In this talk, I present continuing work from a collaborative project with Valerie Fridland (University of Nevada, Reno), which is exploring the relationship between speech production and perception at both the regional and individual level (Kendall and Fridland 2012, Fridland and Kendall 2012, Fridland, Kendall, and Farrington 2014). We examine vowel production and perception patterns from speakers in 8 U.S. states (CA, IL, NC, NV, NY, OR, TN, VA) across the South, West, and Inland North (Labov et al. 2006). Building on other recent work (Evans and Iverson 2004, 2007, Sumner and Samuel 2009, Fridland and Kendall 2012), we are investigating questions such as (a) whether differences in regional speakers’ production patterns implicate differences in perception, (b) whether individual differences in production relate to individual differences in perception, and, (c) whether different vowel sub-systems (e.g. tense and lax mid-front vowels, low back vowels) vary in the way that this linkage between production and perception is realized. I discuss the current status of this work along with some of our recent findings with respect to the above questions. I also discuss some new directions for our work, such as an attempt to map perceptual data (vowel identification patterns from 500+ participants around the U.S.) using methods from dialectometry.