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The Influence of Perceived Race on Ratings of Children's Speech II: Word Identification

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Introduction

- African-American English (AAE) is a distinct English dialect characterized by phonological and morpho-syntactic features including . African-American children, who may or may not be speakers of AAE, are consistently over-represented in Special Education (US Department of Education, 2001).
- Staum Casasanto (2008) showed that listeners process words differently depending on whether they are paired with African American or European American people's faces. When paired with an AA person's face, words like [mæs] are equally likely to be processed as *mass* or *mast*. They are only processed as mass when paired with an AE person's face.
- Evans et al. (this conference, link to poster via QR code above) showed a similar effect when people rated the accuracy of children's productions of words paired with AA and EA faces. Words like [kool] were rated as more accurate productions of <cold> when paired with AA faces than when paired with EA children's faces.
- One problem with that experiment was that the use of accuracy judgments may have led listeners to invoke prescriptive views of AAE rather than actual knowledge of AAE. In this poster, we examine whether we can observe an effect of speakers' imputed race when we ask listeners to identify the word that was produced rather than how accurately it was produced.

Research Questions

- Does imputed race of child speakers affect listeners' word-recognition?
 - We predict that words with final /l/ will be more likely to be rated as examples of final /ld/ words (i.e., [kool] will be rated as <cold>) when paired with AA faces than with EA faces because AAE speakers do not consistently produce a contrast between /l/ and /ld/ in word-final position
 - We predict that words with final stops will be
- Does knowledge of AAE features or explicit attitudes toward AAE mediate these effects?

Methods

Participants

- 20 adults with no history of speech, language, or hearing impairments.

Attitudes Survey

- Listeners indicated their agreement to 25 statements using an equally appearing interval scale. These included questions about AAE ("African American English is lazy speech") and ones about language teaching. These were taken from Hoover (1996).

AAE Knowledge Assessment

- Listeners answered 22 questions that tested knowledge of the features of AAE, focusing equally on morphosyntax and on phonology. These originally appeared in Ford et al. (1975).

Listening Task

- Elicited as part of a larger study on dialect variation (see Edwards, Gross, MacDonald, Brown, & Seidenberg; 2010). Talkers were African-American children between 4 and 9 years old from the Madison, WI area. We selected 160 speech samples, 10 each of 16 different words from 4 coda groups (final /l/, final /t/, final stop + plural -s and final /ld/).
- Reductions or omissions are allowed in AAE for all but the stop + plural cluster. Final consonants in tokens for each word ranged from completely present to completely reduced. Tokens were classified as "accurate" (i.e. fully produced codas) or "inaccurate" (i.e. reduced or omitted codas) by both (1) skilled transcription and (2) the results of a task in which 20 naïve listeners rated the words' accuracy.
- Each token was paired with a picture of either a EA or AA child's face. Listeners indicated their response using a visual-analog scale (Figures 1 and 2). Pairing of tokens with faces was counter-balanced across listeners.

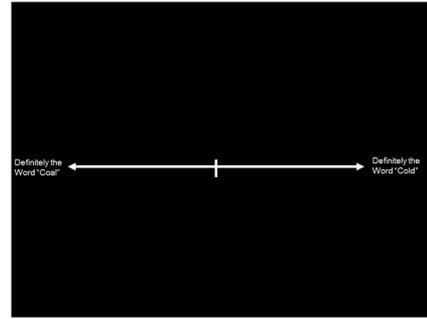


Figure 1. Sample Visual Analog Scale used in the speech-rating task for the target stimuli with final <l> and final <ld>. Stimuli that would be presented with this screen would include correct <cold>, [kool] for <cold>, correct <coal>, and [kool] for <coal>

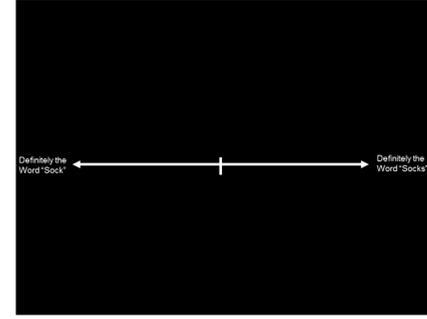
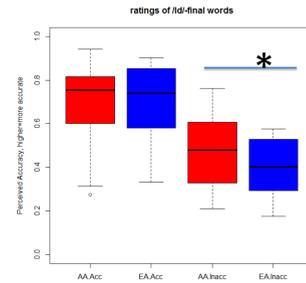
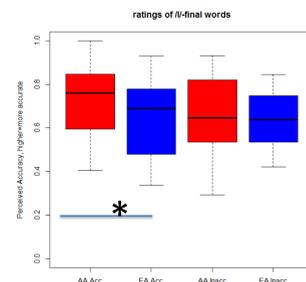
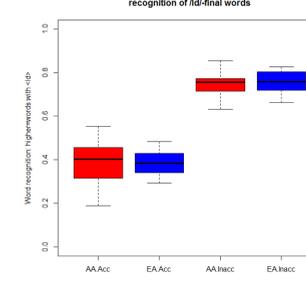


