

Production planning effects on variable contraction in English

Variationist studies traditionally identify conditioning factors as falling into one of two types: “external” factors represent non-linguistic characteristics of the speaker or situational context; “internal” factors comprise linguistic elements surrounding the variable item (Cedergren & Sankoff, 1974). However, often unacknowledged (though see Preston, 2004) is that *psycholinguistic* factors, such as those implicated in language processing, must also play a role in shaping the surface distribution of linguistic variants. The present paper investigates this third category of conditioning factors by exploring the potential role of the incremental planning of speech on the variable contraction of *is* (e.g. *My mother{’s ~ is} a teacher*).

Psychologists have long recognized that speech is planned and produced in discrete units, and that task demands, such as a cognitive load, may compromise a speaker’s ability to plan ahead (Ferreira and Swets, 2002). This incremental, variable production planning has a natural connection to sociolinguistic variation, particularly in the case of sociolinguistic variables which are conditioned by a linguistic element to their immediate right: if the rightward element has not yet been planned, it should not be available to condition the variable that precedes it. Thus, the distribution of variants of a rightward-conditioned variable should differ depending on whether the rightward element has been planned. This has been tested for *ing/in’* variation (M. Wagner, 2012) and *t,d*-deletion (Tanner et al., 2015); we add a case study of *is*-contraction, well-known to be conditioned by the type of constituent to the right of the *is* (Labov, 1969), to this literature.

We extracted 336 tokens of *is* after non-pronoun subjects from the Switchboard corpus (Godfrey et al., 1992). Tokens were coded as either contracted or uncontracted, and, following M. Wagner (2012), the duration of the word following the *is* was used as a proxy for advance planning, with planning interpreted as less likely the longer the following word’s duration. To control for differing word lengths, only tokens in which the word following the *is* was disyllabic were used.

We analyzed the data using mixed-effects logistic regression in R, with a random effect of speaker and fixed effects of subject length, preceding segment, following constituent type, following word duration (log-transformed), and an interaction term between the latter two. If production planning does shape the distribution of variants in this case, we should expect to find a significant interaction between following constituent and our planning proxy. However, we find no such interaction: the effect of following constituent is significant, as expected ($p = 0.01$), but its interaction with following word duration is not ($p = 0.33$).

This result differs from those of M. Wagner (2012) and Tanner et al. (2015), who find a following segment effect on their variables to be mitigated when advance planning is unlikely. However, these seemingly contradictory findings can be explained if advance planning facility differs for phonological versus syntactic elements, as V. Wagner et al. (2010) propose. We draw conclusions from our findings for the nature of grammatical architecture and the cognitive mechanisms that derive varying linguistic forms.

References

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