Show-Me Vowels: Phonetic variation in and around St. Louis, Missouri

Tivoli Majors

University of Missouri-St. Louis

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The city of St. Louis lies at the crossroads of several dialect areas. To the north and east, in cities such as Chicago, we find the Northern Cities Shift (NCS) characterized by higher [æ], fronter /a, lower and fronter /a, and lower and/or backer [e]. To the south, we find a dialect containing a rotation of the vowels in direct opposition to that found in the Northern Cities. To the west, the dialect is characterized by a low back vowel merger (LBM) of [a] and [a] that yields homophonous *cot-caught*.

This study is concerned with the expansion of two of these sound changes into greater St. Louis. The NCS, having spread down I-55 from Chicago, is well-established in St. Louis. The LBM is rapidly spreading eastward and appears to be encroaching upon St. Louis's outer suburbs.

Mergers spread at the expense of vowel distinctions (Labov 1994), whereas vowel chain shifts such as the NCS exist precisely to maintain distinctions between vowels – in a classic push-chain, one vowel encroaches on the phonetic space of another. To maintain distinction, the encroached-upon vowel shift away, encroaches upon another vowels, which then move away, and a chain shift arises. *The Phonological Atlas of North America* identifies several mechanisms available in North American dialects to stave off the LBM. The NCS, which involves the vowels merged in the LBM, is one of the major mechanisms thought to inhibit the LBM.

Acoustic examination of the vowel systems of 27 adolescents from Missouri indicates that young people in St. Louis are participating in the NCS in a limited way. The most robust characteristic of the NCS in St. Louis appears to be /a/ fronting rather than /æ/raising, which is thought to be the initial trigger of the NCS. In addition to the participation in the NCS, St. Louisans appear to be resisting the LBM fairly well, but some data suggests some young speakers may be succumbing to pressure to merge /a/ and /ɔ/, but in a decidedly front position, yielding a very different phonetic instantiation of the merger and possibly debunking the notion that presence of the NCS give a speaker immunity to the LBM.