

Gemination in Taishanese explained
by Autosegmentalism

Final Project

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Abstract

The purpose of this paper is to describe the presence of gemination processes in the Taishanese dialect of Chinese, using the theory of Autosegmentalism. Sample data was obtained from previous phonological studies in the language of words and phrases in for which it underlying morpheme structure suggests gemination. This data supports earlier analysis which suggest two distinct environments in which gemination occurs. To rules describing these environments are posed, and the output suggests gemination as a phonological change motivated by ONSET.

1 Introduction

Taishanese (台山话) also known as Hoisanwa or Toisanese, is a dialect of Chinese. This dialect is from the Si-yi subgroup of the Yue dialect family, spoken in southeastern China. The dialect is often referred to as the language of choice for early Chinese-American immigrants, as many of the first Chinese immigrants during the California Gold Rush were of Taishanese descent. [3]. However, the language has fallen substantially in recent years in favor of Cantonese and increasingly, Mandarin, among diaspora speakers [4]. Although historically Taishanese has been categorized as an accented or ‘country’ version of Cantonese, a study by Szeto [6] suggests that the languages are only 31% mutually intelligible. In fact, many phonological phenomena present in Taishanese have no equivalent in Cantonese or in Mandarin [8]. One such phenomena is gemination of glides. This paper is primarily concerned with the description of two circumstances in the language where gemination is likely to occur, and the explanation of these processes using Autosegmental Theory.

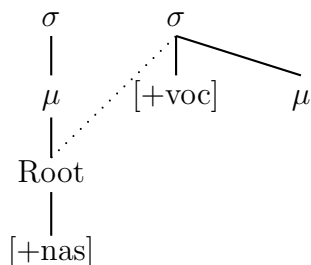
2 Analysis

Yiu proposes that Taishanese requires gemination in two circumstances: when /i/ or /u/ appear as the final segment of a diphthong in a syllable preceding an onset-less syllable, and when /j/ or /w/ appear as the first segment of a syllable preceded by a nasal or when the nasal is followed by an onset-less syllable [7]. Both patterns of gemination appear to be motivated by ONSET.

2.1 Gemination of Nasal, Preceding syllabic /j/, /w/

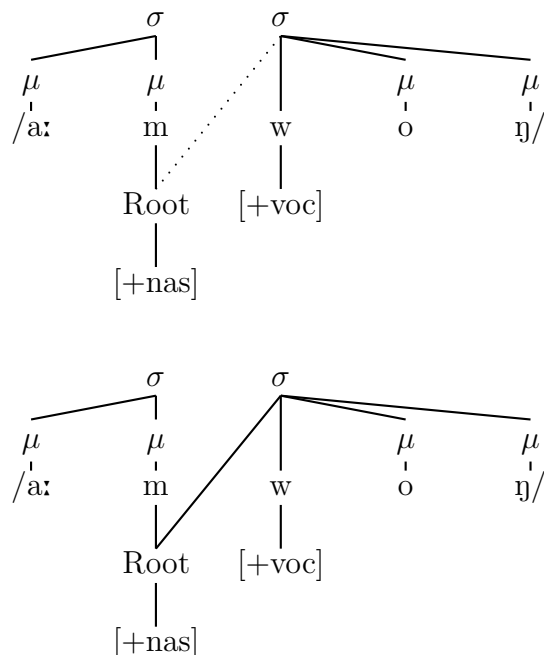
One can infer based on the descriptions in Yiu (1946) that one of the situations in which gemination occurs in this dialect is when a syllable-final nasal is followed by a syllable which lacks an onset or has an onset consisting of a glide, namely /w/ or /j/ within the phonetic inventory for Taishanese. In these cases, the nasal spreads to the onset of the following syllable, creating a cluster with the already-present glide, or an entirely new onset if there was none in the underlying representation. This is shown in the Nasal Gemination Rule, below.

Figure 1: Nasal Gemination Rule



The following is a sample derivation for one example given in Yiu, for the word ‘yellowish’ [7].

