

Reflexes of initial gemination in Western Micronesian languages

Historical comparative evidence points to the existence of initial geminate consonants in the common ancestor of Western Micronesian languages, a group that comprises Marshallese, Chuukic, and Pohnpeic languages (Jackson 1984). Modern reflexes of initial geminates suggest a great deal of tension existed between the pressure to avoid such structures and the pressure to maintain the contrast and function that they encoded. This paper offers a survey and analysis of modern derivatives of initial geminates, whose range supports a model of phonology that incorporates synchronic components of phonetic substantiveness and phonological structure preservation.

Every Western Micronesian language has at least a trace of what historically were initial geminate consonants. Reflexes of initial gemination include nasalization, as in Pohnpeian (1) (Rehg 1981) and Mokilese (Harrison 1976), epenthetic degemination, as in Ratak Marshallese (2a) (Abo et al 1976), prothesis, as in Ralik Marshallese (2b) (Abo et al 1976) and Pingelapese (3) (Good & Welley 1989), and feature-changing, as in Woleaian (4) (Sohn 1976). Additional data are on the second page. Some languages have simply maintained the initial geminate structure, such as Chuukese (Goodenough & Sugita 1980) and Puluwat (Elbert 1973).

In each of these languages, the reflex of initial gemination can distinguish lexical items, as in Pohnpeian *mp^wul* ‘to flame’ vs. *p^wul* ‘unripe’, Chuukese *ca* ‘eat, drink’ vs. *cca* ‘blood’, Marshallese *laj* ‘cruel’ vs. *yellaj* or *lelaj* ‘melodious voice’. It can also derive distributive or optionally transitive verbs from stems with initial singletons, as in Pohnpeian *pɔk* ‘love’ → *mpɔke* ‘rub noses’, Marshallese *bat* → *bbat* ‘being late’, and Woleaian *ɸuga* → *pp^wuxa* ‘to boil’. What is striking about these data is that most of these languages have adopted a strategy of avoiding initial geminates, but still maintain the contrast in some other way. Crucially, no language has simply neutralized the length contrast in initial position.

The range of processes used to resolve the structure suggests a strong role for a substantive phonetic motivation, formalized as synchronic markedness, at work in phonological innovation. In every innovative case, some variant of the constraint AVOID-INITIAL-GEMINATES appears to have a tendency to be ranked highly, forbidding either a subset or the full set of initial geminate consonants. This tendency is a reflection of the disfavor learners would show towards adopting initial geminates as licit structures, even if such structures are present in the synchronic language. Perceptual phonetic evidence provides substantive support for this disfavor (Abramson 1987, Fulop 1994, Kraehenmann *et al.* 2000, Muller 2003).

The avoidance of the particular marked structure does not choose a particular repair strategy, or pathway of change, hence the range of reflexes. Nevertheless, the absence of any neutralized system indicates an additional synchronic principle at work in maintaining the contrast carried by initial geminates. The balancing pressure of synchronic faithfulness, which formalizes the maintenance of contrast, offers an account of the persistence of some kind of modern reflex in lieu of complete neutralization, which is a plausible but absent alternative.

Thus the range of attested reflexes provides an example of phonetically and substantively driven phonological innovation. Rather than characterize synchronic typology as the residue of diachronic change, as an Evolutionary approach would claim (Blevins 2004), this analysis provides an example of diachronic divergence as the residue of synchronic markedness.

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(1) Pohnpeian (Rehg 1981): nasal substitution

mmet	‘full’
mpek	‘to look for lice’
mm ^w us	‘to vomit’
mp ^w ul	‘to flame’
nta	‘to say’
nseen	‘to snare’
nciŋ	‘to write’
nca	‘blood’
ŋŋar	‘to see’
ŋŋec	‘to pant’
ŋkɔl	‘to make sennit’

(2) Marshallese (Abo et al 1976): epenthetic degemination (Ratak); prothesis (Ralik)

<i>Stem</i>	<i>a. Ratak</i>	<i>b. Ralik</i>	<i>Gloss</i>
bat	bebat	yebbat	‘late’
dewer	dedewer	yeddewer	‘put down, leave’
jayal	jejayal	yejjayal	‘observe’
kahal	kekahal	yekkahal	‘entice’
m ^w et	məm ^w et	yəmm ^w et	‘pitch, of a boat’
	kekan	yekkan	‘food’
	qeqahad	yeqqahad	‘fade away’
	bebeyer	yebbeyer	‘give up’
	lējaj	yellāj	‘melodious voice’
	tetēŋ	yettenŋ	‘sleep soundly’
	qeqal ^w	yeqqal ^w	‘coconut sennit’

(3) Pingelapese (Good & Welley 1989): compensatory prothesis

iisiŋ	‘write’	(c.f. Pohnpeian nciŋ)
iitil	‘to torch fish’	(c.f. Pohnpeian ntil)
iisino	‘to be concerned’	(c.f. Pohnpeian nsenoo)
aup ^w i	‘to be loose-tongued’	(c.f. Pohnpeian mp ^w i ‘leak’)

(4) Woleaian (Sohn 1976): manner feature shifts

<i>transitive</i>	<i>pseudo-intransitive</i>	
lütü	nnütü	‘to be jumping’
xašee-y	kkaše	‘to throw’
raxo-mi	ččaxo	‘to hug’
šaxee-y	ččaxe	‘to chase’
φuxa	pp ^w uxa	‘to boil’
peša-ŋi	ppaša	‘to stick to’
sawee-y	ssawe	‘to go alongside’
taφee-y	ttāφe	‘to follow’
feraxi	fferaxi	‘to be spread’