

The NORTH-FORCE merger in Manchester

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This study—part of a large-scale project investigating Manchester’s vowel system—reports on patterns of variation and change in the status of the phonemic contrast between the NORTH and FORCE vowels in Manchester. It is based on a sample of 90 informants, stratified by age, gender, socio-economic status, and ethnicity. Sixty-four of the speakers identify themselves as white British; the other 26 informants represent the two largest ethnic minorities in Manchester, i.e., Pakistani and Black Caribbean. Five socio-economic levels, based on occupation, are distinguished (from lower-working to upper middle); the role of education as an indicator of social status is also explored. The informants were recorded during sociolinguistic interviews, supplemented with word list reading and minimal pairs tests.

The informants’ complete vowel systems are measured in terms of F1 and F2 in Praat (Boersma & Weenink 2012). For 25 speakers, the point of measurement is selected by hand, following Labov, Ash, and Boberg (2006). The speech of 65 speakers is measured automatically, using the Forced Alignment and Vowel Extraction suite (Rosenfelder et al. 2011). The paper explores variation in the acoustic position of each of the phonemes and the phonetic distance between them. In addition, it reports on the results of minimal pair tests conducted for 90 speakers, testing their perception and production of the phonemic contrast.

The measurements are subjected to a series of multivariate analyses, with factors such as age, gender, socio-economic status, ethnicity, part of town, and attitudes towards Manchester entered as independent variables. The results suggest that while the two phonemes are now largely merged for the middle classes, so that words in pairs such as *four-for*, *hoarse-horse*, *wore-war* sound identical, there is a significant distinction for working class speakers, both in perception and production. There is some indication that the vowels may be merging further even in this group, with females leading the change. The paper also explores the role of different indicators of social status other than occupation, such as education, for the purposes of explaining linguistic variation.

References:

- Boersma, P. & Weenink, D. 2012. Praat: doing phonetics by computer [Computer program].
Labov, W., Ash, S., & Boberg, C. 2006. *The Atlas of North American English: Phonetics, Phonology, and Sound Change*. Berlin/New York: Mouton de Gruyter.
Rosenfelder, I., Fruehwald, J. Evanini, K. and Jiahong, Y. 2011. FAVE (Forced Alignment and Vowel Extraction) Program Suite. <http://fave.ling.upenn.edu>.