Pre-velar raising and the California Shift in Nevada English

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Pre-velar raising of /ɛ/ and /æ/ has been identified in a number of North American dialects, particularly in the Wisconsin/Minnesota area (ANAE 2006, Purnell 2008, Zeller 1997). Recently, pre-velar raising has also been observed in the Pacific Northwest, primarily in Washington State (Freeman 2013, Wassink 2015). Recent research by Becker et al. (forthcoming) suggests that this feature can also be found in Portland, Oregon. However, younger speakers in Portland also exhibit incoming vowel features associated with the California Vowel Shift. Since the CVS involves retraction of /ɛ/ and /æ/, pre-velar raising in this variety suggests an incoming alternative norm which is unexpected in speakers with CVS features.

Recently, Fridland, Kendall, and Fickle (2015) found that retraction of /æ/ and /ɛ/ is also found in Nevada, while a subset of speakers simultaneously showed a pre-velar split in the /ɛ/ but not the /æ/ class. Gunter, Clayton, and Fridland (2016) examined the vowel system of 10 younger and 10 older Nevadans and found evidence for pre-velar raising as well as retraction of /ɛ/, led primarily by younger women, i.e. both pre-velar raising and features of the CVS. This study also found a strong positive correlation between LEG raising and degree of /ɛ/ retraction, which suggests that tokens affected by velar pinch are resistant to retraction. Here, we explore this relationship between pre-velar raising and CVS retraction, expanding to look at data from both the /e/ and the /æ/ class to consider whether in Nevada, in contrast to findings for Portland, both shifts are led by the same group of speakers.

We also begin to more deeply consider what might motivate the pre-velar raising we have found among a subset of our speakers. There are at least two possible explanations for the degree of LEG raising in /ɛ/ in Nevada. The first is phonetic: just as pre-lateral back vowels are resistant to fronting, pre-velar /ɛ/ is resistant to retraction due to velar pinch, which raises F2 and depresses F1. But as retraction becomes more entrenched, we may expect to see pre-velar tokens follow. Initially, though, we would expect 'pinched' tokens to be more resistant to retraction. The view that pre-velar raising is simply a co-articulatory effect is consistent with Bauer and Parker's findings (2008). However, some work suggests speakers may instead have re-phonologized tokens of /æ/ and /ɛ/: it is possible that speakers are confused about word-class affiliation, as has been suggested by Zeller (1997) and Wassink and Riebold (2013). In this scenario, pre-velar /e/ and pre-velar /ɛ/ tokens are reanalyzed into the same vowel class. Thus, raised /ɛ/ will fail to retract while the other members of the /ɛ/ class do. We hypothesize that the tendency for the same speakers in Nevada to show both advanced CVS retraction and LEG and LAG raising provides more support for the co-articulatory basis for pre-velar raising; otherwise, we shouldn't find a correlation between retraction and raising. In other words, why would it be more likely that only retracted speakers re-phonologize pre-velar tokens?

We will also discuss our ongoing work on testing the word-class affiliation hypothesis by using a vowel-categorization task, following Di Paolo (1988, 1992). If participants have reassigned pre-velar tokens of /ɛ/ to the /e/ class, then they should assign words like *beg* to the same class as words like *date, safe,* or *hay*.

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