CUE INTERACTION AND THE REPRESENTATION OF STRESS IN LANGUAGE CONTACT

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30th mfm, Manchester, May 25–27, 2023

1 INTRODUCTION

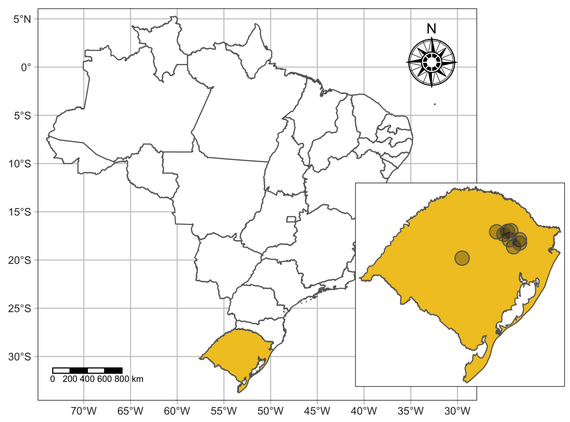
- **Language contact:** Transfer of phonological properties often observed (e.g., [1, 2])
- Contact between heritage and dominant language → properties of HL will be affected by dominant language; dominant language may be immune [3]

☞ THIS POSTER: **Contact situation where the dominant language is influenced by the HL**

- **Contact situation:** Veneto-Portuguese in southern Brazil; **Property:** acoustic manifestation of stress

1.1 Brazilian Veneto

- Brazilian Veneto (BV; locally *Talian*): variety of Veneto (Romance) developed in Brazil after Italian immigration in 19th century
- In southern Brazil, Italian immigrants (mostly Veneto-speaking) settled in a relatively isolated area (= Italian Immigration Area, or IIA → cluster of points on map)
- This geographic isolation contributed to the development of a Veneto-based koine [4, 5]



1.2 Effects of BV on Portuguese

- BV = first language of many Veneto-Portuguese bilinguals (Portuguese = dominant)
- Result: Brazilian Portuguese (BP) variety in IIA regarded as highly accented [4]
- Previous literature describes BV-accented BP based on segmental phenomena
- BV accent more common in older, rural speakers, who use BV more regularly [6]

1.3 Stress in Veneto and Portuguese

- Many similarities between BV and BP **stress assignment**: (a) mostly penult; (b) final if final syllable is heavy; (c) possible in antepenult position; (d) cued (mostly) by duration [7–9]
- **Important distinction:** unstressed word-final mid vowels reduced in BP but **not** in BV

2 OBJECTIVES & QUESTION

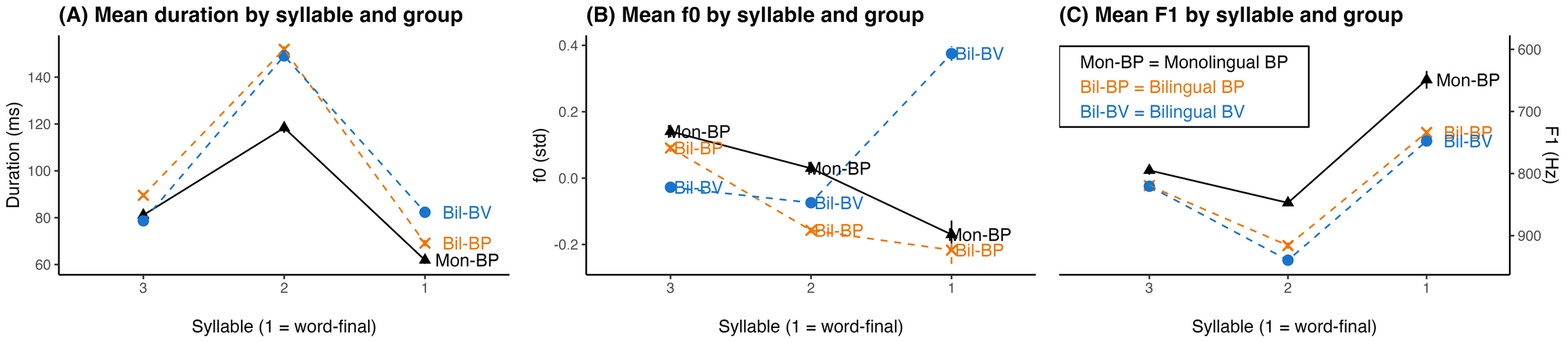
- **Objective:** to examine how stress is manifested in BV-BP contact
- **Motivation:** Perception of BV-accented BP may not be restricted to segmental phenomena, but may also be influenced by prosodic properties related to stress
- **Question & hypothesis:** **Are stress-related acoustic properties transferred from BV into BP?** Although stress is cued by duration in both languages, it's possible that BV and (mono) BP don't use this cue (and others) the same way – but some overlap is expected

