

Implicit Imitation of Regional Dialects: Acoustic Analysis

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Spontaneous phonetic imitation, whereby speakers imitate the pronunciation of their conversation partners, has gained attention as a possible mechanism underlying language change. However, there has been some debate as to how much of this imitation is automatic as opposed to conscious style shifting, and to what extent it may be influenced by social factors such as gender, race, and conversational role (Babel, 2009; Pardo, 2006; Trudgill, 2008).

This study examined the effect of another social factor, regional dialect, on spontaneous phonetic imitation. Exposure to a dialect can improve performance on lexical decision tasks (Sumner & Samuel, 2009), and investigations using word-shadowing tasks have also found that imitation increases with exposure to the stimulus materials (Goldinger, 1998). Nye and Fowler (2003) reported more imitation of sequences that used English words and phonotactics than nonsense sequences that combined English sounds, suggesting an effect of lexical and phonological knowledge on imitation.

Thirty-one American English participants from three regional dialect groups (Northern, Midland, and "Mobile" participants from more than one region) listened to and repeated monosyllabic CVC English target words produced by three Northern and three Midland talkers. The shadowed responses were then compared with baseline readings and the target productions of the same words to assess imitation along four phonetic parameters: vowel quality, vowel duration, midpoint f₀, and f₀ trajectory.

Preliminary analyses revealed significant imitation of vowel quality (especially for the vowels /a/ and /ae/), vowel duration, and midpoint f₀, but divergence in f₀ trajectory, suggesting that not all aspects of the speech signal are imitated to the same degree. In addition, Midland shadowers imitated vowel quality and f₀ trajectory more than other shadowers, while Northern shadowers imitated vowel duration more than other shadowers. There were no significant effects of stimulus dialect, however, suggesting that participant dialect is a more important factor in imitation than target dialect. These results are consistent with Babel's (2009) suggestion that phonetic imitation is not automatic in all circumstances and that while social factors may influence imitation, they are constrained by each shadower's pre-existing repertoire of production targets.

Babel, M. E. (2009). *Phonetic and Social Selectivity in Speech Accommodation*. Unpublished dissertation, University of California, Berkeley, Berkeley.

Goldinger, S. D. (1998). Echoes of Echoes? An Episodic Theory of Lexical Access. *Psychological Review*, 105(2), 251-279.

Nye, P. W., & Fowler, C. A. (2003). Shadowing latency and imitation: the effect of familiarity with the phonetic patterning of English. *Journal of Phonetics*, 31, 63-79.

Pardo, J. S. (2006). On phonetic convergence during conversational interaction. *Journal of the Acoustical Society of America*, 119, 2382-2393.

Sumner, M., & Samuel, A. G. (2009). The effect of experience on the perception and representation of dialect variants. *Journal of Memory and Language*, 60, 487-501.

Trudgill, P. (2008). Colonial dialect contact in the history of European languages: On the irrelevance of identity to new-dialect formation. *Language in Society*, 37, 241-280.