be" and the affirmative) are separated from those in environments Elsewhere, and indices were calculated for each new category. The results are summarized in Figure 4. Note the striking similarity between the two curves.

![Figure 4: Sharpening by Lexical Distribution](image)

7. **Stratification by Origin**

The cause of Sharpening in Taiwan seems to be Southern Min in origin. In Taiwan, the vast majority of Mandarin speakers are bidialectal, since they also speak Taiwanese as one of their native tongues. Aboriginal natives aside, the Amoy are the original settlers of the island, but they are the minority when considered politically and linguistically. The new government imposed Mandarin as the official language, i.e. the prestige variety, causing a diglossic situation. In the consonantal system of Taiwanese, the feature of retroflexion is missing. Retroflexion is a difficult feature to acquire, as exemplified by foreigners trying to learn Mandarin. This applies to bidialectal speakers in Taiwan, because Taiwanese is used more often in non-formal situations, as predicted in a diglossic environment. Taiwanese is spoken at home to grandparents and among neighbours, and it is classified as a low variety. Mandarin, reserved for schooling, business and formal situations, typifies a high variety. There is a greater exposure to Taiwanese, especially for children. Due to this familiarity with the sounds of S. Min, retroflexes belong to a comparatively rare class of phones. When Mandarin is first enforced through education, it is difficult to correct the nonrhotic sounds the students substitute for the rhotic ones. Thus Sharpening is a very prominent process in Taiwan.

In Mainland China, the influence of S. Min on Mandarin is minor, because only 4.2% of Mainlanders speak S. Min. However, the strongest pressures towards Sharpening are exerted collectively by the Southern Chinese dialects. These dialects include Cantonese, Hakka, Wu and Min. The consonantal systems of these dialects all lack the retroflex, and therefore influences "Putonghua" (the common non-standard Mandarin in Mainland China) in the same way S. Min affects Taiwanese Mandarin. However, only 30% of the population in China speak a dialect other than Mandarin (compare this with the 71% of S. Min speakers

3. Non-native speakers of Mandarin have difficulty differentiating the alveopalatal sounds from the retroflexes. In fact, Dow (1970) cites one previous field worker who used the alveopalatal symbols to transcribe the retroflexes, when the differences are actually great between the two manners of articulation.
in Taiwan). Southern Chinese dialects are spoken by a few residents of Taiwan, and the lack of retroflexes in these dialects reinforces the usage of nonrhotic obstruents. The disparity between Sharpening in the two nations is thus explained. The influence of bidialectism is supported by individual data. Among the Taiwanese natives, only T+1 does not speak Taiwanese, and consequently he has the lowest Sharpening index (2) in the Taiwanese category. Among the Mainlanders, M-2, M-3, and M+4 were also bidialectal in Chinese, although only M-3 spoke S. Min. Consequently, M-3 had the highest index among the Mainlanders (100), and M-2 and M+4 showed a slight Sharpening in their speech (19 and 18 respectively).

8. **Stratification by Age**

Sharpening is dependent on age, as seen in Figure 3. The results indicate that the younger Mandarin speakers are gradually losing the distinction between rhotic and nonrhotic consonants. Younger generations Sharpen their rhotic consonants, while older generations tend to retain the distinction between the two. This trend seems to contradict efforts by the two governments to impose Northern Mandarin as the universal standard. In Taiwan the explanation involves social and political factors. Since there is considerable friction between Taiwan and Mainland China, the youths of Taiwan would view Northern Mandarin as politically unfavourable, and would avoid using features found in that dialect. They would prefer to sound more like their compatriots, and view the Peking dialect as effeminate and out of place in Taiwan (Kubler, 1981). The situation in Mainland China is harder to fathom, and would require a more intensive study in China.

9. **Emergence of a New Standard**

As stated in the introduction, Kubler (1981) suggested that a new standard, Standard Taiwanese Mandarin, is emerging in Taiwan. This hypothesis is supported by this paper, which attempts to prove that Sharpening is a change in progress and not age-graded. To show that Sharpening will eventually replace the retroflexes with nonrhotics, a real time study would be essential. However, by using data obtained from the interviews an alternate analysis is possible. Once an informant leaves Taiwan, he or she will relocate to a new society where Mandarin is spoken less, effectively removing them from influences which promote changes in Taiwanese Mandarin. The informant would most likely speak Mandarin with relatives who are likewise removed from Taiwanese society. This would establish an approximate index for the year in which they left. Figure 5 is a graph of the Sharpening index plotted against the year of departure from Taiwan.

![Figure 5: Sharpening by Age and Year of Departure](image-url)
The T+ group shows a steady progression in Sharpening. The T- group dominates the upper regions of the graph, showing a steady adherence to Sharpening. The T- group scored higher than T+ in the early years because they would have been younger and received less Mandarin education than the older informants. In fact, some informants would not have received formal Mandarin education, which means a greater chance for mispronunciation. This graph supports the claim that a new standard is evolving in Taiwan.

10. Conclusion

The loss of retroflexion is but one of the changes occurring in Taiwanese Mandarin towards a new standard. Through investigation of the retroflexes in Mandarin, the change in progress was observed and shown to be strongly influenced by another dialect, Southern Min. The meeting of two mutually unintelligible dialects has caused the prestige dialect to alter its phonetic inventory. The change is observable in both Mainland and Taiwan, but the catalysts for the same phonological change in the two nations differ. Southern dialects of Chinese appear to be the inciting factors for Sharpening in China, which has not yet reached the degree the Taiwanese have already attained. An in-depth real time study would verify the linguistic changes in progress. Such a study should be performed in Taiwan and China, but that is beyond the scope of this mini-survey.

As for the future of Retroflexion, it appears that its retrogression into its non-rhotic variants will continue. The current trend towards Sharpening will eventually cause the distinction between the two manners of articulation to be lost, and speakers will use the non-rhotics invariably. It is doubtful that Retroflexion will be a future feature of the changing Chinese dialects, especially since Retroflexion of obstruents is absent from major Western languages like English and French. Further contact with the Western world would almost ensure the decline of Retroflexion.

11. References

A New Chinese-English Dictionary (1979) Hong Kong Youth Press, Hong Kong.


4. One piece of evidence to support the claim is the hypercorrection observed by Kubler (1981) in the classrooms of Taiwan. /s/, which is a separate phoneme from /sr/, will be hypercorrected by students in educational settings, because of the emphasis educators place on retroflexes. But if they cannot distinguish between the two sounds, they would choose the rhotic version because it sounds "more correct", i.e. closer to MSC. I noticed that I am guilty of hypercorrection myself, especially since I am conscious of the variable being tested.