

T/D-deletion in British English revisited: Evidence for the long-lost morphological effect

Maciej Baranowski & Danielle Turton

University of Manchester and Newcastle University

One of the unsolved problems regarding t/d-deletion (whereby word-final coronal consonants are lost in coda clusters) is the lack of a morphological effect found for British English. Since Guy (1991), many studies of American speech communities have replicated the effect that monomorphemes (e.g. *mist*) delete t/d more frequently than past-tense forms (e.g. *missed*). However, this effect has not been found in previous studies of British English. Tagliamonte and Temple (2005) were the first to report the absence of this, on their 40 speakers from York, although a weak trend could be observed in their data.

Sonderegger et al.'s (2011) study of 10 reality TV show contestants showed a small effect of morphological class, but this disappeared once preceding segment was accounted for in the mixed-effects models. Guy et al.'s (2008), in their study of New Zealand English argue that lexical frequency can account for most of the variation in their data, as do Renwick et al. (2013). However, these studies use comparably small corpora to extract their frequency information, which may not be reliable. Walker (2012) finds no effect of frequency through examination of four different corpus methods.

Our large-scale study is based on a sample of 95 speakers of Manchester English, stratified by age, gender, socio-economic status, and ethnicity. The informants were recorded during sociolinguistic interviews, supplemented with word list reading. Five socio-economic levels, based on occupation, are distinguished (from lower-working to upper middle).

The interviews are transcribed in ELAN and forced-aligned using the Forced Alignment and Vowel Extraction suite (Rosenfelder et al. 2011). The Handcoder Praat script (Fruehwald & Tamminga 2015) is used to locate every token of the variable in the sound file (excluding tokens with a following /t/ or /d/) and play it for auditory analysis, speeding up the coding of the dependent variable considerably, and automating the coding of phonological environment.

The data are subjected to mixed-effects modelling in R, with fixed effects including linguistic factors (morphological status of the word, preceding and following sound, and voicing), and social factors (age, gender, socio-economic status, ethnicity, and style), with speaker and word included as random effects. Zipf-scaled frequency measures were taken from SUBTLEX-UK (van Heuven et al. 2014), which is superior to other commonly used corpora, such as CELEX or the BNC, due to its size and improved lexical decision times.

The results show the existence of the morphological effect between monomorphemes and past-tense forms (Fig. 1). This effect is robust, and remains when preceding segment is introduced into the model, alongside the effects listed above. Voicing, following and preceding segment are also significant. Moreover, the effect of frequency is not significant in this dataset, in both Zipfian log-scaled frequencies from SUBTLEX and the BNC.

We conclude that previous studies have been premature in their dismissal of the morphological effect, and that the effect may come out with large enough datasets representing a coherent speech community. We also discuss the role of word frequency in analysis of this stable variable, and the importance of using reliable frequency measures in such investigations.



Figure 1: Morphological class effect

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