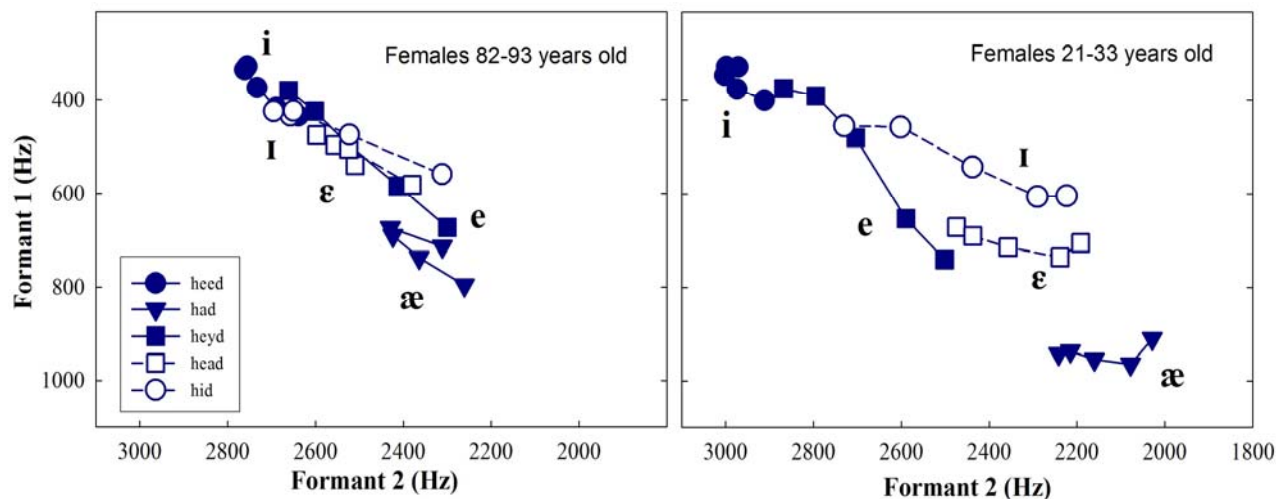


## Cross-generational reorganization in the vowel space of Southern American English

This acoustic study examines the cross-generational development of Southern Vowel Shift (SVS), a set of complex vowel changes reportedly currently taking place in Southern American English in the United States. Our participants come from the Appalachian area in western North Carolina (the Inland South) which is identified by Labov, Ash & Boberg (2006) as a center of the most advanced features of the SVS. The study focuses on two stages of the SVS: Stage 2 is the centralization and lowering of /e/ and fronting and raising of /ɛ/, the so-called reversal of the front/back locations of /e/ and /ɛ/, and Stage 3 is a parallel lowering of /i/ and fronting and raising of /ɪ/ which results in another reversal of the front/back locations of /i/ and /ɪ/. We also examine the cross-generational changes to /æ/ which is known for its Southern raising.

The data come from 70 female and 69 male speakers who were born, raised, spent most of their lives and currently live in the area and speak the local dialect. Each speaker produced the same speech material and was tested under the same experimental conditions. At the time of the recordings completed in years 2006-2008, the oldest speakers were in their 90s and the youngest were children aged 8-12 years. The results will be presented for citation words *heed*, *hid*, *hey'd*, *head*, *had* selected out of a larger sample.



The left panel of the figure shows mean relative positions and formant movement for vowels produced by the 6 oldest women (82-93 years) and the right panel for vowels produced by 9 young women (21-33 years). Formant frequency (F1 and F2) was measured at five equidistant points in the central 60% portion of the vowel (corresponding to the 20-35-50-65-80%-temporal points). We find the oldest speakers producing the e/ɛ and i/ɪ reversals and the raised and fronted /æ/. With each younger generation (not shown here), there is a progressive fronting of /i/ and /e/ and lowering and backing of /ɪ, ɛ, æ/. Clearly, the vowel system of the young speakers in the right panel does not look like the system of the oldest. As will be shown in the poster not only the relative vowel positions but also formant dynamics (vowel inherent formant movement) change across generations for these North Carolina speakers. These data provide new support for the view that systemic reorganization of the vowel space occurs gradually, generation by generation, and particular vowels change their acoustic characteristics in terms of both positional changes and the extent of vowel inherent spectral change. Several measures will be used to characterize the acoustic changes, including formant trajectory length, spectral rate of change and spectral centroid location (see Fox & Jacewicz, 2009, *JASA* 126: 2603-2618, for more details of the analysis).