

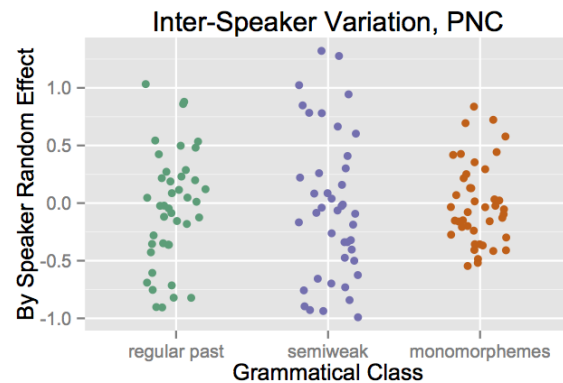
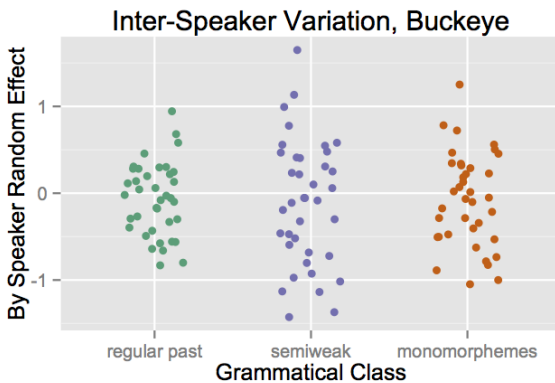
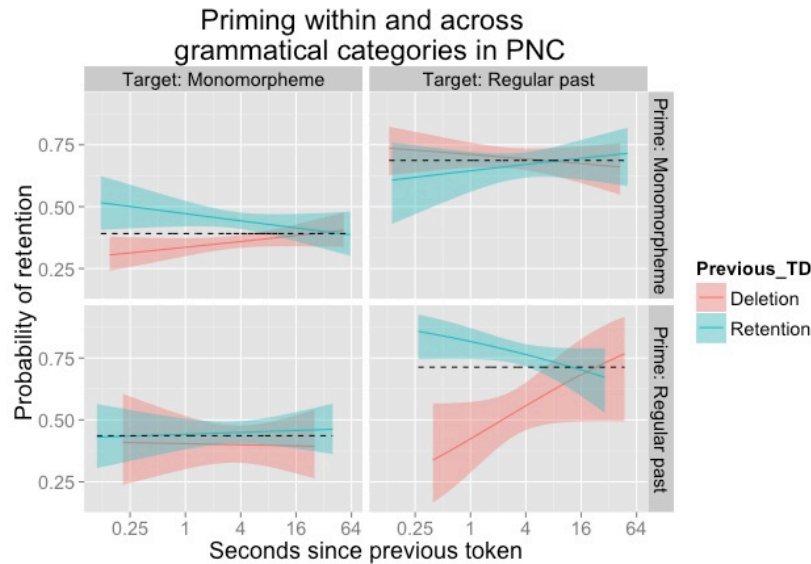
## Deconstructing TD Deletion

Where biological sciences have their model organisms like fruit flies and rats, variationist sociolinguistics has TD deletion. There have been a number of models proposed to explain the observed morphological effect on TD deletion (monomorphemes < semiweaks < regular past), including its original variable rule formulation in Labov, Cohen, Robins & Lewis (1968), Guy's (1991a, 1991b) expansion of that model into lexical phonology, OT formulations (Kiparsky, 1993; Bermúdez-Otero, 2010), as well as some models which eschew morphological structure altogether (Bybee, 2001). The common feature of these models is their assumption that TD deletion is a single process. In this paper we problematize this assumption using data from the Buckeye Corpus (N=8,006) (Pitt et al 2007) and a subset of the Philadelphia Neighborhood Corpus (N=10,189) (Labov & Rosenfelder 2011).

We bring two kinds of quantitative evidence to bear on the question of where TD variability originates. First, we show that there is an effect of priming within grammatically-matched prime/target pairs, but that this effect does not extend across grammatical categories. In other words, deletion or retention in a monomorpheme promotes re-use of the same variant in a subsequent monomorpheme, but does not affect the variant choice in a subsequent regular past tense token. We suggest that this result suggests the existence of separate phonological processes affecting monomorphemes and verbal morphology.

Second, we show that the rates of both inter-speaker and inter-lexical variance are small and uniform for monomorphemes and past tenses but are significantly larger for semiweak verbs. This result in combination with previous research showing that children don't affix /+t/ to the semiweak verbs (Guy & Boyd, 1990; Roberts 1997; Smith, Durham & Fortune 2009) lead us to argue that there are two distinct underlying processes affecting semiweak verbs, morphological and phonological, and outline a model that derives the correct quantitative predictions.

These results point to at least three distinct processes (two phonological, one morphological) that produce the complex pattern of surface variation that has been called TD deletion in the literature. This is incompatible with previous accounts presuming a single deletion process.



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