Effects of Gender and Style on Fronting and Raising of /æ/, /e:/ and /ɛ/ before /g/ in Seattle English

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The English spoken in the Pacific Northwestern United States (PNWE) has received minimal research attention in variationist sociolinguistics. Labov, Ash and Boberg (2006) and Wolfram and Schilling-Estes (1996) describe this comparatively new region of the United States as likely to show widespread phonological variation due to dialect contact -- consistent with diffusion of forms from its settler-past (including New England and the inland North). This paper provides the first report from an ongoing sociophonetic study of dialect focusing in PNWE, using a sample of 30 PNWE native-speakers. We find a predominating tendency for PNWE speakers to monophthongize /e:/ BAKE. In addition, we find consistent complete spectral overlap (merger) between pre-velar /ɛ/ BEG and /e:/ BAG. The /ɛ/-class shows a bimodal distribution: pre-velar /ɛ/ exhibits a systematically lower F1 than non-pre-velar /ɛ/. Raising and fronting in prevelar /æ/ BAG was also found. The pre-nasal tensing and raising of /æ/, regarded as an early stage in the Northern Cities Shift, was not found. Gender differences emerged, such that while some males overlap all three classes (/ɛ/, /e:/ and /æ/), females show overlap only between /ɛ/ and /e:/ BAG. Both genders show separation of vowel categories in formal styles, with overlap increasing in less-scripted styles. Raising of /æ/ to /e:/ is apparently an older form, noted by Reed in 1952. Data were analyzed for three linguistic tasks: word list, reading passage, and experimental tasks (including semantic differentials and lists). Acoustic measures include vowel duration and the first three vowel formants (F1-F3) at five timepoints. Overlap was assessed for the log-mean normalized transforms of these data using an analytic geometric procedure (Wassink, 2006) which returns overlap fractions for vowel pairs in two- (F1xF2) and three-dimensions (F1xF2xduration). Vowel overlap (using midpoint data) and trajectory data (using Euclidean distances) were calculated, allowing gliding to be instrumentally described.

References