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**Speech processing and dialect variation in the American Midwest**

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The Midwestern United States is divided into two dialect regions: North and Midland. The Northern dialect is characterized by the clockwise rotation of the low and low-mid vowels in the acoustic-phonetic vowel space. The Midland dialect is characterized by back vowel fronting and the merger of the low back vowels. A series of experiments exploring the effects of dialect variation on spoken word recognition has revealed systematic linguistic processing costs associated with these dialect-based vowel system differences for Midwestern listeners. While word recognition performance in noise is equally accurate for both dialects, the patterns of errors that listeners produce reveal systematic confusions between phonologically different vowels that overlap in the acoustic-phonetic space across the two dialects. In addition, speeded lexical classification performance is highly accurate for both dialects, but performance is slower for Northern vowels than Midland vowels of the same phonological class. The results from these studies suggest that even in the absence of striking intelligibility differences between the two dialects, processing costs associated with the perception of dialect variation can be observed using traditional speech perception and spoken word recognition tasks.