

## The urge to unmerge: a case of structural change across the lifespan

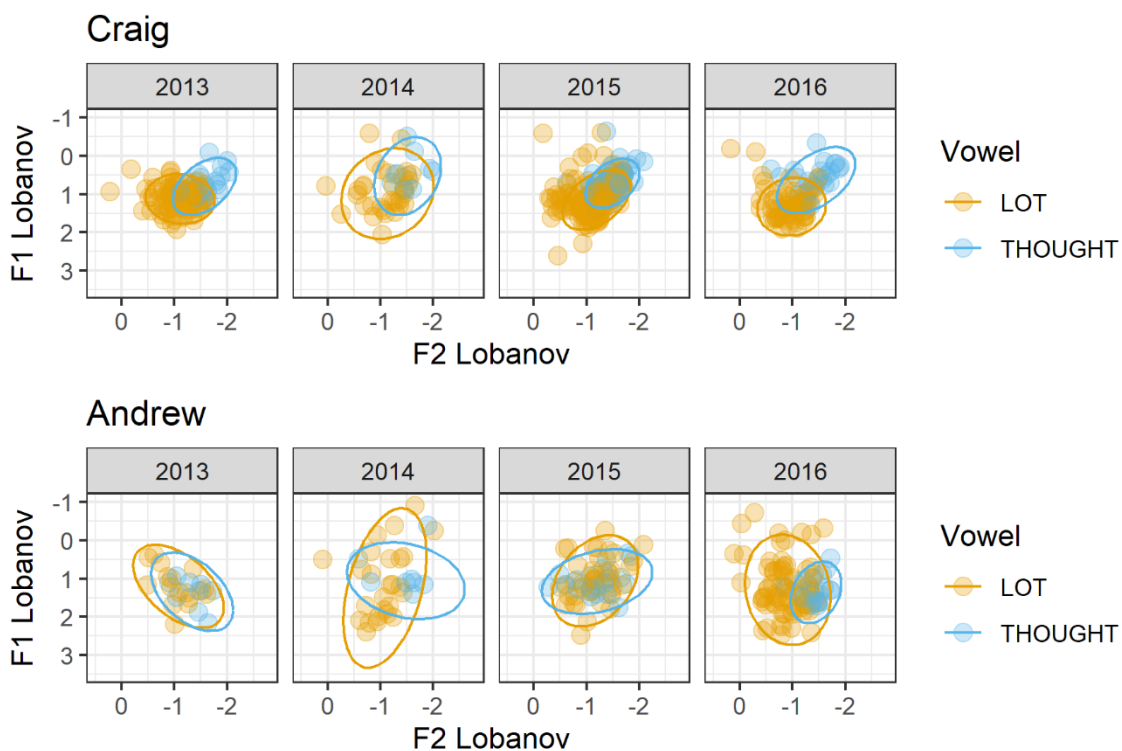
OR

### My favourite merger: convergence and restructuring in the speech of podcast presenters

Sociolinguistic research focusing on change across the lifespan demonstrates that speaker grammars exhibit a degree of plasticity well into adulthood. However, while a number of studies report longitudinal intraspeaker shifts, the changes tend to be more superficial in nature. For instance, there is evidence of changes in frequency of variable use (Sankoff and Blondeau 2007); the simplification of conditioning rules (MacKenzie 2019); or the merging of a phonemic category (Kwon 2018). The evidence also appears to support the view that adult learners “do not easily acquire new structural categories” (Labov 2010).

This study reports on findings of a longitudinal shift in vowel realisation and explores the conditions necessary for more structural change to take place. Is regular interaction enough, or does a speaker have to be immersed in the ambient dialect? The data are taken from 2.5 hours of recordings of ‘Overdue’ a book-themed podcast presented by Craig Getting (35) and Andrew Cunningham (35). Craig was born and raised in Philadelphia and exhibits separate LOT/THOUGHT categories (Kwon 2018). Andrew grew up and attended college in Ohio and then relocated to Philadelphia in 2016. As a consequence, Andrew acquired the typical Ohio system, with a merged LOT/THOUGHT category (Campbell-Kibler, Pratt, and Cook 2008).

