

## Squliq Atayal Epenthetic Vowels

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This paper analyzes the data of Squliq Atayal, an endangered Austronesian language spoken in northern Taiwan, and identifies the existence of epenthetic vowels in some environments that are not discussed in previous literature. It is shown that vowels are inserted to avoid surface consonant clusters, and that the quality of the epenthetic vowel depends upon both whether it occurs in the final stressed syllable and whether the preceding consonant is a sibilant. The Squliq data suggests that both metrical structure and the preceding consonants play a role in determining the quality of the inserted vowels.

In Squliq, stress falls in final syllables, and vowels in pre-penultimate positions weaken to a schwa. Based on a comparison of different vowel reduction patterns ((1) v.s. (2)) in the language, the paper argues that some roots actually ends with consonant clusters in the underlying representation, and that vowels [ə] or [u] are inserted to break up the illicit consonant clusters, as illustrated in (2):

- (1) Regular vowel reduction: vowels in pre-penultimate positions weaken
- |    |            |           |             |           |                |
|----|------------|-----------|-------------|-----------|----------------|
| a. | /kahul/    | [kahul]   | /kahul, an/ | [kəhulan] | ‘to come from’ |
| b. | /m, quriq/ | [məquriq] | /quriq, an/ | [qəriqan] | ‘to steal’     |
- (2) Irregular vowel reduction: vowels in the penult weaken unexpectedly
- |    |            |                    |            |           |            |
|----|------------|--------------------|------------|-----------|------------|
| a. | /tahk/     | [tah <u>u</u> k]   | /tahk, an/ | [təhəkən] | ‘to boil’  |
| b. | /Vm, qihl/ | [qəmih <u>u</u> l] | /qihl, an/ | [qəhələn] | ‘to force’ |

If the penultimate schwa in the suffixed forms in (2) is viewed as the result of exceptional vowel reduction rather than epenthesis, it would be impossible to account for the contrast with (1a), where penultimate /u/ does not reduce. The different patterns in (1) and (2) have been identified in Egerod (1965) but have received no explanations. Because data such as those in (2) overwhelmingly contain [u] in the final syllables of unsuffixed forms, the present analysis suggests that these roots contain consonant clusters in the input, and that the default epenthetic vowel is [ə], which realizes as [u] in final stressed syllables. In the proposed Optimality-theoretic analysis, a constraint against a schwa in foot head position is responsible for the variable realization of the epenthetic vowels.

Another instance of epenthetic vowels is found in pre-tonic positions. The epenthetic vowels are [ə] except when the preceding consonants are /s/ or /ts/ (alveolar affricate), where the vowels are pronounced as an apical vowel, such as /squliq/ [sɪquliq] ‘human beings’ rather than [səquliq]. Because the restriction on the weak vowels after the sibilants applies to both epenthetic vowels and underlying vowels that are reduced to schwas (e.g. /saqis, an/ [sɪqisan] ‘to sew’), the data suggest that a sequence constraint referring to both the sibilant and the following schwa is needed. A simpler approach employing a markedness constraint against surface underspecification, coupled with the assumption that place features could be doubly-linked between the onset and nucleus, is unable to provide a unified explanation for both the case of epenthetic and underlying vowels in Squliq.