

Do we believe what they perceive?

What speech perception reveals about a Southern 'unmerger' in progress

Chris Koops, Elizabeth Gentry, Andrew Pantos
Rice University

In a study of native listeners' implicit knowledge of the social distribution of a phonological variable we found that the perceived distribution does not completely match the findings of production surveys of the same variable in the same community. This presents an interesting challenge to models of linguistic variation based exclusively on production data, and questions how the distribution of sociolinguistic variables is best defined.

The linguistic phenomenon we are investigating is the 'unmerger' of pre-nasal /i/ and /e/ among Anglo Houstonians. This long-standing feature of Southern American English is increasingly losing ground in large metropolitan centers of the South (e.g. Tillery and Bailey 2004).

We conducted a speech perception experiment to measure the degree to which Houstonians expect Anglo speakers of three different age groups to participate in the merger. The experiment was conducted using a head-mounted eye-tracker, which monitored the participants' eye movements as they selected on a computer screen the lexical items which they heard (Tanenhaus et al. 2000).

Of particular interest were participants' eye fixations on /eN/ and /iN/ competitors, i.e. words which are temporarily ambiguous with the target word in a merged production system. We interpret a greater amount of looks to the competitor as an indicator of the listener's readiness to assume that the speaker may have a merged system.

Preliminary results show that, as predicted, listeners are more likely to assume a merged system when listening to an 'old' speaker than when listening to a 'middle-aged' speaker. However, we find no significant difference between the perception of a 'middle-aged' and a 'young' speaker.

These results generally corroborate our recent production surveys in Houston (Gentry 2006, Pantos 2006), which show the merger to be positively correlated with age. However, there is a discrepancy between our participants' perception and the actual production of Houstonians in the 'middle-aged' group. Although, in production terms, native Houstonians in this group pattern with 'old' speakers in participating in the merger, listeners expect a 'middle-aged' speaker to pattern with a 'young' speaker in being less merged.

We suggest that this mismatch is due to recent demographic changes in Houston, with large numbers of non-Southern Anglo speakers moving into the Houston metropolitan area in the course of the Sunbelt migration (Thomas 1997, Klineberg 2006). Native listeners who are exposed to this linguistically mixed population apparently associate merged

vowels specifically only with the oldest speakers, even though some younger speakers are also merged.

Our study adds to previous research on the perception of vowel merger, including near-merger (Di Paolo & Faber 1990, Labov et al. 1991, *inter alia*) by providing additional evidence for the role of perceived speaker dialect as a potentially disambiguating factor in speech perception (Hay et al. 2006). Our findings have broad implications for the study of language variation as they challenge sociolinguists to consider whether the variation we seek to describe resides in the “objective” production of speakers native to a community, or rather in the “subjective” experience of its native listeners.

References

- Di Paolo, Marianna and Alice Faber. 1990. “Phonation differences and the phonetic content of the tense-lax contrast in Utah English.” *Language Variation and Change* 2: 155-204.
- Gentry, Elizabeth. 2006. “Hovering between the South and the West: Houston’s merged dialect.” Paper presented at NWAV 35
- Hay, Jennifer, Paul Warren, and Katie Drager. 2006. “Factors influencing speech perception in the context of a merger-in-progress.” *Journal of Phonetics* 34: 458-484.
- Klineberg, Stephen. 2006. *Public perceptions in remarkable times: tracking change through 24 years of Houston surveys*. Houston: CORRUL
- Labov, William, Mark Karen, and Corey Miller. 1991. “Near-mergers and the suspension of phonemic contrast.” *Language Variation and Change* 3: 33-74.
- Pantos, Andrew. 2006. “Redefining the South: Teenage Houstonians and the Southern Shift.” Paper presented at NWAV 35
- Tanenhaus, Michael, James Magnuson, Delphine Dahan, and Craig Chambers. 2000. “Eye movements and lexical access in spoken-language comprehension: Evaluating a linking hypothesis between fixations and linguistic processing.” *Journal of Psycholinguistic Research* 29: 557-580.
- Thomas, Erik. 1997. “A rural/metropolitan split in the speech of Texas Anglos.” *Language Variation and Change* 9: 309-332.
- Tillery, Jan and Guy Bailey. 2004. “The urban South: phonology.” E. Schneider, K. Burridge, B. Kortmann, R. Mesthrie, and C. Upton (eds.) *A Handbook of Varieties of English*. Vol. 1: Phonology. Berlin, New York: Mouton de Gruyter, pp. 325-337.