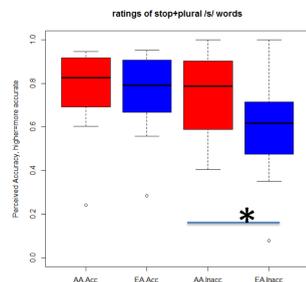
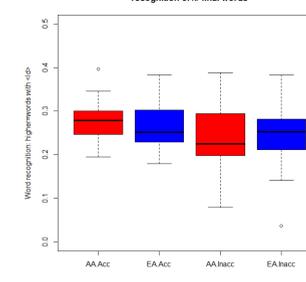
Figure 2. Sample Visual Analog Scale used in the speech-rating task for words with final stops and final stop + plural /s/. Stimuli that would be presented with this screen would include correct <socks>, [sok] for <socks>, correct <sock>, and [soʔ] for <sock>



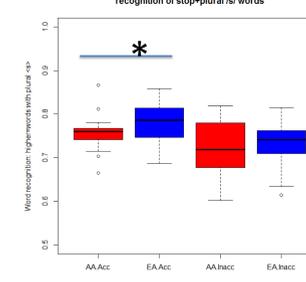
Figures 3 and 4. Accuracy ratings (left) and word-recognition judgments (right) for /ld/-final words. Listeners in Evans et al. rated to be more accurate when paired with African American children's faces (left), but listeners in this study did not identify the productions differently (right)



Figures 5 and 6. Accuracy ratings (left) and word-recognition judgments (right) for /l/-final words. Listeners in Evans et al. rated to be more accurate when paired with African American children's faces (left), but listeners in this study did not identify the productions differently (right)



Figures 7 and 8. Accuracy ratings (left) and word-recognition judgments (right) for /stop plus plural /s/-final words. Listeners in Evans et al. rated to be more accurate when paired with African American children's faces (left). Contrary to expectations, listeners perceived words to be more like an /s/-final target when paired with European-American children's faces



Results

- Unlike in Evans et al., imputed race did not affect listeners' responses. In Evans et al., imputed race affected accuracy judgments for stimuli with final /l/, final /ld/, and final stop+plural /s/. In contrast, Word-recognition patterns in the current study were unaffected by race for the final /l/ and final /ld/ words. A significant effect for final stop+plural /s/ words was in the opposite-than-expected direction.
- No correlations were found between measures of knowledge of AAE or attitudes toward AAE and identification patterns. In Evans et al., there were some significant correlations between accuracy ratings and both implicit and explicit attitudes.
- We conclude preliminarily that the effect of imputed race on the perception of children's speech is most robust in tasks that use involve an evaluation of accuracy rather than a low-level percept of the word that the child is saying.**
- Ongoing research is examining whether an effect can be found using different methods. The visual-analog scaling task we used in this study might be inappropriate for a word-recognition task. An open-set response might be more appropriate.

References

- American Speech-Language-Hearing Association. (2004). Knowledge and Skills Needed by Speech-Language Pathologists and Audiologists to Provide Culturally and Linguistically Appropriate Services [Knowledge and Skills].
- Babel, M.E. (2012). Evidence for phonetic and social selectivity in spontaneous phonetic imitation. *Journal of Phonetics*, 40, 177-189.
- Edwards, J., Gross, M., MacDonald, M., Brown, M., & Seidenberg, M. (2010). Examining aspects of code-switching ability in children who speak African American English. Poster presented at the Symposium for Research on Child Language Disorders, Madison, WI.
- Greenwald, A.G., McGhee, D.E., & Schwartz, J. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology*, 74:1464-1480.
- Staum Casasanto, L. (2008). Experimental Investigations of Sociolinguistic Knowledge. Dissertation, Stanford University Department of Linguistics.
- Thomas, E. (2007). Phonological and Phonetic Characteristics of African American Vernacular English. *Language and Linguistics Compass*, 1(5), 450-475.
- United States Department of Education. (2001). 23rd Annual Report to Congress on the Implementation of the IDEA. Available from <http://www2.ed.gov/about/reports/annual/osep/2001/index.html>.

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