Order and Interaction of Prefixes in Mayrinax Atayal

Many researches in Optimality Theory have done to deal with the interaction between phonological constraints and constraints on morpheme position. The asymmetry when prefixing *-um-* between vowel initial roots and consonant initial roots in Tagalog serves as a good example. The ranking of NO-CODA and ALIGN-*um*-L produces 'infixation' in consonant initial roots, and 'prefixation' in vowel initial roots. In this paper, I will take the advantage of prosodic constraint (P-constraint) out-ranked morphological constraint (M-constraint) to explain several phenomena observed in the prefixes in Mayrinax Atayal, one of the Formosan languages.

Mayrinax Atayal has a set of focus system, *ma-* and *-um-* as active focus (AF) and *si-* as beneficiary/instrumental focus (BF/IF). A set of realis/irrealis markers, *-in-* and *pa-*, can co-occurred with the focus markers. Four issues concerning these prefixes are discussed: 1) focus markers always occurred on the left side of realis/irrealis markers (*si-pa-tu.tiŋ*, **pa.si.tu.tiŋ*), 2) the special status of *-um-* and *-in-* (*tu.ma.piq*, **um.ta.piq*), 3) morpheme dislocation when *ma-* and *-in-* co-occur (*mi.na.caq.ruh*, **ma.in.caq.ruh*), and 4) deletion of the first syllable when prefixing *ma-*, when the first consonant of the root is not apical or the first vowel is not /a/.

The first issue could be well-explained by two morpheme-specific constraints $\text{ALIGN}_{\text{FOCUS}}$(PrW,L) and $\text{ALIGN}_{\text{RE/IRRE}}$(PrW,L) with the former out-ranked the later (see (1)). The second issue is taken care of by the ranking of ONSET » $\text{ALIGN}_{\text{FOCUS}}$(PrW, L) (see (2)). The third issue is a re-confirmation of the constraint ranking—P-constraint » M-constraint (see (3)). As for the fourth issue, I propose that there are other prosodic constraints work here: Realize σ, Parse σ, MAX-APICAL, and MAX-V. With these P-constraints out-ranked M-constraints (here, LIN and MAX), the first consonant of the roots is deleted (if not apical consonants and if the first vowel is not /a/) when prefixing *ma-* (4). The P-constraints ranked higher than M-constraints is concluded as (5).

(1)

/si-pa-tu.tiŋ/	ONSET	ALIGN$_{FOCUS}$(PrW,L)	ALIGN$_{RE/IRRE}$(PrW,L)
☝ a. si.pa.tu.tiŋ			**
b. pa.si.tu.tiŋ		**!	
c. tu.pa.si.tiŋ		****!	**

(2)

/in- ta.piq/	ONSET	ALIGN$_{RE/IRRE}$(Stem,L)
☝ a. ti.na.piq		*
b. in.ta.piq	*!	
c. ta.pi.qin		*****!

(3)

/ma-in-caq.ruh/	ONSET	ALIGN$_{FOCUS}$(PrW,L)	ALIGN$_{RE/IRRE}$(PrW,L)
☝ a. mi.na.caq.ruh		*	*
b. ma.in.caq.ruh	*!		**
c. in.ma.caq.ruh	*!	**	

(5) a.

/m$_1$a$_2$-q$_3$a$_4$.niq/	Realize σ	Parse σ	MAX-APICAL	LIN	MAX
☝ a. (m$_1$a$_{24}$.ńiq)					*

b. $m_1a_2.(q_3a_4.n\acute{i}q)$		*!			
c. $(q_3a_{24}.n\acute{i}q)$	*!				*
d. $(m_1a_2q_3.n\acute{i}q)$	*!				*
e. $(m_1a_{24}q_3.n\acute{i}q)$				*!	

b.

/m_1a_2-c_3a_4q.ruh/	Realize σ	Parse σ	MAX-APICAL	LIN	MAX
☝ a. $m_1a_2.(c_3a_4q.r\acute{u}h)$		*			
b. $(m_1a_{24}q.r\acute{u}h)$			*		*!
c. $(c_3a_{24}q.r\acute{u}h)$	*!				*

c.

/$m_1a_2.b_3i_4.$cu /	Realize σ	Parse σ	MAX-APICAL	LIN	MAX
☝ a. $m_1a_2.(b_3i_4.c\acute{u})$		*!			
b. $(m_1a_2.c\acute{u})$					**
c. $(b_3i_4.c\acute{u})$	*!				**
d. $(m_1i_4.c\acute{u})$	*!				**

(6) Realize σ » Parse σ, (P-constraint)
MAX-APICAL,
MAX-V,
» LIN » MAX (M-constraint)

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