Dialect Imitation Across Typologically Distinct Prosodic Systems
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Introduction
- Speakers are able to adjust their prosodic patterns to approximate those of a different dialect [1], [2], [3].
  1. Phonetic features: F0 peak alignment, global pitch level
  2. Phonological features of contour: tonal composition, boundary tone specification, downstep and scaling
- Only typologically similar systems have been investigated so far
- Here we explore imitation between American and Singapore English
  - AmE: head language, pitch accent specification
  - SgE: edge language, Accentual Phrase (AP) boundary specification

Issues
- Will strong typological differences interfere with imitation success?
- What is the role of exposure/experience with the target dialect in imitation success?
- Can speakers imitate token-by-token variability or do they construct targets from aggregates of observed patterns?
  - c.f., cross-linguistic imitation where this is not observed [4], [5]

Hypotheses
In the absence of shared phonological categories, speakers may...
1) Not be able to adjust to target peak alignment or F0 ratio
2) Use D1 inventory to approximate the early AmE peak alignment by constructing smaller APs (c.f., prosodic promotion)
   - Different alignment; no item-by-item phonetic matching; unable to suppress strong downstep between 1st / 2nd APs
3) Phonetic value matching

Implications for the granularity of phonetic detail that can be accessed by the production system

Methods
- Tasks: Baseline reading (native dialect) + Imitation (2 rounds)
- Target words: trisyllabic, initial stress, sentence-initial
- Participants: 19 males, bilingual in SgE/Mandarin, aged 21-27 yrs
- Measures: F0 peak alignment (proportional to target vowel), F0 ratio (H2/H1), weekly hours of exposure to AmE (self-reported)

Results
- Speakers shifted peak alignment distribution onto that of the model
- Speakers reduced H2 / H1 ratio towards target values
- Stats: Linear mixed effects (fixed: task; random: subject, items)

Discussion
- On the basis of alignment results, speakers implemented phonetic value matching on a token-by-token basis
- Speakers were able to adjust downstep magnitude to non-native values, suggesting non-assimilation to SgE phonology
- Therefore, strong typological differences do not appear to interfere with imitation
- Comparing with findings for imitation within/across related dialects [1] and cross-linguistic imitation [4], [5], this suggests an important role for perceptual (non-) assimilation [6], [7], [8] in the imitation of prosodic features

References