Analysis of the LOT/THOUGHT categories (approx. 1200 tokens) suggests that across the timespan, Andrew’s initially one-part system comes to approximate Craig’s two-part system. Figure 1 demonstrates the distribution of the two categories (Lobanov normalised F1 and F2) by speaker over time.



Statistical analyses of Pillai scores and linear mixed effects regression support these observations, as shown in Table 1.

	Craig		Andrew	
Year	Pillai Score	lmer 'vowel' p-value	Pillai Score	lmer 'vowel' p-value
2013	0.401	<.0001	0.146	0.56
2014	0.296	<.0001	0.128	0.32
2015	0.251	<.0001	0.005	0.78
2016	0.491	<.0001	0.278	<.0001

Lower Pillai scores indicate greater vowel overlap (Nycz and Hall-Lew 2014). While Craig shows relatively higher Pillai scores across time, Andrew's consistently low scores are followed by a marked increase in 2016. Lmer modelling revealed a significant three-way interaction between Speaker, Vowel Category and Time Point for normalized F2. Post-hoc analyses showed that while Vowel Category was consistently significant for Craig (indicative of a split category), it was only a significant predictor for Andrew in 2016.

These findings suggest that structural reorganization of an adult grammar is possible, given the right conditions. This is a notable finding as previous research has found that speakers "were unable to split a category that is merged in their native accent" (Evans and Iverson 2007). Moreover, the observation that Andrew did not exhibit the change until 2016 when he relocated to the dialect area suggests that regular contact is not sufficient to induce this type of change; speakers need sustained input from the ambient dialect (Nycz 2013). What is not clear from these data, however, is the exact status of Andrew's original phonology. Descriptions report that the COT/CAUGHT merger can be partial in Ohio (Durian, Schumacher, and Reynard 2007). It may be the case that while Andrew's vowels were merged in production, he retained the distinction in perception. Further work is needed to establish whether this is the case.

- Campbell-Kibler, Kathryn, Teresa Pratt, and Cook Victoria. 2008. "Vowel Systems in Ohio: Reality and Perceptions. Paper Presented at NWAV 37, Houston, TX." In .
- Durian, David, Jennifer Schumacher, and Melissa Reynard. 2007. "Social Class, Convergence, and the Vowel Systems of Columbus AA(V)E and EAE. Paper Presented at NWAV 36, Philadelphia, PA." In . Philadelphia.
- Evans, Bronwen G., and Paul Iverson. 2007. "Plasticity in Vowel Perception and Production: A Study of Accent Change in Young Adults." *The Journal of the Acoustical Society of America* 121 (6): 3814–26. <https://doi.org/10.1121/1.2722209>.
- Kwon, Soohyun. 2018. "Phonetic and Phonological Changes of Noam Chomsky: A Case Study of Dialect Shift." *American Speech* 93 (2): 270–97. <https://doi.org/10.1215/00031283-6926146>.
- Labov, William. 2010. *Principles of Linguistic Change, Cognitive and Cultural Factors*. Wiley.
- MacKenzie, Laurel. 2019. "Perturbing the Community Grammar: Individual Differences and Community-Level Constraints on Sociolinguistic Variation." *Glossa: A Journal of General Linguistics* 4 (1): 28. <https://doi.org/10.5334/gjgl.622>.
- Nycz, Jennifer. 2013. "Changing Words or Changing Rules? Second Dialect Acquisition and Phonological Representation." *Journal of Pragmatics*, Contexts of Use in Cognitive Sociolinguistics, 52 (June): 49–62. <https://doi.org/10.1016/j.pragma.2012.12.014>.
- Nycz, Jennifer, and Lauren Hall-Lew. 2014. "Best Practices in Measuring Vowel Merger." In , 060008. Providence, Rhode Island. <https://doi.org/10.1121/1.4894063>.
- Sankoff, Gillian, and Hélène Blondeau. 2007. "Language Change across the Lifespan: /R/ in Montreal French." *Language* 83 (3): 560–88.