## Individuals in the crowd: The joint roles of agency and structure in sound change

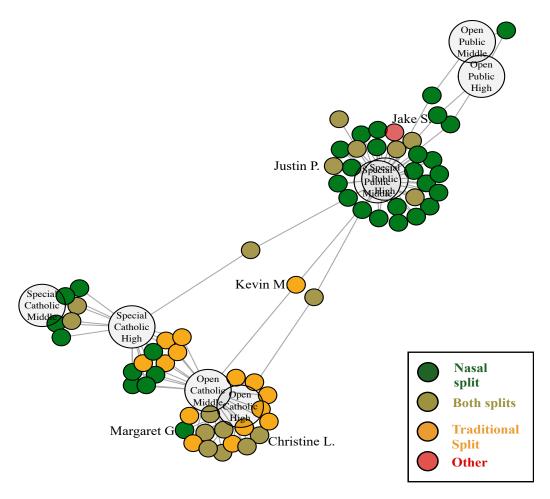
Individual agency and an individual's social structures play a joint role in that speaker's linguistic norms and production. Understanding the relationship between agency and structure remains an important and active problem in social sciences more broadly (e.g. Giddens 1984; Bakewell 2010) and sociolinguistics specifically (e.g., Bucholtz & Hall 2005). In this work, I investigate the joint effects of speaker agency and social structure on the adoption of a local sound change.

The TRAP vowel in Philadelphia is currently undergoing a change from the traditional allophonic split to an incoming nasal split. While most speakers only produce one of these two allophonic systems, some speakers also produce variation between the two allophonic systems; this variation can be understood as an intermediate phase between the old and new TRAP systems (*author citation*). For more information about the phonology of TRAP in Philadelphia and about speaker classification, we refer the reader to Labov et al. (2016) and (*author citation*); here I focus primarily on an analysis of the sociolinguistic outliers. Using a combination of large-scale social network analysis and speakers' individual identity, I identify a community-wide pattern of change, demonstrating that the type of middle school and high school that participants attended plays a major role in the adoption of an incoming allophonic split, with local Catholic schools acting as a conservative linguistic force across the city.

A bipartite social network diagram (Dodsworth, 2014), shown in Figure 1, demonstrates the robust influence of school network on linguistic production: the new nasal split dominates the public schools, while the traditional split dominates the open admissions Catholic schools. Crucially, this community-wide network (analysis) also enables a more nuanced analysis of individual speakers. For example, while Justin P. and Christine L. appear on the surface to produce a similar linguistic profile (producing variation between the two allophonic systems), we see that their position within their respective social networks renders them quite different sociolinguistic profiles: while Christine is a leader of linguistic change within her community, Justin is a conservative holdout against the encroaching nasal split. A closer look at Justin and Christine's orientations towards Philadelphia as a city as well as their own aspirations and self identity provides a deeper insight into their variable use of both the old and the new allophonic systems.

By the same token, this network analysis also enables the identification of speakers who are linguistic outliers within their subcommunities: Kevin M. (the only traditional split graduate of a public school), Margaret G. (the only nasal split graduate of an Open Admissions Catholic high school), and Jake S. (whose data is unlike any other speaker in the data set). For each of these speakers, we find that their local orientation and personal aspirations are reflected in their linguistic production.

These findings demonstrate that the factors impacting the shift away from the traditional TRAP system in Philadelphia are best teased apart through a combination of social network analysis and a nuanced examination of individual identity factors.



**Figure 1:** Social network diagram of TRAP production by school network. Each speaker is represented by a colored circle, and is connected to their middle school and high school. Colors represent TRAP production. Schools are broken down into Open Admissions Catholic schools, Special Admissions Catholic Schools, Special Admissions Public Schools, and Open Admission Public schools, following Labov et al. (2016).

## **References:**

Bakewell, O. 2010. Some reflections on structure and agency in migration theory. *Journal of Ethnic and Migration Studies* 36(10): 1689—1708.

Bucholtz, M. & Hall, K, 2005. Identity and interaction: a sociocultural linguistic approach. *Discourse Studies* 7(4-5): 585—614.

Dodsworth, R. 2014. Network embeddedness and the retreat from Southern vowels in Raleigh, NC. *University of Pennsylvania Working Papers in Linguistics 20.2: Selected Papers from NWAV 42*.

Giddens, A. 1984. *The Constitution of Society: Outline of the Theory of Structuration*. University of California Press.

Labov, W., Fisher, S., Gylfadottir, G., Henderson, A., and Sneller, B., 2016. Competing systems in Philadelphia Phonology. *Language Variation and Change* 28(3).