"And then I say [sʌuθ] weird": /aʊ/-raising in Massachusetts

Kamil Kaźmierski, Faculty of English at Adam Mickiewicz University in Poznań

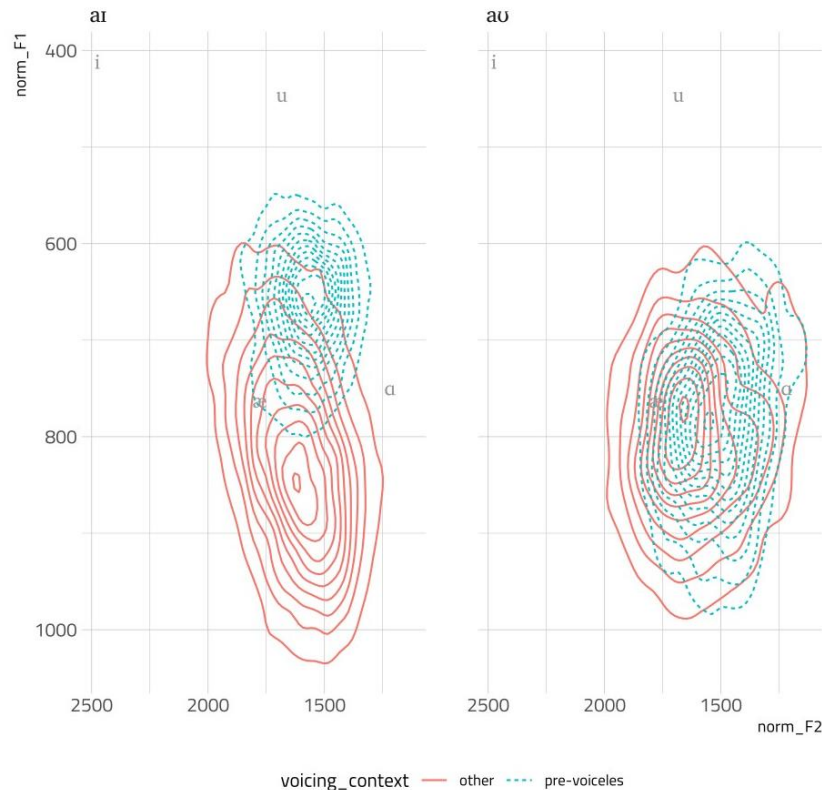Paper presented at the 50th Poznań Linguistic Meeting

/aʊ/-raising has been reported for a number of North American dialects, most famously for Canadian English (Joos 1942), but also for a number of US varieties (Allen 1989; Dailey-O'Cain 1997; Niedzielski 1999). In New England, there is evidence of both across-the-board raising (Roberts 2007), as well as for raising conditioned by the voicing of the following segment (Thomas 1961; Stanford 2020). In Labov's (1963) classic study of Martha's Vineyard, off the East Coast of Massachusetts, some speakers showed across-the-board raising, and some were influenced by the phonetic context. Throughout Massachusetts, many local pronunciation features, such as r-lessness, PALM and START fronting, NORTH/FORCE distinction, MARY/MARRY/MERRY distinction have been on the decline (Stanford 2019). Against that backdrop, /aʊ/-raising, which has received less attention from both speakers and linguists, poses an interesting case. Is it merely surviving as it has managed to stay under the radar? Or is it gaining ground as a new local identity marker at the same time as the more stigmatized features are losing ground?

Twenty one-hour-long interviews with young Massachusetts natives have been used as a new data source on /aʊ/-raising for the present study. The presence of raised tokens of /aʊ/ has been confirmed auditorily, and some of the speakers even mention that the way they pronounce words with /aʊ/ differently than people from elsewhere in the US. Automatic Speech Recognition provided by the WebMAUS service (Kisler et al. 2017) has been used to produce orthographic transcripts of the interviews, and FAVE-Align from the FAVE suite (Rosenfelder et al. 2014) has been used to produce phone-level annotations. Then, single-point formant measurements have been extracted with FAVE-Extract to enable comparison to Stanford (2019). Initial aggregate results (see Figure 1) suggest that (a) /aʊ/ is in general higher than non-pre-voiceless /aɪ/, suggesting an across-the-board raising, and (b) pre-voiceless /aʊ/ is backer than non-pre-voiceless /aʊ/, suggesting sensitivity to phonetic context. Individual-level comparison (not shown) points to differences in the extent of the allophony, as well as to the reliance on F1/F2 in its realization.

Comparison to the data made available by Stanford (2019), which include legacy data from DARE and LANE, will make possible the placement of the present results within a wider socio-historical context. Additionally, Generalized Additive Mixed Modeling will be applied to full formant tracks extracted from the new data set to inspect the dynamic aspects of the allophonic contrast.

Figure 1: Allophony of /aɪ/ (left panel, *N* = 15,296) and /aʊ/ (right panel, *N* = 2,648) conditioned on the following segment. Blue broken line 2d densities show the voiceless context, red solid lines show the elsewhere context. Population-level means of FLEECE /i/, TRAP /æ/, LOT /ɑ/ and GOOSE /u/ have been added for reference.

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