

Beyond phonetic cues: Names affect listeners' performance in a talker identification task

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Listeners perform best when dealing with a familiar voice or language (e.g., Nygaard & Pisoni, 1998). This is typically called the familiar language advantage (FLA). With voice memory, FLA manifests as listeners being better at remembering voices with familiar languages or accents. For example, American English-speaking listeners are better at identifying American English speakers than Spanish or Spanish-accented English speakers (Thompson, 1987), while Spanish-English bilinguals are equally good at identifying all three accents (Goggin et al., 1991). The proposed mechanism for these results lies in listeners knowing which phonetic cues are talker-specific in a familiar language but not being able to tease apart talker-specific and language- or accent-general phonetic cues in an unfamiliar language (e.g., Winters et al., 2008; Perrachione & Wong, 2007).

While we know that listeners' biases and expectations about speakers affects intelligibility and perceived accentedness (e.g., Rubin, 1992), it is unknown how listeners' beliefs affect voice memory. To this end, we conducted a voice memory study with Mandarin-accented English voices and locally accented English voices in conditions which paired voices with stereotypically congruent names (Mandarin-accented English voice as *Chen* and locally accented English voice as *Connor*) and stereotypically incongruent names (vice versa). If the FLA effect relies solely on listeners' ability to parse phonetic information as talker-specific or accent-general, we would not expect name congruency to affect performance.

Listeners were presented with a sentence read by one of the speakers and asked to identify the name of the speaker. The voices were paired with either romanized traditional Chinese names (e.g., *Chen*) or stereotypical white names (e.g., *Connor*). After being familiarized with 5 voices, listeners completed: (1) training, (2) practise quiz (with feedback), and (3) final test with both accent groups. A total of 112 listeners completed the task, 50 who are English-Mandarin bilinguals and 62 with no Mandarin speaking experience. Listeners performed better on the native English voices [$B = 1.05$, $SE = 0.13$, $z = 7.9$, $p < 0.001$] and Mandarin-English bilinguals performed better on the task overall [$B = 0.13$, $SE = 0.05$, $z = 2.5$, $p < 0.05$]. There was also an interaction of Accent and Name [$B = -0.37$, $SE = 0.19$, $z = 2.0$, $p < 0.05$], which indicated that incongruent name/accent pairings negatively affected the native-accented voices more than the Mandarin-accented voices.

These results suggest that voice memory does not *solely* hinge on listeners' attribution of phonetic cues. Incongruent name/accent pairings negatively affect performance, particularly for the native accent. One interpretation is that non-native sounding names may bias listeners to perceive a native voice as unfamiliar. Preliminary results from our current research support this interpretation. We have listeners rate the speakers' accentedness using a visual analogue scale. Results indicate a trend toward incongruent name-accent pairings increasing the perceived foreign accentedness for the native speakers, but not for the Mandarin-accented speakers.

References

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