Matu'uwal (Mayrinax) Atayal Vowel Syncope

Matu'uwal Atayal (i.e. Mayrinax; Austronesian, Taiwan) is generally considered to be a very conservative Atayal dialect in that it preserves the distinction between male and female forms of speech (Li 1982), and it lacks the rich consonantal alternations found in the Squliq dialect of Atayal (Li 1980). However, Matu'uwal exhibits intriguing patterns of vowel syncope which has so far been neglected in the literature. Based on fieldwork data, the paper unravels the generalizations in Matu'uwal vowel syncope, showing that the complicated patterns can be clarified in light of the diachronic development of schwa in proto-languages. The paper observes that a set of alternating vowels is attributed to the different realizations of the historical schwa in different positions within a word, and argues that these vowels are represented as empty vowel slots in the lexical representations in the synchronic phonology of the language. Adopting the idea of empty vowels allows the proposed analysis to show that Matu'uwal manifests rhythmic vowel deletion under right-to-left iambic metrification, which can be straightforwardly analyzed in Harmonic Serialism (McCarthy 2007), filling a typological gap of metrically conditioned syncope (right-to-left iambs) not discussed in McCarthy (2008).

A close examination of Matu'uwal data shows that some vowels alternate among [i, u, a, ə/ɪ] and zero in the paradigm. The data of vowel alternations are classified into four types as illustrated in (1) to (4), based on the occurrences of the empty vowels. In Matu'uwal, phonemic vowels include /i, u, a/, stress falls on the final syllable, and complex syllable margins are not permitted. (Underlining '_' in the angle brackets indicate deleted vowels.)

(1) a. 'weave (fem)': tinun, t<um>inun, tinun-un, tinun-i, tinun-ani
     b. 'do': kab**a**laj, si-kab**a**laj, kab**a**laj-un~kəb**a**laj-un, kablaj-ani [kab_.la.ja.ni]
     c. 'cook (rice)': g<um>hahapuj, gahpuj-ani [ɣah_.pu.ja.ni]

(2) a. 'cook (fem)': t<um>al**u**k, si-tal**u**k, talk-i [tal_.ki], tal**a**k-ani~təl**a**k-ani
     b. 'waste': h<um>ik**u**m, hikm-un [hik_.mun], hikm-i [hik_.mi], hik**a**m-ani

(3) a. 'throw' cbu' [tsɪβuʔ], c<um>bu' [tsum_.βuʔ], si-cbu' [ɕits_.βuʔ], cbu'ani [tsɪβuʔani]
     b. 'put': s<um>ku' [sum_.kuʔ], si-sku' [ɕis_.kuʔ], s**u**ku'-an [sukuʔan], s**u**ku'-aw

(4) a. 'follow': gəlug, g<um>lug, g<in>lug, si-glug [ɕiɣ_.luɣ], pa-galg-un [pa.ɣal_.ɣan]
     b. 'complete': naqr**u**' [naq_.ruʔ], naqar'-i [na.qar_.ʔi], naq_ra'-ani [naq.r**a**.ʔa.ni]

Given the observation in Li (1981) that Proto-Austronesian schwa became *u in word-final syllables in Proto-Atayalic (which comprises Atayal and Seediq), a clear generalization emerges in the Matu'uwal data as long as we assume that the alternating vowel, which reflects historical schwa, still retains a timing slot in the input. With right-to-left iambic metrification, even-numbered syllables from the right edge appear in the nonhead position of a foot and are thus subject to deletion (or weakening). A twist in the Matu'uwal data is that while rhythmic syncope affects all vowels in secondary feet, syncope in the main foot is quality-sensitive; only weak vowels are deleted in the primary foot.

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