3 METHODS

- Two **production experiments**: BV + BP
- Participants: BV-BP bilinguals from the IIA (n = 21; completed both experiments); BP monolinguals (n = 9)
- **Experiment:** naming task. Participants named figures (nouns) on screen using carrier sentences. 44 items in BV, 42 in BP
- **Target vowel:** /a/ in antepenult/penult/final positions. Stress always penult

☞ **Analysis:** Target vowels segmented in Praat [10] for duration, F1, F2, and f0 (three points + mean). Data analyzed with mixed-effects linear models, one per correlate (with by-speaker and by-item random intercepts). Durational ratios were also calculated between penult and unstressed syllables

4 RESULTS & DISCUSSION



Duration. Stressed vowels (/a/) have similar durations in Bil-BP and Bil-BV, but are significantly longer than those produced by monolinguals ($\hat{\beta}$ = 37.84, t = 6.15; relative to Mon-BP in syllable 2)

- Word-final vowels were significantly longer in Bil-BV

Ratios. BV has symmetrical ratios ($\bar{x}\left[\frac{\text{pen}}{\text{ant}}\right]$ = 1.92; $\bar{x}\left[\frac{\text{pen}}{\text{fin}}\right]$ = 1.97)

- Mon-BP and Bil-BP have similar $\frac{\text{pen}}{\text{fin}}$ ratios: $\bar{x}$ = 2.55 and $\bar{x}$ = 2.56
- Mon-BP and Bil-BP have shorter $\frac{\text{pen}}{\text{ant}}$ ratios compared to Bil-BV: $\bar{x}$ = 1.43 and $\bar{x}$ = 1.65

f0. Bil-BV vowels had substantially higher f0 word-finally relative to both Bil-BP and Mon-BP ($\hat{\beta}$ = 61.55, t = 4.98)

- Word-initially, f0 is higher in Mon-BP and Bil-BP

F1. For word-final /a/, F1 was significantly lower in Mon-BP than Bil-BV and Bil-BP (Bil-BV: $\hat{\beta}$ = 56.05, t = 3.95; Bil-BP: $\hat{\beta}$ = 63.07, t = 3.95), which patterned together, indicating more reduction in Mon-BP

☞ **SUMMARY:**

- Overlap in some of the cues used to signal stress in Bil-BP and Bil-BV, *as per* our hypothesis
  - These cues are **absolute duration** and **F1**
- However, **f0** is used differently in Bil-BP and Bil-BV, and **durational ratios** in Bil-BP are closer to Mon-BP than Bil-BV
  - **Bilinguals don't have the same acoustic specifications in the two languages**
- Contact promotes cue interaction in Bil-BP stress: systems **interdependent but not merged**
- Overlap in cues between Bil-BP and Bil-BV may contribute to perception of BV-accented BP (further research needed)

ACKNOWLEDGEMENTS & SELECTED REFERENCES

Many thanks to our participants, to Maria Inês Bernardi Chilanti for help checking test items, to Hannah Markert for research assistantship, and to SMUWorks for funding.

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