

PHONETIC ACCOMMODATION IN HINDI-ENGLISH AND TELUGU-ENGLISH EARLY SEQUENTIAL BILINGUALS: THE ROLES OF CATEGORY ESTABLISHMENT AND PHONETIC DISSIMILARITY

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HOW DOES THE L1 OF EARLY SEQUENTIAL HINDI-INDIAN ENGLISH BILINGUALS (HEBs) AND TELUGU-INDIAN ENGLISH BILINGUALS (TEBs) AFFECT THEIR L2 ENGLISH DURING ACCOMMODATION TO AMERICAN ENGLISH (AE)?

HYPOTHESES

Based on phonetic dissimilarity-led L2 accommodation^[4], we predict the following:

- **H1:** Because HEBs' L2 /s/ (COG ~6000 Hz) is more dissimilar from AE, HEBs will accommodate to AE /s/ more than TEBs (L2 /s/ COG ~7500 Hz)^[1,2].
- **H2:** Because TEBs have no L1 /z/^[7], TEBs will accommodate to AE /z/ more than HEBs (who have L1 /z/)^[8].
- **H3:** Because HEBs' word-final [l] is more dissimilar from AE word-final [t], HEBs will accommodate to AE word-finally more than TEBs^[3].

METHODS

- 50 participants (25 HEBs & 25 TEBs) tested in India; L2 AoA: <10 years
- Tasks: Baseline Production Task (read words off a screen) & Accommodation Task (repeat words spoken by an AE interlocutor)^[5]
- Speech materials & Analysis:
 - Words with /s/ and /z/ in word-initial position: *seat, sad, suit, set, zap, zen, zoo, zeal*
 - Centre of Gravity (COG) measured over the whole fricative; for non-target affricate-like productions, only fricative portion after the stop was measured
 - A Praat script^[9] was used for extracting COG over the whole duration
 - Words with /l/ in initial and final positions: *lateral, lentil, lethal, loofah*
 - Mean F1 & F2 measured within a 10-ms steady-state interval annotated for each lateral^[6]
- Statistics: COG/F1/F2 ~ Task * Phoneme/Position * Group + (1 + Task | Participant) + (1 | Word)

FINDINGS

Figure 1. Centre of Gravity in English fricatives by group, phoneme, and task.

