



Background

Voice Onset Time (VOT) of voiceless stops in

- **English:** long lag (~60-120 ms)
- **Spanish:** short lag (~0-30 ms)

Phonetic accommodation: when speakers adjust phonetic features of their speech in order to increase or decrease social distance from a group

Is phonetic accommodation of VOT influenced by

1. **language background (monolingual or bilingual)?**
 - English monolinguals
 - Spanish English bilinguals
2. **long-term exposure to monolingual or bilingual speech in speech community?**
 - Monolingual community: Ithaca, NY (7% Hispanic)
 - Bilingual community: Miami, FL (68% Hispanic)
3. **short-term exposure to monolingual or bilingual speech?**
 - exposure throughout conversation
 - immediate exposure (primed vs. unprimed word-pairs)

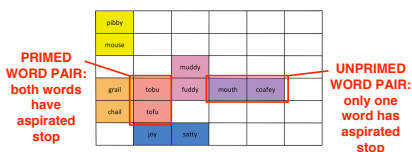
Methods

Participants

- 5 participants (ages 18-35) in each group:
- **MI:** English Monolinguals from Ithaca
 - **MM:** English Monolinguals from Miami
 - **BI:** Spanish-English Bilinguals from Ithaca
 - **BM:** Spanish-English Bilinguals from Miami

Referential Communication Task

- On laptop screen, participant sees a board consisting of word-pairs.
- Over headset, participant is asked about word-pairs by a pre-recorded **English monolingual voice** or **Spanish-English bilingual voice**.
- There are 36 boards and 216 word pairs per recorded speaker.
- Boards occur in 4 blocks (9 boards per block).

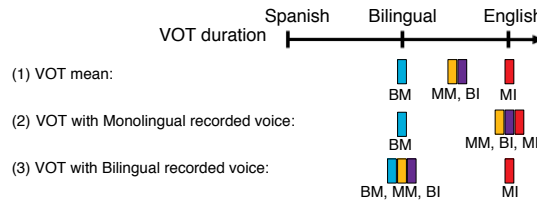


EXAMPLE TRIAL

Voice: "What is by the word TOFU?"

Participant: "TOBU is by the word TOFU."

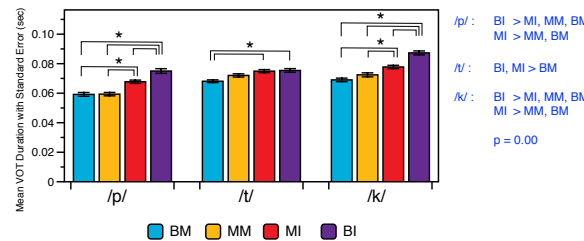
Hypotheses



Results

Overall mean VOT durations for participant groups

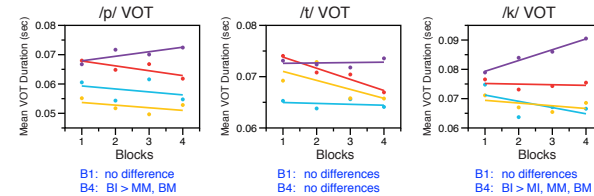
BIs and MIs had longer VOTs than BMs and MMs.



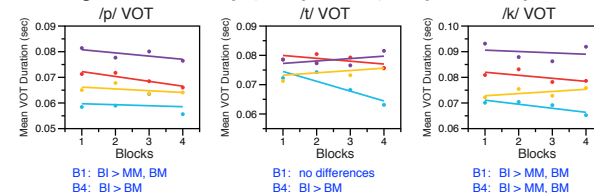
Mean VOT by blocks and voice*

Block 1 (B1): mean(first 1/4 of boards) Block 4 (B4): mean(last 1/4 of boards)

Bilingual voice: BIs diverged when speaking with Bilingual.



Monolingual voice: BMs slightly diverged when speaking with Monolingual.

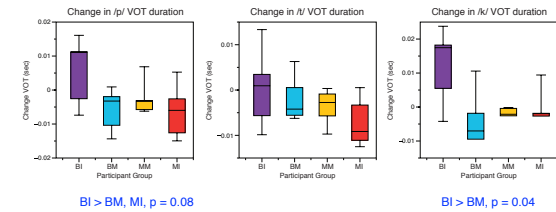


VOT change by voice*

VOT change = mean(VOT duration in 4th block) - mean(VOT duration in 1st block)

Bilingual voice:

VOT change differed between BIs and BMs.



Monolingual voice: No significant differences in VOT change within groups or between groups.

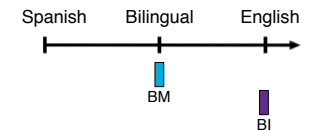
* There were no significant differences between primed and unprimed word-pairs, for both VOT means and VOT change.

Conclusions & Future Directions

Bilingual community VOT < Monolingual community VOT



Bilinguals diverged from speakers who are not majority in community.



VOT with Monolingual voice:

VOT with Bilingual voice:

Future directions

- Examine more target features: final /l/ velarization, vowel quality, prosody (rhythm and pitch)
- Analyze data from more participants (20 per participant group)
- Compare the influence of voice order

References

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