# Ideology and Sociophonetic Representations: Investigating the Role of Awareness and Personae in Asian American/Canadian Speech

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Various approaches to sociophonetic representations theorize that the way linguistic experiences are interpreted and stored in memory is mediated by listener *attention,* guided by *ideology* ([1,2,3,4]). However, this proposed relationship has not been tested in depth. For example, while *awareness* has been predicted to increase strength of sociophonetic associations via attention and salience, the few studies exploring this connection use indirect or imprecise measures and find inconsistent results ([5,6]). Plus, although the social information that listeners map to phonetic detail may be better captured at individual levels by microsocial ideological constructs (*personae*) rather than macrosocial categories, relatively little work has explored this link in perception ([7]).

Using the context of Asian American/Canadian (AAC) speech, I examine two phonetic features, /oʊ/-backing and /ð/-stopping, that may be ideologically linked to AAC identities with different degrees of awareness ([8,9]). I use targeted gradient measures of awareness to test predictions systematically at both group and individual levels. Based on acculturation being a relevant social dimension for AACs, I examine the association of these phonetic variables with Asian American personae judged to be more mainstream/American-oriented or more ethnic/Asian-oriented ([10,11]). This provides a novel context for testing the role of persona in perception.

Sixty self-identified Asian Americans from California completed an auditory two-alternative forced choice speaker identification task. They heard words spoken by 11 AAC women and selected who they thought was speaking from two photos. Critical auditory stimuli consisted of 10 /oʊ/ words (e.g., *c**o**ding*) and 10 /ð/ words (e.g., *fea**th**erweight*) recorded by six target speakers. Crucially, each word was produced with two phonetic variants representing Californian and AAC pronunciations: Mainstream (M: fronted /oʊ/, fricated /ð/) and Non-mainstream (N: backed /oʊ/, stopped /ð/). Photos depicted people with different visual styles (e.g., clothes, makeup). These were normed via social evaluation surveys to represent three target personae: Mainstream Asian (MA), Ethnic Asian (EA), and Mainstream White (MW). MA photos were perceived as more culturally American (e.g., American makeup styles) than EA photos (e.g., Asian makeup styles). From these, three target persona pairings were created (MA-MW, EA-MA, EA-MW). A fourth persona, Ethnic White (EW), was included to balance perceived race across the task. This was paired with MW to form a comparison condition containing no Asian photo (EW-MW). After the listening task, participants completed a questionnaire including five 7-point Likert scale questions assessing awareness of /oʊ/-backing and /ð/-stopping as features of AAC speech.

Based on average ratings, participants were generally more aware of an ideological link between AAC identity and /ð/-stopping (M=3.88, SD=1.66) than /oʊ/-backing (M=3.29, SD=1.67). Behavioral data were analyzed via Bayesian multilevel logistic regression. Overall, listeners were more likely to select an Ethnic Asian photo when hearing stopped /ð/ compared to fricated /ð/ in EA-MA ($M_{N-M}$=0.30) and EA-MW ($M_{N-M}$=0.39) conditions (Figure 1a). No difference was found in the MA-MW ($M_{N-M}$=0.02) condition. This provides strong evidence within this study that /ð/-stopping is specifically tied to an Ethnic Asian persona, rather than a macrosocial Asian category. Moderate-to-weak evidence links /oʊ/-backing to both Asian personae, as listeners were more likely to select the (Ethnic) Asian photo when hearing backed /oʊ/ compared to fronted /oʊ/ in MA-MW ($M_{N-M}$=0.09), EA-MA ($M_{N-M}$=0.13), EA-MW ($M_{N-M}$=0.12) conditions (Figure 1b). Notably, effect sizes were smaller for /oʊ/-backing than /ð/-stopping, aligning with the prediction that a variable with higher awareness should elicit larger behavioral effects. At the individual level, there was high uncertainty and therefore no clear evidence for an effect of awareness. Based on qualitative observations, however, small trends in the predicted direction suggest that individuals with higher awareness ratings *may* have had larger biases to identify the speaker as (Ethnic) Asian when hearing /oʊ/-backing or /ð/-stopping. More data would be needed to confirm these patterns.

Overall, these findings align with a model of sociophonetic cognition where ideology shapes representations: In this view, phonetic detail is encoded with ideological information and awareness of ideology mediates association strength. These insights enable further understanding of the processes underlying sociophonetic perception, learning, and change.

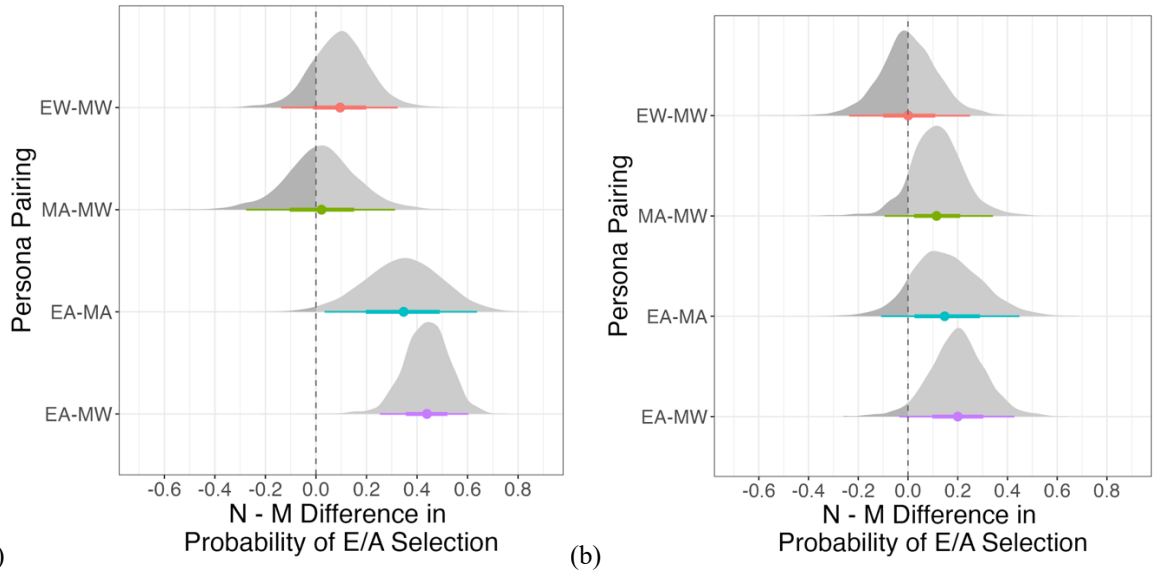


**Fig. 1.** Posterior distributions of the difference in Ethnic/Asian photo selections between Non-mainstream and Mainstream variants per persona pairing, based on Bayesian multilevel regression models for (a) /ð/-stopping and (b) /oʊ/-backing. Point intervals represent the median (point), 95% credible interval (thin line), and 66% credible interval (thick line). Proportion of the distribution below 0 is shaded with a darker gray.

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