The Phonology of vowel systems in Australian languages

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Typologically, Australian languages are characterized by small vowel inventories (Maddieson 2013). Three inventories account for the great majority of Australian languages: (1) /i, a, u/; (2) /i, e, a, u/; (3) /i, e, a, o, u/ (Busby 1979; Round 2023a). The only widespread morphophonological process involving vowels is consonantal lenition, where the conditioning environments involve adjacency to vowels. However, vowel quality oppositions are not usually a factor in lenition and consequently consonantal lenition provides no evidence as to phonological oppositions among vowels (Round 2023b). Vowel harmony is comparatively rare and often involves total harmony, which again provides no evidence as to phonological oppositions (Round 2023b). Given the limitations in both inventories and morphophonology, there has been virtually no research on the phonology of Australian vowel systems.

Cross-linguistic analysis of vowel systems posits that [±back], [±high], [±low] are the default phonological parameters (Chomsky & Halle 1968; Hayes et al. 2009). I examine this general analysis in relation to two datasets. The first dataset consists of those morphophonological processes in Australian languages which do distinguish vowel quality. This dataset does not support the general hypothesis, but rather supports an analysis where [±round] is active rather than [±back]. The second dataset consists of two languages, Kamu and Larrakia, with six-vowel inventories including a high, central vowel. This dataset supports the general hypothesis that [±back] is active rather than [±round]. I consider analyses which might encompass both datasets.