Title: Nasal Substitution in Pendau: An Optimality Theoretic Approach

Nasal substitution, which refers to the replacement of a root-initial voiceless obstruent by a homorganic nasal under prefixation, is a common morphophonological process in Austronesian languages (e.g. *mə**ŋ** + **p**aksa > mə**m**aksa* 'to force', Indonesian). The current paper provides an optimality theoretic analysis of nasal substitution as well as the phonological opacity regarding nasal substitution in Pendau, an endangered Austronesian language spoken in central Sulawesi, Indonesia.

Pater (2001) provides a treatment to nasal substitution, in which a violable constraint CRISPEDGE$_{[PRWD]}$ (Itô & Mester 1999), that no element belonging to a Prosodic Word be linked to a prosodic category external to that Prosodic Word, forces the coalescence of the voiceless obstruent and its preceding nasal. I show that this constraint is irrelevant to the nasal substitution in Pendau, since the very premise that allows CRISPEDGE$_{[PRWD]}$ to operate, that is, the alignment of a Prosodic Word and a root (Cohn & McCarthy 1994), is not supported by evidence in Pendau. My analysis with a more general constraint *CC (Archangeli, Moll & Ohno 1998), which holds that consonant clusters across a morpheme boundary are marked, successfully accounts for nasal substitution both in Pendau and in other Austronesian languages.

Pendau exhibits two instances of phonological opacity regarding nasal substitution. First, nasal substitution is not observed when the root-initial voiceless obstruent is a glottal stop (e.g. *mo**ŋ** + **ʔ**ai > mo**ŋk**ai*). While the input /ŋk/ is outputted as [ŋ] as a result of nasal substitution, the output of the input /ŋʔ/ is [ŋk], and this gives us a synchronic chain shift ŋʔ > ŋk > ŋ. I show that this is a result of both structure preservation (Kiparsky 1985) and minimization of input-output distance. Structure preservation prevents the occurrence of a placeless nasal and forces place assimilation to be progressive (i.e. [ŋk]) instead of regressive (i.e. *Nʔ). Minimization of input-output distance, achieved by outranking *CC by a Local Constraint Conjunction (Smolensky 1993, 1995, 1997) of two faithfulness constraints, prevents [ŋ] to be the optimal candidate as it has multiple faithfulness violations, which [ŋk] does not have. This input-output minimization also serves to preserve contrast across prefix-root boundaries in Pendau.

Second, nasal substitution is not always observed when the root-initial voiceless obstruent is a fricative (e.g. *mo**ŋ** + **s**ambaɭe > mo**ɲ**ambaɭe* 'butcher', but *mo**ŋ** + **s**oɭe > mo**n**soɭe* 'fry'). I posit that there are two phonemic fricatives in Pendau (i.e. /s/ and /ʃ/) although there is only one phonetic fricative [s]. The non-occurrence of the palatal fricative in the surface is due to an undominated constraint *[CONT, PAL]. I also posit that nasal substitution is generally forbidden in nasal-fricative sequence because nasals and fricatives have different continuant features and thus they fail to coalesce (i.e. /ŋs/ > [ns] but *n). But in the case of the palatal fricative, nasal substitution applies so as to avoid the fatal violation of *[CONT, PAL] (i.e. /ŋʃ/ > [ɲ] but *ɲʃ).

Word Count: 490

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