

Intraspeaker priming of sociolinguistic variation: Cognitive and linguistic complexity

Meredith Tamminga (University of Pennsylvania)

tamminga@ling.upenn.edu

There is growing interest in the cognitive mechanisms underpinning the production of sociolinguistic variation by individual speakers. In this paper I take within-speaker self-priming effects in sociolinguistic variation (tendency to repeat the same variant recently used) as a window on the psycholinguistic processes involved in online sociolinguistic production. This perspective produces evidence for complexity of two types: multiple linguistic variables producing what looks on the surface like one variable, and multiple cognitive mechanisms leading to overall repetitiveness in quantitative patterns of variation. I argue 1) that the well-studied sociolinguistic variables ING (*workin'* ~ *working*) and TD (*ol'* ~ *old*) both involve distinct morphological and phonological processes; and 2) that what is usually called "priming" in sociolinguistics actually originates from two cognitive mechanisms: episodic memory for whole words, and repetition priming of affixes stored abstractly in the lexicon.

The data (ING: N=6,613, TD: N=6,188) are coded auditorily from 122 conversational sociolinguistic interviews with white Philadelphians in the Philadelphia Neighborhood Corpus. All reported effects come from logistic mixed effects regression with variant-by-speaker random slopes to account for different baseline rates of variation across speakers. I show that within both variables, words where the variable functions as a verbal suffix (*work-ing*, *kick-ed*) behave differently from words where the word containing the variable is monomorphemic (*ceiling*, *old*). Variant choice in polymorphemic words does not trigger re-use of the same variant in subsequent monomorphemic words, and vice versa; token pairs where the prime and target are of matched morphological status, however, do show priming. On this basis I argue that variation in the polymorphemic cases involves morphological alternations, while the variation in the monomorphemic cases arises from phonological variation.

I then show that the intraspeaker priming of morphological variation has two characteristics that set it apart from priming of phonological variation: the effect generalizes across different lexical items (use of *-in'* in *working* promotes subsequent use of *-in'* in *talking*) and decays significantly over about a minute. The phonological variables, in contrast, show variant choice facilitation only when the prime and target are the same word, but this lexically-specific effect is much longer-lasting. I suggest that this distinction is attributable to the cognitive origins of persistence for morphological and phonological variables. When the variable is a suffix, the allomorphs (e.g. *-in'* and *-ing*) are stored abstractly in the lexicon and are subject to repetition priming in lexical access, just like non-variable lexical items; this is consistent with demonstrations that suffix repetition induces priming in lexical decision experiments [1, 2]. Phonological variation, however, is retained only as part of episodic memories of the details of specific instances of whole words. The additional operation of episodic memory in morphological variation then gives rise to an observed lexical boost, whereby *workin'* → *workin'* is a stronger effect than *workin'* → *talkin'*.

The multifactorial account of intraspeaker priming in sociolinguistic variation is consistent with experimental results showing distinct roles for episodic and abstract factors in repetition and morphological priming [3, 4]. Pursuing such an account, particularly using conversational data to detect the operation of psycholinguistic processing as a complement to experimental work, promises to advance our understanding of how intraspeaker sociolinguistic variation is represented and produced by speakers at different grammatical levels, and how these differences may interact with memory and speech processing.

References: [1] Marslen-Wilson et al. (1996) CogSci proceedings, p. 223–227. [2] Van Wagenen (2005) MA thesis, UCLA. [3] Forster & Davis (1984) *Experimental Psychology* 10(4):680–698. [4] Kouider & Dupoux (2009) *Acta Psychologica*, 130:38–47