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Modeling dialect-related variability in American English plosives

Thomas Purnell

University of Wisconsin, 1168 Van Hise, 1220 Linden Drive, Madison, WI 53706, USA

Socially motivated variation in speech often lies in the differential use of phenomena described in identical or near-identical terms. This paper investigates the hypothesis that dialect differences may result from the relative distribution of an acoustic characteristic with respect to trading relations with other co-varying characteristics, or by variations in the characteristic within regions of linguistic stability. Plosive variation among European American and African American English speakers in the upper Midwest is examined. Speakers from both dialect groups may produce plosives instead of interdental fricatives in syllable initial position, and devoice or glottalize apical plosives in syllable final position. Additionally, speakers of both dialects have been observed to hypervoice voiced plosives word-initially. The current experiment explores the boundary characteristics of a trading relations model within the plosive system of both dialect groups. The specific question addressed by the paper is whether the range of plosive variation suggests a shared property of non-standard dialects, or whether the relation among acoustic measures is dialect specific. Results are discussed in light of acoustic, perceptual and categorical stability.