The Articulation of Kaytetye Coronalns

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Kaytetye is an Arandic language spoken in Northern Territories, Australia, with an extensive coronal inventory.

Methods

- 6 participants
  - native speakers of Kaytetye
  - female, ages 36-60 (mean 48)
- 24 Target words
  - target coronals in /\textipa{ka},/ \textipa{ka}/ or /\textipa{ka}/ context; e.g., /\textipa{ka}/: /\textipa{ka}t/ (fontanelle) /\textipa{ka}/: /\textipa{ka}g/ (bramble wattle)
- phrase: /\textipa{ka}t/ /\textipa{ka}g/
- 6-10 randomized repetitions of each item per participant analyzed

Sentence repetition task

- paired audio of pre-recorded sentences with images of target word
- 6-10 randomized repetitions of each item per participant analyzed

Research Question:
How do Kaytetye coronals differ from one another, articulatorily?

Measurements

1. constriction height
2. time to peak constriction
3. total lingual displacement

Based on previous work on coronal articulation (e.g., Demuth in a sound attenuated room at Ilewerr (Stirling) community in Northern Territory, Australia.

Results Overview

- Constriction height expectation:
  - Alveolar < Retroflex < Palatal
- Total displacement expectation:
  - Alveolar < Retroflex < Palatal
- Time to constriction expectation:
  - Alveolar, Dental, Retroflex < Palatal

- Dental articulation
  - Unlike constriction height, dental consonants show significantly greater total displacement than alveolar consonants.
  - more than just tip and blade raising is occurring.
  - tongue body depression assists advancement of the tongue blade and tip

- Palatal articulation
  - earlier initiation of articulation in retroflex consonants (left), not merely faster rate of articulation
  - consistent with an articulatory account: physiological requirements of retroflexion are substantial and are facilitated by early gestural initialization
  - further consistent with anticipatory coarticulation as a source of retroflex harmony in some languages (Walker et al., 2008)

References


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