Figure 2: Derivation of /a:m-woŋ/



SR: [a:m-mwoŋ]

Since no specific features are being added or deleted from segments, application of the Many-to-One Prohibition and Stray Erasure following this rule are both vacuous.

2.1.1 Possible Alternative Analysis

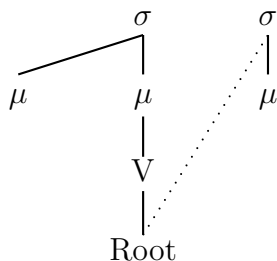
While the transcription conventions in Yiu suggest that Nasal Gemination creates an onset in the following syllable which consists of an nasal *and* a glide [7], there is a second plausible analysis. Consider the possibility of a secondary process whereby after gemination has occurred, the glide becomes syllabic so as not to create an onset cluster. This may be preference, since while certain descriptions of the language include onset clusters with glides [1], the inventories only include /kw-/, and not the range of clusters which could be produced by this rule. It seems that the language in general may be better suited to an analysis which, unlike Yiu’s, forces glides to syllabify following gemination.

2.2 Gemination of Syllabic /i/, /u/, Preceding Syllable without Onset

Assume treatment of diphthongs in rimes as bi-moraic structures. The following rule governs the second circumstance, wherein glides are geminated if they appear as the second vowel in

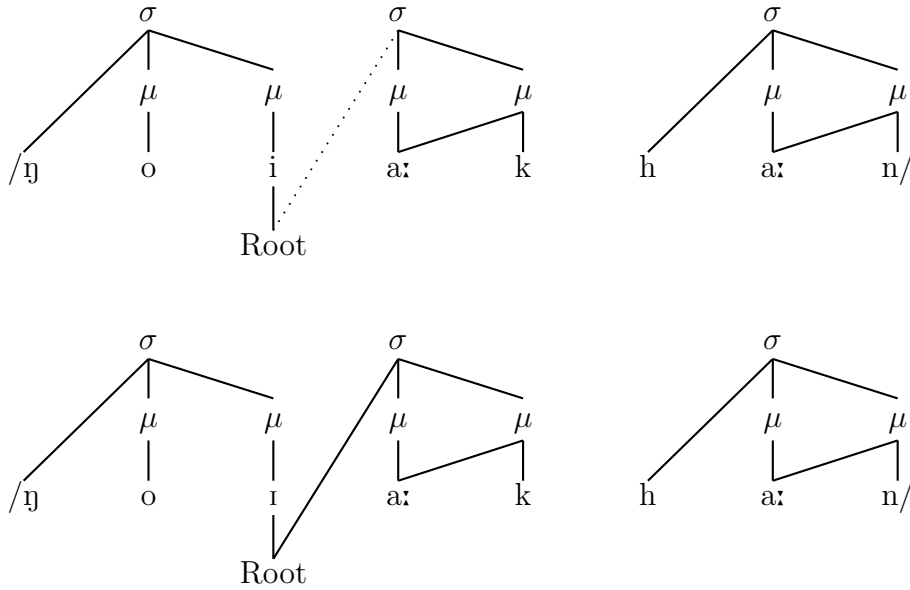
a diphthong, preceding another syllable without an onset.

Figure 3: Glide Gemination Rule



There are examples of diphthongs do not end in a vowel associated to a glide. It may be tempting to restrict gemination to high vowels to isolate /i/ and /u/, but this still produced undesirable derivations. Consider, for example, the word ‘I’. While there is considerable argument pertaining to the appropriate transcription of this particular word, one common transcribed form, [ŋoɪ], is evidence that not every final vowel in a diphthong corresponds to a glide consonant in the language. Under this rule, the surface representation contains a new onset consisting of a consonant with all of the features of ɪ. However, since there exists no non-syllabic equivalent of this segment, spreading is blocked by the limitations of phonetic inventory. Thus, when language users combine the syllables, these derived segments will be impossible to utter and will not be realized. 我, [ŋoɪ], and 得闲, [ŋoɪ à:k-hā:n], ‘I’ and ‘have leisure time’, respectively, the UR /ŋoɪ à:k-hā:n/ has an identical surface form, [ŋoɪ à:k-hā:n]. This can be heard in the dialogue of Lesson 9 from the Defense Language Institute’s Basic Course [2]. A sample derivation is given in figure 4.

