

On Syllable Nuclei in Squliq Atayal

This paper investigates the syllable structure of Squliq Atayal, an endangered Austronesian language spoken in northern Taiwan, with a focus on its syllabic nuclei. Although there have been a few studies on the phonology of the Squliq dialect of Atayal (Egerod 1966, Yamada and Liao 1974, Li 1980, among others), its prosodic characteristics remain unclear in the literature. The paper will show that constraints against complex syllable margins force on-glides and off-glides into the nucleus position of a syllable in Squliq, and that the language tolerates only non-falling-sonority nuclei despite the appearance of [aj, aw] sequences on the surface.

The distribution of closed syllables in Squliq is limited to two specific circumstances, which suggests that the canonical syllable in Squliq is in fact an open syllable. Word-medial closed syllables arise only when the adjacent consonant clusters involve the perfective infix –in–, as illustrated by the contrast between /m-in-nbuw/ ‘AV-Perf.-drink’ [min.nə.buw] (*[mi.nə.nə.buw]) and /m-nbuw/ ‘AV-drink’ [mə.nə.buw] (*[mən.buw]). If these morphologically complex forms are put aside, Squliq tolerates closed syllables only in word final positions, which can be viewed as the result of licensing of extra material at prosodic edges.

Given that closed syllables occur only word-finally except when morphological factors come into play, the similar restriction of falling-sonority sequences [aj, aw] to word-final positions suggests that the off-glides are not part of the nucleus. However, the off-glides could be forced into the nucleus position by a following word-final consonant, and the glides consequently undergo coalescence with the preceding vowel, as illustrated by the contrast /soja-un/ [sijon] (*[sijawn]) ‘like-PV’ and /soja-i/ [sijaj] (*[sije]) ‘like-Imp.NAV’. The lack of word-medial CVG and word-final CVGC syllables and the occurrence of coalescence in words such as [sijon] suggest that falling-sonority nuclei are not allowed in the language.

The prohibition against falling-sonority nuclei raises the question regarding the syllabic affiliation of the on-glides in [ja, wa, ju, wi] sequences; treating the on-glides as a member of complex CG onsets would have the advantage of maintaining a simple nucleus throughout the language. However, the phenomenon of pre-penultimate vowel reduction in Squliq suggests that the on-glides are more likely to form a constituent with the following vowel, because the glide-vowel sequences are simultaneously affected by the reduction rule (e.g. /qualax/ [qwalax] ‘rain-AV,’ /qualax-an/ [qəlaxan] ‘rain-LV’).

In the proposed OT analysis, post-consonantal on-glides are forced to the nucleus position by *COMPONS (against complex onsets), violating the lower-ranked *COMPNUC (against complex nuclei). Word-final off-glides are forced to syllable margin positions by *COMPNUC-VG (against complex VG nuclei). Non-final off-glides undergo coalescence because simultaneous satisfaction of the high-ranking *COMPNUC-VG and *COMPCOD is impossible without merging the glides with the preceding vowels, violating the lower-ranked UNIFORMITY-IO.

Sample Data: Following conventional transcriptions, the weak vowels [ə, i] are omitted.

<i>Agent voice</i>	<i>Suffixed forms</i>		<i>Gloss</i>
a. smoja	soja-i	sjaj	‘to like’
b. smoja	soja-un	sjon	‘to like’
c. mita	kita-i	ktaj	‘to see’
d. pmuja	pmuja-un	pmjon	‘to cultivate’
e.	pnbu-i	pnbwi~pnbuj	‘to cause to be sick’
f.	pnbu-an	pnbwan	‘to cause to be sick’
g. tbuci	tbcu-un	tbcjun	‘to separate’
h. snhi	snhi-an	snhjan	‘to believe’

OT analyses: Underlining shows the nucleus of the final syllable.

Tableau 1:

/soja ₁ -i/	*COMP ONS	*COMP COD	*COMP NUC-VG	ONSET	MAX- IO-V	*COMP NUC	UNIFOR MITY-IO	V- NUC
a. si.ja.i				*!				
b. si.jaj			*!			*		*
☞ c. si.jaj								*
d. si.je							*!	

Tableau 2:

/soja ₁ -u _{2n} /	*COMP ONS	*COMP COD	*COMP NUC-VG	ONSET	MAX- IO-V	*COMP NUC	UNIFOR MITY-IO	V- NUC
a. si.ja.un				*!				
b. si.jawn			*!			*		*
c. si.jawn		*!						
☞ d. si.jon							*	
e. si.jun					*!			

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