The sensitivity of persistence to subject animacy in AAVE third singular /s/

Many linguistic variables are conditioned by **persistence** – the tendency to reuse a recently-used variant. An inverse frequency effect, whereby the less-frequent variant more strongly promotes its own reuse, has been identified experimentally and in corpus data (Ferreira 2003, Szmrecsanyi 2006, Jaeger & Snider 2007). It is not known whether the inverse frequency effect reflects which variant is less frequent overall or which variant is less frequent within a linguistic context. We investigate persistence effects in third singular /s/ variation ("He sing(s)") in African American Vernacular English (AAVE). We demonstrate that this variable is persistent in a way that shows contextual sensitivity to the effect of animacy on /s/ realization (McLaughlin 2013). Furthermore, we show that the inverse frequency effect depends on the context of the prime rather than the target.

We use data from 583 interviews with African American children in the Frank Porter Graham Corpus. To measure persistence, each token (target) is coded for the presence or absence /s/ in the previous token (prime), and the distance between target and prime in orthographic words. Subject animacy is operationalized as human vs. non-human (following Rosenbach 2005).

Figure 1 shows that third singular /s/ (N=1773) is subject to a robust persistence effect. The red line shows that previous absence of /s/ depresses the probability of using /s/ subsequently, while the blue line shows that the previous presence of /s/ increases the probability of subsequent /s/. These effects are of roughly equal magnitude as expected with the mean /s/ presence near 50%. We know from McLaughlin (2013), though, that /s/ absence is the minority variant with inanimate subjects while /s/ presence is the minority variant with animate subjects (Figure 2). The general symmetry of the persistence effect, then, might not be expected to hold across these different contexts. Further, if it matters to persistence which variant is rare in a given context, it then becomes relevant to ask whether persistence is sensitive to the context of the target or the prime. Figure 3 reveals that the relative persistence effects caused by /s/ presence and absence can differ across linguistic contexts, and specifically are sensitive to variant frequencies within the prime. This figure plots the size of the persistence effect with inanimate-subject targets only (N=419), measured as the absolute value of the log-odds divergence from the subset mean. The left facet shows that when the prime has an animate subject, the persistence effect is stronger for presence than absence because presence is the less frequent variant. The right facet shows that when the prime has an inanimate subject, the persistence effect is stronger for absence than presence because absence is the less frequent variant.

Our findings are novel in several ways: persistence has not previously been documented for third singular /s/, AAVE, or children's naturalistic production. Furthermore, we show that the inverse frequency effect applies at the level of conditioned variables. These results boost our confidence in the psycholinguistic reality of persistence as well as the validity of the recently-documented animacy effect.
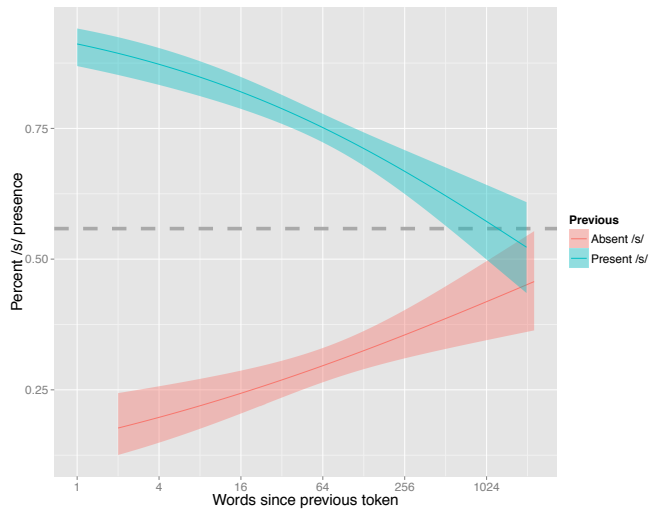
Figure 1: Persistence of third singular /s/.

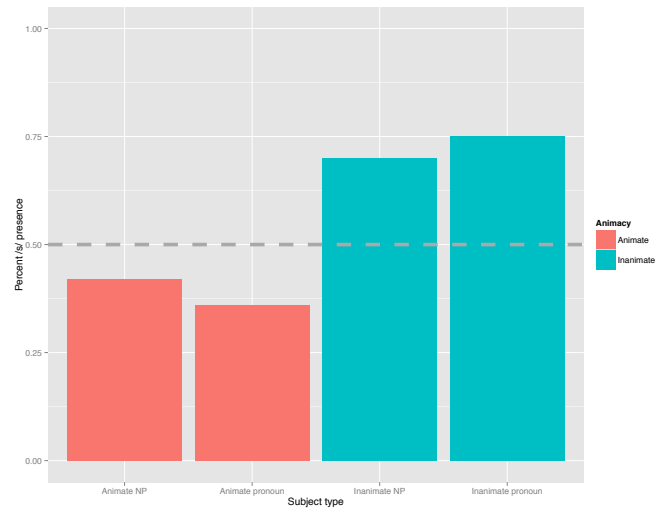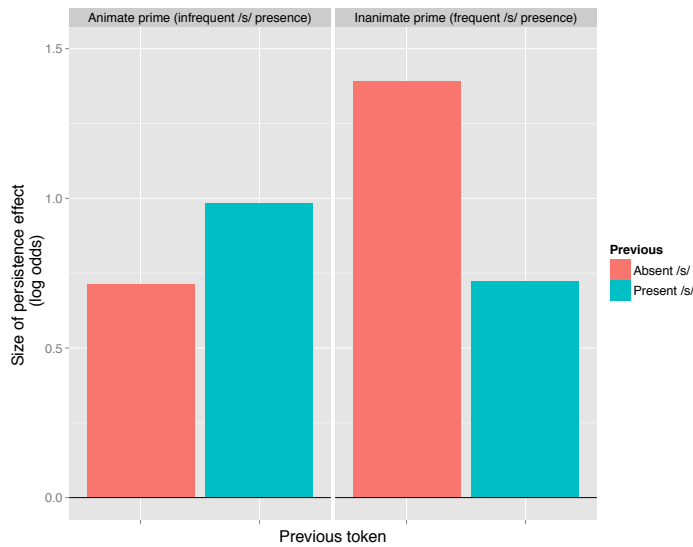*Figure 2: Percent /s/ presence across subject types (reproduced from McLaughlin 2013).*

Figure 3: Contextual persistence effects from animate and inanimate primes on inanimate targets.

References

Ferreira, V. S. (2003). The persistence of optional complementizer production: Why saying "that" is not saying "that" at all. *Journal of Memory and Language,* 48:379-398.

Jaeger, T. F. and Snider, N. (2007). Implicit learning and syntactic persistence: surprisal and cumulativity. *University of Rochester Working Papers in the Language Sciences,* 3(1):26–44.

McLaughlin, Brittany. (2013). Animacy effects on verbal -s and copula deletion in African American Vernacular English. Paper presented at the 2013 Annual Meeting of the Linguistic Society of America, Boston, January 6, 2013.

Rosenbach, Anette. (2005). Animacy versus weight as determinants of grammatical variation in English. *Language* 81(3):613-644.

Szmrecsanyi, B. (2006). *Morphosyntactic persistence in spoken English: A corpus study at the intersection of variationist sociolinguistics, psycholinguistics, and discourse analysis.* Mouton de Gruyter.

Tamminga, Meredith. (2013). Persistence in the production of linguistic variation. Dissertation proposal, University of Pennsylvania.