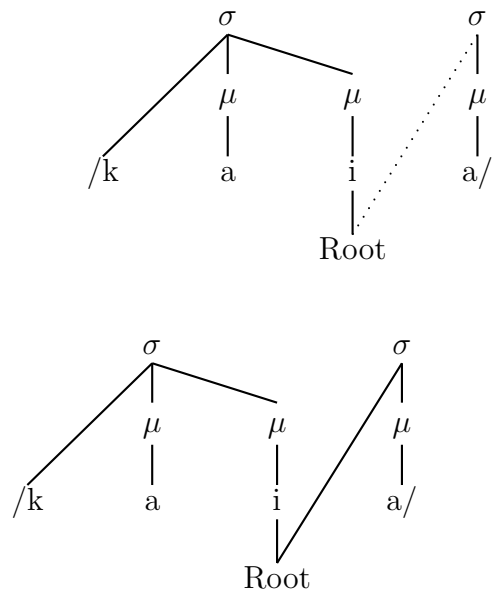
Figure 4: Derivation of /ŋoi à:k-hā:n/



SR: [ŋoi ə:k-ha:n]

However, in examples of a glide with a syllabic equivalent, gemination occurs. The following is a sample derivation of the word 'chicken', as found in Yiu [7]:

Figure 5: Derivation of /kai-a/



SR: [kai-ja]

Here, since the Root of /i/ is not contained in a mora, it is not syllabic, and thus realized as a glide.

Again since no specific features are being added or deleted from segments, application of the Many-to-One Prohibition and Stray Erasure are both vacuous.

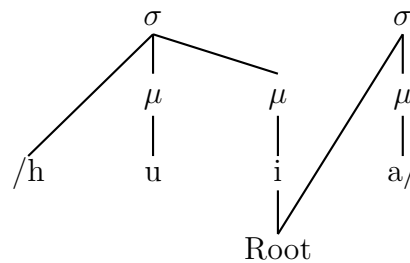
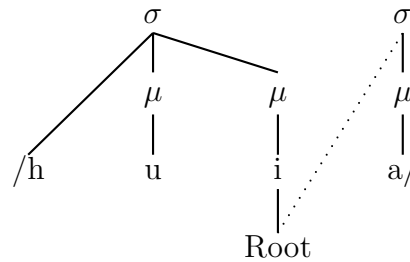
2.3 General Features of the Rules

Note that both of these rules can apply across morpheme boundaries *and* word boundaries. Consider the following example from Light (1986) [5].

Romanization	‘Wohng Lensang hàimhhaì dòhmáhn hui (a) àiluhk?’
Translation	Wong mr. be-NEG-be yesterday go (-a) mainland
Gloss	Did Mr. Wong go into the Mainland yesterday?

Here the aspect marker for completion, ‘-a’, is present on the verb [hui], meaning ‘to go’. Based on the allowed context of these two rules, we would expect the compound /hui-a/ to have surface representation [hui-ja], as seen in figure 6.

Figure 6: Derivation of /hui + -a/



SR: [hui-ja]

In addition, both rules seem to be motivated by a need to satisfy the principle of ONSET. The Nasal Gemination Rule creates a stronger onset (again, it is unclear whether the gemination is creating an onset cluster, or whether in fact the glide becomes syllabic in these situations), since all onsets created through this rule will contain a segment less sonorous than the glide on its own. In the case where the second syllable had no onset in the UR,

Nasal Gemination behaves like the Syllabic Spreading Rule, in that they both create an onset where there was previously none, cardinally satisfying ONSET.

3 Conclusion

Conclusions about the validity of this evaluation of gemination are limited in scope by the relative dearth of data available of the behavior of speakers in practice. However, it appears that an autosegmental view of the behavior of the language supports scenarios proposed by Yiu concerning gemination [7]. The gemination of syllable-final segments, particularly concerning structures containing glides and their syllabic equivalents, can be adequately described from an autosegmental perspective.

References

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