

Sound change and speech evolution

Andrew Wedel

This discussion section will showcase two facets of the rapidly moving field of sound system evolution: (i) new findings on the bi-directional relationship between sublexical and lexical categories in sound change, and (ii) new methods for obtaining detailed data on individual and group variation over time.

Strictly phonemic models of the lexicon hold that the pronunciation of a phoneme is determined solely by the grammar, not word identity, and therefore predict that sound change should occur in lockstep across the lexicon. Early work on lexical diffusion in the 60's and 70's called the phonemic model into question by suggesting that sound change can proceed at different rates in different words, but lack of data blunted the theoretical impact of these findings. In the last few years, however, new analytic techniques combined with detailed corpus data have allowed researchers to drill down into this issue with a new and exciting degree of control. The first two papers in this session study large datasets and provide strong new evidence for an interaction between representations at the lexical and sublexical levels in sound change.

In their paper 'Word-level distributions and structural factors co-determine GOOSE-fronting', Marton Soskuthy and colleagues analyze a corpus of Derby English spanning three generations to investigate the interaction of prevocalic yod and u-fronting in different classes of words. Of central interest are a class of words in which prevocalic yod, which is a strong conditioning factor for u-fronting, can be optionally dropped (e.g., 'new' as [nu] or [nju].) Soskuthy and colleagues find that these optional-yod words show an intermediate degree of u-fronting, which is present even in yod-dropped tokens. These findings are taken to provide evidence for representational coherence at the word level, as well as at the levels of phoneme and allophone.

The process of tonogenesis in Korean is a classic phoneme-split in which the VOT contrast between lax and aspirated stops is collapsing, while a previously allophonic distinction in following vowel F0 is expanding. The work presented by Hye-Young Bang exploits the fact that this process is currently underway to ask whether the collapse in VOT distinctions between lax and aspirated stops precedes, follows, or is simultaneous with the expansion of a F0 distinction in the following vowel, and whether these changes are coordinated at the word level. Using a multi-generational corpus of spoken Korean, loss of contrast in stop VOT is found to occur in tandem with gain of contrast in vowel F0, and these changes are found to be more advanced in more frequent words. These results are interpreted to indicate that these changes are driven by reductive loss of VOT distinctions in frequent words, and that enhancement of F0 occurs adaptively to maintain contrast. Finally, these results are consistent with a role for maintenance of contrast at the level of the word in shaping trajectories of sound change.

A persistent, though steadily improving problem in research on sound change is the difficulty in obtaining detailed data that is both controlled enough for thorough analysis, and natural enough to be trusted as ecologically valid. The second two papers in this session showcase creative exploitation of 'natural experiments' and modern analytic techniques to generate detailed information about individual and group-level sound patterns.

The work presented by Alan Yu studies individual and structural factors in variation in anticipatory and carry-over vowel-vowel coarticulation by creating and analyzing a phonetic corpus of the speech of US Supreme Court Justices during oral argument over one year. Analysis of this corpus shows that individual

justices are stable in their degree of coarticulation over the course of the year. Additionally, the degree of backness coarticulation is similar between justices. However, there is considerable individual variation in the degree of height coarticulation between justices, suggesting that this type of coarticulation may be under greater phonological, as opposed to general phonetic control.

The work presented by Morgan Sonderegger similarly exploits data available from a socially constrained situation to investigate individual variation over time. The reality show Big Brother UK houses a group of people together for up to three months and records them for broadcast. This work asks whether participants' patterns in VOT production for voiced and voiceless stops change over the course of days and weeks, whether accommodation effects are apparent. All speakers are found to show daily changes in VOT, while a subset show longer-term trends. Importantly, the finding of inter-day differences in VOT production suggest that studies of individual pronunciation change over longer timescales should take samples over multiple days for each timepoint.