

Complex segment or cluster? The flapped lateral in Iwaidja

Robert Mailhammer (Western Sydney University/CAS) & Mark Harvey (University of Newcastle)

Iwaidja, a non-Pama-Nyungan language spoken in Northwestern Arnhem Land, Australia has been described as having two flapped lateral phonemes, an alveolar /lʳ/ and a retroflex /ɭʳ/ (Pym & Larrimore 1979). The inventory of [-nasal] apical phonemes is set out in Table 1.

Table 1: [-nasal] apical phonemes

	Stop	Flap	Lateral	Lateral Flap	Approximant
Alveolar	d	r	l	lʳ	
Retroflex	ɖ	ɽ	ɭ	ɭʳ	ɻ

Phonetically, the lateral flaps are [lateral closure + total closure + release] sequences, a rare sequence type cross-linguistically (Ladefoged & Maddieson 1996). However, they are an areal phenomenon: e.g. Amurdak (Handelsmann 1991), Gaagudju (Harvey 2002). Homorganic coronal sequences of this nature are widely attested in Australian languages. The standard phonological analysis is that these sequences are /lateral/ + /stop/ clusters; i.e. /ld/ and /ɭɖ/.

Australian languages standardly contrast /d/ with a phoneme most commonly described as an alveolar tap/trill /r/. Contrasts between /d/ and /r/ are extremely rare, and the usual lack of this contrast is one of the reasons that [lateral closure + total closure + release] sequences are standardly analyzed as clusters. The other reason is that the sequences show the same distribution as clusters, they appear only in intervocalic position.

In Iwaidja, the alveolar sequence appears initially, [lralga] ‘sea’, and synchronically this appears to be the principal motivation for analyzing [lr] as /lʳ/ and not as a cluster in Iwaidja. Butcher et al (2007) posit that there is a contrast between /lʳ/ and /ld/ medially: /_o[ma]_{oo}[lʳar]_o/ ‘leaf’ vs /_o[jal]_{oo}[ɖaŋ]_o/ ‘yam sp.’. However, there is no quantitative evaluation of this hypothesis. Recent fieldwork has not confirmed this contrast. The retroflex sequence [[ɽ] only appears intervocalically, and the only motivation for its analysis as /ɭʳ/ is parallelism with [lr].

Overall, there are in fact three phonological hypotheses on [lr] and [[ɽ].

1. Stop /d, ɖ/ vs Tap /r, ɽ/ vs Lateral + Stop cluster /ld, ɭɖ/
2. Stop /d, ɖ/ vs Tap /r, ɽ/ vs Lateral + Tap cluster /lr, ɭr/
2. Stop /d, ɖ/ vs Tap /r, ɽ/ vs Complex Segment /lʳ, ɭʳ/

In the absence of quantitative phonetic data on stops, taps, and [lateral closure + total closure + release] sequences, it is problematic to comparatively evaluate the three hypotheses on the phonological analysis of [lateral closure + total closure + release] sequences.

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