

Comparing vowel pronunciations across singing and speaking in a community choir

Ben Gibb-Reid, Hasmik Gasparian, James Cave (University of York)

ben.gibb-reid@york.ac.uk

How do individuals adhere to their spoken accent when singing in a non-professional context? Previous studies suggest that choral singing is associated with standard southern standard British English (SSBE) (Marshall et al., 2024; Morrissey, 2008). However, in a community choir, music genres can shift between traditional choral pieces and pop music. The present data is unique in being taken from a choir that isn't classically trained and has a repertoire of songs which include gospel, pop, and hymns. British pop singers have been found to shift towards American features (Trudgill, 1997). Sociophonetic research on choir singing has been limited, though Marshall (2023) indicates that regional features can influence sung segmental realisations. In addition to predictions around accent and musical genre, there is evidence to show that singers typically produce more open vowels when singing than when speaking (Gibson & Bell, 2012). The present study investigates a community choir in Middlesbrough and assesses how speakers adapt their voice when singing together; specifically, the extent to which they maintain their Middlesbrough accent (see Llamas, 2007) or adopt American or SSBE features.

Four individuals born in (or relatively near) Middlesbrough were recorded over multiple sessions in 2024: two females and two males. All have been members of the choir for at least two years. Individuals were recorded speaking in interviews, chatting informally, and singing in the choir setting (each recording providing around 30mins of data). Recordings were segmented manually in Praat (Boersma & Weenink, 2022). Vowels were normalized using the Watt and Fabricius modified method in the *vowels()* package in R (Kendall & Thomas, 2022). Euclidean distance measures were used to interpret the distance between onsets and offsets for diphthongs (following Fabricius, 2007).

Preliminary results suggest that participants aligned more with SSBE when singing in the following ways: a wider FOOT/STRUT split, a backer GOOSE, a more diphthongal GOAT, and a more open MOUTH onset. Some Middlesbrough features were also maintained across speaking and singing: merged TRAP/BATH, and a relatively monophthongal FACE. Contrary to predictions around a General American pop style, a LOT/THOUGHT split was maintained speaking and singing. Participants also moved closer to one another in terms of overall vowel space when singing which potentially suggests a co-creation of a sung choir group style.

Fabricius, A. H. (2007). Variation and change in the trap and strut vowels of RP: A real time comparison of five acoustic data sets. *Journal of the International Phonetic Association*, 37(3), 293–320.

Gibson, A., & Bell, A. (2012). Popular music singing as referee design. In J. M. Hernández-Campoy & J. A. Cutillas-Espinosa (Eds.), *New perspectives on stylistic variation* (pp. 139–164). John Benjamins Publishing Company.

Kendall, T., & Thomas, E. R. (2022). *Vowels: Vowel Manipulation, Normalization, and Plotting in R*. (Version 1.1) [R]. <http://ncslaap.lib.ncsu.edu/tools/norm/>

Llamas, C. (2007). "A place between places": Language and identities in a border town. *Language in Society*, 36(4), 579–604.

Marshall, E. J. (2023). O Lo/r/d, open thou ou/r/lips: Rhoticity in choral singing from Glasgow and Cambridge. In R. Skarnitzl & J. Volín (Eds.), *Proceedings of the 20th International Congress of Phonetic Sciences*, Prague (pp. 2184–2188).

Marshall, E. J., Stuart-Smith, J., Butt, J., & Dean, T. (2024). Variation and change over time in British choral singing (1925–2019). *Laboratory Phonology*, 15(1).

Morrissey, F. A. (2008). Liverpool to Louisiana in one lyrical line: Style choice in British rock, pop and folk singing. In M. A. Locher & J. Strässler (Eds.), *Standards and Norms in the English Language* (pp. 195–220). Mouton de Gruyter.

- Simpson, P. (1999). Language, culture and identity: With (another) look at accents in pop and rock singing. *Multilingua - Journal of Cross-Cultural and Interlanguage Communication*, 18(4), 343–368.
- Trudgill, P. (1997). Acts of conflicting identity: The sociolinguistics of British pop-song pronunciation. In *Sociolinguistics* (pp. 251–265). Springer.