1. Introduction

- Can second language learners acquire subtle phonological processes?
  - What if a process is variably attested?
  - What if the structure underlying a process is not signalized in output segments?

- Focus: High Vowel Deletion (HVD) in Québec French (QF)
  - A process that is sensitive to foot structure, even though the typical signatures for stress and footing are absent in QF

2. Prominence in English and French

- English and (Quebec) French have distinct prominence profiles.
  - English: Lexical stress: Stress is realized in the Foot (Ft) and computed in the Phonological Word (Pw) (Liberman & Prince, 1977; see (1))
    - (avocado)
  - French: Intonational prominence: The only obligatory position for prominence is the right edge of the Phonological Phrase (PPh) (Dell 1984; see (2))
    - (Je m’excuse, Je m’excuse ‘the bad avocado’)
- Consequence: French is analyzed as a foot-less language, in contrast to most languages (e.g., Jun & Fougeron, 2000; see Thibault & Ouellet 1996 for evidence that French has the same rhythmic contour as European French)
- Alternative way to probe for foot structure in QF: High Vowel Deletion
  - Is rhythmic structure relevant for HVD?
  - Two opposing views:
    1. Verkytjen (1982): HVD is sensitive to alternating rhythmic structure
    2. Cedergren (1986): HVD is insensitive to alternating rhythmic structure

- Experimental results from native speakers (Garcia, Goad & Guzzo, 2016) consistent with Verkytjen: HVD is preferred in even-numbered syllables from the right edge of the word

- These HVD patterns motivate iterative iambic footing in QF
  - (3) kəb(ı)ne (mə) ‘organizer’
  - (4) bo’dalı ‘capitalization’

3. Our study

- Objective: To examine the acquisition of HVD in QF by English-speaking learners and the prosodic constraints that govern it

- Challenges faced by English-speaking learners of QF:
  - Although QF has no lexical stress, it builds iterative iambic feet
  - HVD is regulated by footing, since it is preferred in foot-dependent position
  - English has a different type of footing: iterative weight-sensitive trochees

- Hypothesis: Because the typical signatures for stress and footing are absent in QF and HVD applies variably, L2ers will not understand the conditions under which the process applies

4. Methods

- Participants:
  - 10 English-speaking learners of QF (intermediate proficiency)
  - 10 native speakers of QF (controls)
- Stimuli:
  - 3-6 syllable words (n = 275), with deletion or non-deletion of [i] in various positions within the word
  - No HVD word-finally, following a branching onset, or preceding a coda consonant
  - No schwas in target words
- Task:
  - Words presented both orthographically and auditorily
  - Participants had to judge whether the word they heard was pronounced in a natural way
    - Scale: 1 = completely unnatural; 5 = completely natural

- Variables:
  - Group: native speaker controls; L2ers
  - Position of deletion in foot:
    - Foot-dependent position
    - Foot-head position
- Clustering results mirrors a well-formed branching onset:

5. Data

- Figure 1: Responses based on foot dependency (all possible positions of deletion included). Deletion in foot-dependent positions yield a higher concentration of natural responses.

- Figure 2: Responses based on result cluster. Deletion yielding strings mirroring ill-formed complex onsets yield a higher concentration of natural responses.

6. Results

- For both groups of speakers, non-deletion is preferred over deletion ($\beta = 1.55$, $p = 0.00001$)
- Group:
  - No difference between L2ers and native speaker controls ($\beta = -0.11$, $p = 0.85$)
- Position of deletion in foot:
  - HVD is preferred in weak positions within an iambic foot: it is equally preferred in positions 2 and 4, and equally dispreferred in positions 3 and 5 ($\beta = 0.29$, $p = 0.01$)

- Clusters mirroring well-formed branching onsets:

- This indicates that syllabification and foot structure remain intact after HVD: kəb(ı)ne can only be reconstructed as kə bə, while sup(ı)re can be reconstructed as su pre or su.p’re

7. Discussion and Conclusions

- Learners’ preference patterns for HVD mirror native speakers’ preference patterns
- Learners can acquire subtle aspects of the phonology of a second language even when a process is variably attested and the structure underlying such a process is not signalized in output strings
- This is possible even at intermediate levels of proficiency
- Given the way that prominence manifests itself in English and French, transfer is not a likely source for learners’ target-like behaviour

References


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