

Bull or bowl? A production study of prelateral back vowel mergers in Pacific Northwest English

English spoken in the Pacific Northwest has formed over 200 years through a unique dialect contact situation, created by several periods in which large, often sudden influxes of immigrants came from many different locales. The first publication of a large sociophonetic study of Pacific Northwest English (Wassink, 2015) established several linguistic variants characteristic of the region. One characteristic not mentioned by Wassink is prelateral merger of BOWL /ol/ and BULL /ʊl/, although Stanley (2017) did show some evidence of merger of /ʊl/ and /ol/ in Cowlitz County, Washington, and merger of prelateral back vowels in the American West is well-attested (DiPaolo & Faber, 1990, McLarty, Kendall & Farrington 2016). Squizzero (2009) determined via a phonetic perceptual experiment that native Pacific Northwesteners were unable to correctly categorize /ol/ and /ʊl/ at a level above chance when listening to words in isolation pronounced by a speaker from the region with a difference in F1 of 101 Hz at the vowel's midpoint. The present study draws on data from Wassink's English in the Pacific Northwest Project (2015) to acoustically examine a sample of 10 speakers across two generations and two sociolinguistic styles to establish the existence of merger. Between 23 and 27 prelateral tokens per speaker were measured and compared to each speaker's general vowel space. A proportional measure approach was taken for measuring F1 and F2. F1 and F2 were modeled using polynomial functions and compared using Smoothing Spline ANOVA (see Koops 2010, Wassink & Koops 2013, Risdal & Kohn, 2014). A description of the quality of the merger and possible near-merger will be presented through analysis of vowel/vocoid trajectory and duration.

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