

Frequency and Phonological Variation: Evidence from Mexican American English

Bybee (2002) proposed a usage-based model of phonetically conditioned sound change. The model predicts that the rate with which words undergo change will depend on the frequency with which they are used in favorable contexts. Among other variables, Bybee tested the model on Santa Ana's (1991) Chicano English data on -t,d deletion from final consonant clusters, e.g., *mist-mis/Ø/* or *missed-miss/Ø/*, an often studied variable that shows similar patterning across a wide range of English dialects. She argued that the usage-based model provides a better explanation for the well-documented process of -t,d deletion than alternative models such as Guy's (1991) exponential model.

This paper reports convergent results of two tests of Bybee's model. The first test involves the reanalysis of more than 3,000 tokens of -t,d deletion in the English of Mexican Americans in an urban barrio in south Texas (Bayley, 1994). In the second test, we examined a similar amount of data collected from a south Texas rural community. In contrast to Bybee, however, who performed multiple chi-square tests on Santa Ana's data, we performed multivariate analysis with VARBRUL, which allowed us to determine the relative strength of a range of factors, including frequency. Results of these analyses show that frequency has at most a minor effect. In the rural data, frequency is not significant. In the urban data, frequency is only a fourth-order linguistic constraint, trailing behind morphological class and the features of the preceding and following segments. Moreover, contrary to the predictions of Bybee's model, and similar to the results reported in Myers and Guy (1997), separate analyses of the urban data by morphological class show a significant frequency effect only for monomorphemes, not for regular past-tense verbs. That is, when we find a frequency effect, it appears to operate only post-lexically. These results suggest that the role of frequency in phonological variation and change has been considerably overestimated.

References

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