

Zaid Galvez 01D

Collaborators: Drew Knochenhauer, Jaime Adame

The following is a segment inventory and lexicon of an Austronesian language spoken about several islands in the Pacific. The following paper will explain this language's various alternations, including deletions, degemination, and assimilation. A prefix of this language experiences rich changes with its final nasal, with rules applying in order.

Consonants:

m		n	ɲ	ŋ	
p b		t d	c	k g	
		s			
			j		
					h
	r				
	l				

Also: [w][d͡ʒ][t͡ʃ].

Pairs indicate voiceless and voiced, respectively.

Vowels:

i		u
e		o
	ə	
a		

root	prefix	gloss
/lempar/	/məŋ-/	throw
/rasa/		feel
/wakil/		represent
/jakin/		convince
/masak/		cook
/nikah/		marry
/bawa/		bring
/dapat/		get
/gaŋgu/		bother
/hilaŋ/		disappear
/ut͡ʃap/		say
/ŋaco/		chat
/ɲaɲi/		sing
/hituŋ/		count
/gambar/		draw a picture
/kirim/		send
/deŋar/		hear
/tunis/		write
/bantu/		help

/dʒahit/		sow
/pukul/		hit
/ambil/		take
/isi/		fill up
/undaŋ/		invite

This Austronesian language appends the prefix /məŋ-/ to the beginning of the word. It utilizes the following morphological template:

/(Prefix +) Root/

Consider these examples: /məŋ+isi/ /məŋ+undaŋ/
 /məŋ+nikah/ /məŋ+masak/

This language deletes nasals before non-vowel approximants. Consider: /lempar/ *throw* has the underlying form /məŋlempar/ when the prefix is appended but has the phonemic representation [məlempar], not *[məŋlempar]. The rule can be written as:

$$[+nasal] \rightarrow \emptyset / \begin{matrix} +approximant \\ -syllabic \end{matrix}$$

This language assimilates the nasals to the following sound. Consider: /dapat/ *get* has the underlying form /məŋdapat/ when the prefix is appended but has the phonemic representation [məndapat], not *[məŋdapat]. Also: /bantu/ *help* has the underlying form /məŋbantu/ when the prefix is appended but has the phonemic representation [məmbantu]. The rule can be written as:

$$\begin{bmatrix} +nasal \\ +dorsal \end{bmatrix} \rightarrow [\alpha place] / \begin{matrix} -syllabic \\ -spreadglottis \\ \alpha place \end{matrix}$$

The nasal deletion rule and the nasal assimilation rule may apply in any order. Consider: /lempar/ *throw* becomes /məŋlempar/ when the prefix is appended, and leaves [məlempar] after the nasal is deleted, leaving no nasal to undergo the assimilation rule. In this way, the nasal deletion rule bleeds the nasal assimilation rule. However, also consider: /rasa/ *feel* becomes [məŋrasa] when the prefix is appended, and /mənrasa/ after assimilation. Here, the [n] is then deleted to leave [mərasa]. Consult table 1.

This Austronesian language avoids nasal geminates by deleting one instance of the consonant when a pair occurs. Consider: /ŋaco/ *chat* has the underlying form /məŋŋaco/ when the prefix is appended but has the phonemic representation [məŋaco], not *[məŋŋaco]. The rule can be written as:

$$\left[\begin{array}{c} +nasal \\ _place \end{array} \right] \rightarrow \emptyset / - \left[\begin{array}{c} +nasal \\ _place \end{array} \right]$$

The nasal assimilation rule must apply before the nasal degemination rule. Consider: /ŋani/ *sing* becomes /məŋŋani/ when the prefix is appended, permitting the assimilation of [ŋ] to [ŋ] and thus creating /məŋŋani/. This creates an environment for the degemination rule to apply, removing the first [ŋ] to create [məŋani]. In this way, the nasal assimilation rule feeds the nasal degemination rule. The nasal degemination rule cannot come first. Consider: There is no environment in /məŋŋani/ where degemination may apply, and would permit *[məŋŋani] when finally undergoing nasal assimilation. Consult table 2.

This language also deletes voiceless stops after nasals. Consider: /pukul/ *hit* has the underlying form /məŋpukul/ after the prefix is appended and /məmpukul/ after nasal assimilation. The [p] is then deleted to leave [məmukul]. The rule can be written as:

$$\left[\begin{array}{c} -voice \\ -continuant \end{array} \right] \rightarrow \emptyset / [+nasal] _$$

The voiceless stop deletion rule must apply after the nasal assimilation rule. Consider: If stop deletion applied first, /məŋpukul/ would become *[məŋukul], leaving no environment in which the [ŋ] may assimilate. In this way, the voiceless stop deletion rule counterbleeds the nasal assimilation rule. Consult table 3.

The nasal assimilation rule and the nasal deletion rule may be in any order. However, both the degemination rule and the voiceless stop deletion rule must be ordered after the nasal assimilation rule. This leaves our rule order as:

Nasal deletion

Nasal Assimilation

Degemination

Voiceless Stop Deletion

While this Austronesian language applies certain rules in certain orders, no single word expresses an alternation with all four rules. The degemination rule and the voiceless stop deletion rule must come after nasal assimilation. However, nasal assimilation may be ordered before or after nasal deletion. Nasal deletion, if ordered first, bleeds nasal assimilation. Nasal assimilation shows a feeding relationship with degemination, but is counterbled by voiceless stop deletion.

Table 1 showing two orders:

UR: /lempar/	UR: /rasa/
Prefix: /məŋlempar/	Prefix: /məŋrasa/
NDel: [məlempar]	Assim: /məŋrasa/
Assim: [məlempar]	NDel: [mərasa]
Deg: [məlempar]	Deg: [mərasa]
VSDel: [məlempar]	VSDel: [mərasa]
PR: [məlempar]	PR: [mərasa]

Table 2 showing correct and incorrect order:

UR: /ŋari/	UR: /ŋari/
Prefix: /məŋŋari/	Prefix: /məŋŋari/
NDel: /məŋŋari/	NDel: /məŋŋari/
Assim: /məŋŋari/	Deg: /məŋŋari/
Deg: [məŋari]	Assim: [məŋŋari]
VSDel: [məŋari]	VSDel: [məŋŋari]
PR: [məŋari]	PR: *[məŋŋari]

Table 3 showing correct and incorrect order:

UR: /pukul/	UR: /pukul/
Prefix: /məŋpukul/	Prefix: /məŋpukul/
NDel: /məŋpukul/	NDel: /məŋpukul/
Assim: /məmpukul/	VSDel: [məŋukul]
Deg: /məmpukul/	Deg: [məŋukul]
VSDel: [məmukul]	Assim: [məŋukul]
PR: [məmukul]	PR: *[məŋukul]

Table 4 showing additional derivations:

UR: /hituŋ/	UR: /bantu/
Prefix: [məŋhituŋ]	Prefix: /məŋbantu/
NDel: [məŋhituŋ]	NDel: /məŋbantu/
Assim: [məŋhituŋ]	Assim: [məmbantu]
Deg: [məŋhituŋ]	Deg: [məmbantu]
VSDel: [məŋhituŋ]	VSDel: [məmbantu]
PR: [məŋhituŋ]	PR: [məmbantu]

UR: /ambil/
Prefix: [məŋambil]
NDel: [məŋambil]
Assim: [məŋambil]
Deg: [məŋambil]
VSDel: [məŋambil]
PR: [məŋambil]