The Behaviour of nasal glottal fricative and nasal glottal stop segments in Jakarta Indonesian: an OT analysis

In this paper, I analyse alternations that occur when a nasal prefix is added in Jakarta Indonesian (henceforth: JI), a variety of Indonesian with strong connection to Betawi Malay, forming a continuum. In particular, when the prefix is added to words that begin with [ʔ] and [h], we find an intriguing pattern of epenthesis and deletion as shown in

(1) /N+hukum/ ŋəhukum 'to punish'

(2) /N+ʔambil/ ŋambil 'to take'

In analysing nasal substitutions, Pater (1996) proposed *NC̥ (nasal voiceless constraints) as the markedness constraints and the other faithfulness constraints must dominate an anti-metathesis constraint LINEARITY in Austronesian languages. I extend Pater's proposal to analyse JI in this paper. However, instead of using * NC̥ (nasal voiceless constraints), I propose new constraints *N-GL/STOP (nasal-glottal/stop) and *N-GL/FRIC (nasal-glottal/fricative)[1]. The study found that markedness constraints *N-GL/STOP and *N-GL/FRIC respectively dominates DEP, MAX and LINEARITY.

Nasalization misses target glottal in the feature geometrical framework proposed by Cohn (1993). Based on Cohn's hypothesis, this paper suggests that when root-initial glottal stop and glottal fricative occur with the nasal prefix, the glottals do not undergo nasalization. Neither the homorganic nasal nor a homorganic clusters occurs with root-initial glottal fricative [h] preceded by a nasal in JI. Instead, epenthesis mediates the sequence [ŋh] as shown in (1) above. I propose *N-GL/FRIC over LINEARTY, DEP and MAX to analyse the root-initial glottal fricative [h] as illustrated in (3). However, unlike the [h], the glottal stop behaves like any other obstruent in JI. It favors deletion rather than epenthesis. The ranking argument in (4) indicates that [ʔ] undergoes deletion rather than fusion in the optimal output in (4a). Epenthesis is disfavored as it appears as a losing candidate in (4b).

However, the [ŋh] and [ŋʔ] sequences possibly occur simultaneously in the output between words. This occurs when [ŋh] and [ŋʔ] are preceded by at least a core syllable (CV) and the nasal itself is included as the final consonant in the maximum syllable CVC e.g. [yaŋ] 'relative.particle' [maŋ] 'indeed' (see (3) and (4)). CVCC or CCV are not allowed in JI, accordingly there should be one constraint to block [ŋh] and [ŋʔ] from forming one syllable simultaneously as consonant clusters. The markedness constraint *COMPLEX-SYLLABLE used in McCarthy (2008) is useful to block the CVCC or CCV from occurring in the output. As a consequence, *N-GL/FRIC and *N-GL/STOP will be violated since these sequences occur in the output and as a result of this, *COMPLEX-SYLLABLE dominates *N-GL/FRIC and *N-GL/STOP respectively.

[1] Pater (1996) uses the common *NC̥ (nasal can not be followed by voiceless consonants). Given the data Pater is considering, Standard Indonesian, has the need to motivate the fusional analysis, *NC̥ seems an adequate constraint. However, it offers no insight in the nasal glottal fricative [ŋh…] and nasal glottal stop [ŋʔ...] in JI since neither [h] nor [ʔ] behaves like voiceless consonants.

Tableaus

(3) *COMP-SYLL >> *N-GL/FRIC >> LINEARITY, DEP and MAX

/N_1+$h_2$ukum/ (to punish)	*COMP-SYLL	*N-GL/FRIC	LINEARITY	DEP	MAX
→a. ŋ$_1$ə$h_2$ukum				*	
b. ŋ$_{1,2}$ukum			*		*
c. ŋ$_1h_2$ukum		*!			
/…yaŋ hari.../ (relative.particle day)					
→d. yaŋ hari		*			
e. yaŋh.a.ri	*!				
f. ya.ŋha.ri	*!				

(4) *COMP-SYLL >> *N-GL/STOP >> LINEARITY, DEP and MAX

N_1 + ʔ$_2$ambil (to take)	*COMP-SYLL	*N-GL/STOP	LINEARITY	DEP	MAX
→a. ŋ$_{1,2}$ambil			*		*
b. ŋ$_1$əʔ$_2$ambil				*	
c. ŋ$_1$ʔ$_2$ambil		*!			
/maŋ ʔɛnak/ (indeed delicious)					
→d. maŋ ʔɛnak		*			
e. maŋʔ.ɛ.nak	*!				
f. ma.ŋʔɛ.nak	*!				

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Key Words: Jakarta Indonesian, Austronesian, nasal prefix, nasal substitutions, phonology, optimality theory.