

## STRESS IN KAYTETYE

**Myfany Turpin (University of Queensland) and Katherine Demuth  
(Macquarie University)**

Kaytetye is an Aboriginal language of central Australia. It has an estimated 250 speakers, including the younger people whose variety differs significantly (Turpin and Ross 2012). Kaytetye belongs to the Arandic subgroup, which is part of the larger Pama-Nyungan family that once covered some 90% of Australia. It is bordered by two Arandic languages to the south and the east; and two languages from other subgroups in the north and west. Kaytetye is not mutually intelligible with its neighbouring languages and whilst traditionally multilingualism was the norm, language shift is now taking place to an English based creole.

Kaytetye shares a similar phonology to other Arandic languages. It has an unusually large consonant inventory consisting of 51 consonants and only two vowels: /a/ [a] and /e/ [ɨ], [ɪ], [e], [ɛ], [ə]. The phoneme /e/ is short and has been described as ‘featureless’ (Breen 2011) because its quality is heavily determined by neighboring labialized and palatalized consonants; as well as its position in a word. The phoneme /a/ is longer than /e/, although the sequence /ej/ is longer than /e/. There is no phonemic vowel length contrast; diphthongs and long vowels are the result of vowel+glide+vowel sequences, e.g. /ewe/ [ɨ:], /awe/ [aʊ], /əjə/ [ɪ:] and /auɛ/ [a:].

75% of Kaytetye words begin with an unstressed vowel, which is somewhat unusual for Australian Aboriginal languages. It has long been noted that stress in Arandic languages is sensitive to whether the syllable has an onset (Davies 1985), giving rise to analyses of VC syllable structure (Breen & Pensalfini 1999). In citation form primary stress normally falls on the first vowel that follows a consonant, although there are some counter-examples. Tabain and Breen question whether Arrernte has lexical stress at all, suggesting post-lexical prominence marking (2011:69).

We propose an analysis where the primary stress domain, the foot, is a binary trochee. It is parsed from left to right and an extrametrical syllable of V(C) can occur at the left edge, as in (1):

- x  
x x x  
<w>[s w]
- (1) [ə<sup>ˈ</sup>ləpə] *elepe* ‘axe’. Also [<sup>ˈ</sup>ləpə], [<sup>ˈ</sup>ləp]

In phrase-initial position the word-initial vowel is optional, as illustrated in the second pronunciation of (1). Word initial /a/ can also optionally be reduced to a schwa.

In Kaytetye, all words end in a non-contrastive vowel whose pronunciation varies and which is also optionally omitted, as illustrated in the third pronunciation of (1). Word-final /ə/ is also elided before a vowel-initial word to avoid vowel hiatus, as in (2):

- (2) /enape \_ arəpə/  
[e<sup>ˈ</sup>napə<sup>ˈ</sup>rəpə] *enape arrenye* ‘echidnas (are) over there’

In longer words, subsequent feet bear secondary stress except in word final position (Henderson 1998), as in (3):

- (3) [ˈpəkə,ɾɪnə]            x  
 /pəkəɾənə/            x        x  
 pwekerrenye        x x    x x  
 ‘king brown snake’ [s w] [s w]

Kaytetye also has some 100 lexical words of V(C)CV structure. Unlike words of a foot or greater, V(C)CV words are not subject to optional deletion or reduction of the initial and final vowel—which is always stressed. Pronunciations of (4) as [kə] or [əkə] are not permissible. Under our analysis such words are less than a foot, as illustrated in (4):

- (4)                            x    F (unbranching)  
                                   x x    |  
 /ake/                    <w>[s]    μ  
 ake ‘head’            [eˈkɛ]    s

Thus, under one possible analysis, the minimal word in Kaytetye is disyllabic, though it only contains a degenerate foot. Although rare, this is not unattested cross-linguistically (Garrett 1999).

As mentioned, Kaytetye has fixed stress on the first CV syllable. However, in casual speech stress can appear to be heard on the second full syllable of a word when the second syllable is /a/ [a] or /ej/ [i] and the previous vowel is short /e/ (cf. Henderson 1998:215), as in (5):

- (5)    anteyane  
       [ənˈtɪjənə]            x        ⇒        [ɛnɾɪˈjənə]  
       /an.te-ja.ne/        x x x (x)  
       sit-PRS:CNT        <w>[s w] w

Rather than the position of stress shifting in these words, the duration of the first CV syllable has been shortened and so the following syllable appears to assume the stressed position. Initial observations suggest pitch and intensity rather than duration are the cues to stress. Verification of such a proposal would require extensive acoustic analysis.

Rhythmic adjustments such as (2) may also be constrained by preferred distances between relative prominences. In (5) both /a/ vowels are longer than the intervening vowel. As such, Kaytetye adds further support to Hayes’ observation that ‘The rule of Rhythmic Adjustment is only a coconspirator in a broader plot that includes the rules of phonetic length assignment as well’ (Hayes 1984:71).

## References

- Breen, G. 2001. The wonders of Arandic phonology. In Jane Simpson, David Nash, Mary Laughren, Peter Austin & Barry Alpher (eds) *Forty Years On. Ken Hale and Australian languages*. Canberra: Pacific Linguistics Series. pp. 45-69.  
 Breen, G. & R. Pensalfini. 1999. Arrernte: A Language with No Syllable Onsets. *Linguistic Inquiry* 30: 1-25.  
 Davis, S. 1985. Syllable Weight in Some Australian Languages. In *Proceedings of the Berkeley Linguistic Society*. Berkeley, California. pp. 398-407.  
 Garrett, E. 1999. Minimal words aren’t minimal feet. In Matthew Gordon (ed.) *UCLA Working Papers in Linguistics*, no.1, Papers in Phonology 2. Pp. 68-105.  
 Hayes, B. 1984. The Phonology of Rhythm in English. *Linguistic Inquiry* 15 (1): 33-74.  
 Henderson, J. 1998. Topics in Eastern and Central Arrernte Grammar. Linguistics, University of Western Australia: PhD thesis.

- Tabain, M. & G. Breen. 2011. Central vowels in Central Arrernte: A spectrographic study of a small vowel system. *Journal of Phonetics* 39: 68–84.
- Turpin, M. & A. Ross. 2012. *Kaytetye to English Dictionary*. IAD Press: Alice Springs.