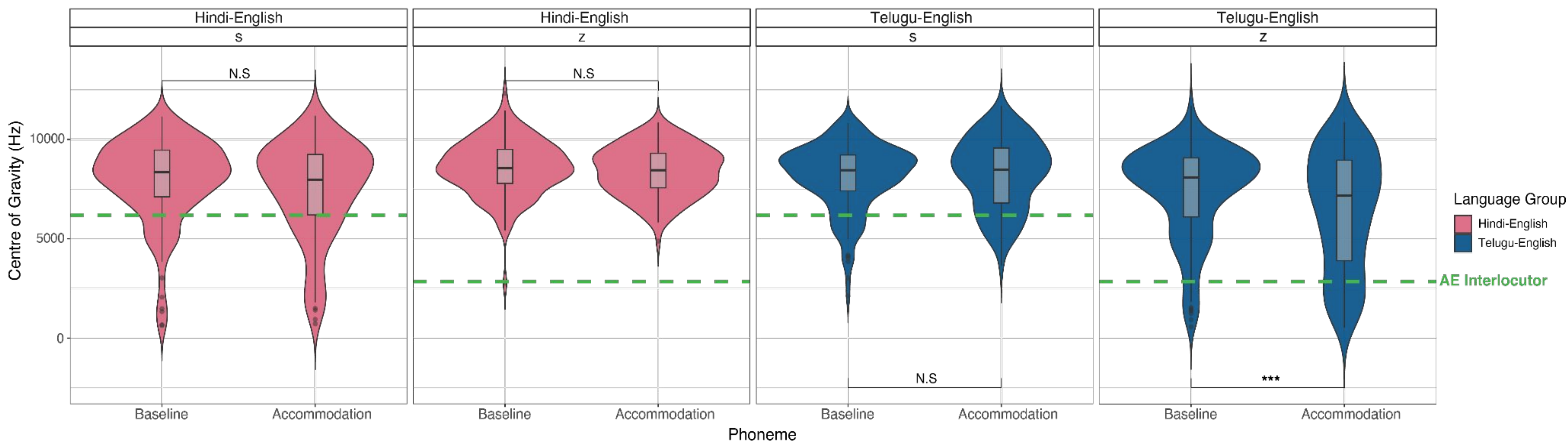
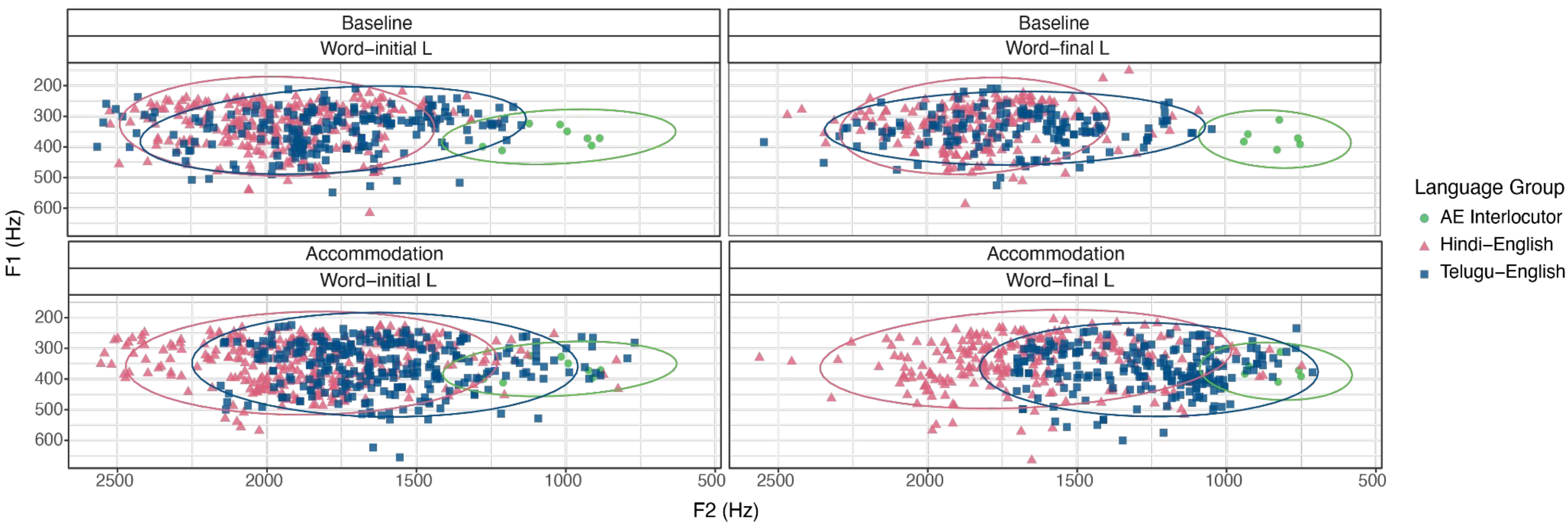


Figure 2. F1 x F2 in English laterals (tokens), by word position, task, and group



SUMMARY OF FINDINGS:

L2 accommodation in COG of sibilant fricatives:

- TEBs showed more accommodation than HEBs towards AE /z/ ($\beta=-1090.93$, $p<0.01$), but none for /s/.
- HEBs did not show any significant changes in their L2 /s/ and /z/.

L2 accommodation in formants of laterals:

- **F1** for **word-initial /l/**: TEB showed more accommodation than HEBs ($\beta=10.462$, $p<0.1$)
- **F2** for **word-initial /l/**: TEBs showed more accommodation than HEBs ($\beta=-128.5$, $p<0.0001$)
- **F1** for **word-final /l/**: TEBs showed more accommodation than HEBs ($\beta=24.3$, $p<0.01$)
- **F2** for **word-final /l/**: TEBs showed more accommodation than HEBs ($\beta=-171.15$, $p<0.0001$)

→ **Results partially support H1, H2 & H3:** HEBs **did not** show any accommodation for /s/. TEBs **accommodated significantly more** on /z/ than HEBs. TEBs **accommodated significantly more** on word-initial and word-final /l/ than HEBs.

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