

ACOUSTICS2008/2078
Dialectal effects in the perception of vowels produced by first and second language speakers: North Carolinian versus Southern Welsh listeners

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This paper investigated the effect of listeners' regional origin on the perception of vowels. Listeners from North Carolina and South Wales were presented with natural tokens of the four English vowels /i/, /I/, /E/ and /{/ which were produced by L1 and L2 speakers. Randomization tests revealed a significant difference between the listener groups' confusion matrices. Examination of the confusion matrixes suggested that the dialectal differences were primarily in the vowel contrasts /I/-/E/ and /E/-/{/ . In order to explore these findings, logistic regression models were fitted to each listener group's responses (predictor variables in the models were initial and final formant values and duration). Territorial maps based on the logistic regression models indicated that there was a substantial difference in the locations of the /E/-/{/ , and a smaller difference in the location of the /I/-/E/ boundary.