**Syntactic priming can drive syntactic change**

**INTRODUCTION**

Syntactic priming is the tendency to repeat sentence structures that have recently been used (Bock 1989).

Syntactic priming reduces speech latency, allowing speech to start more quickly and proceed more smoothly (Corey & Scheepers 2002).

The CEO gave his employee a bonus.

The teacher gave an assignment to the student.

**Corpus evidence**

First we look for evidence that syntactic priming is present in the diffusion of a structural change in progress. Here we analyze the nonconcord existential, a nonstandard structure in American English.

Existential (there is/are + NP) structures exhibit concord when the copula and following NP agree, as in there’s one book. Existentials exhibit nonconcord when the copula and following NP do not agree, as in there are three books.

The Switchboard corpus provides several examples of conversations in which speakers who use nonconcord existentials switch to nonconcord existentials after hearing their interlocutors use them. This suggests that syntactic priming may be a factor in nonconcord use.

Next, we asked if nonconcord existentials consistently follow other nonconcord existentials. Since the Switchboard corpus has few observations per speaker, we turn instead to the Buckeye corpus.

More subjects produced nonconcord existentials after other nonconcord existentials than after concord existentials, as evident from the above plot. Nonconcord beggars more nonconcord.

This pattern could be the result of speaker-specific effects. For example, the observed trend could be a result of some speakers exclusively using nonconcord existentials. Does the evidence of priming persist after accounting for such possibilities?

To isolate the role of priming in the production of nonconcord existentials, we performed two logistic regressions on the forty approximately hour-long interviews of the Buckeye corpus. On the next panel, we report the response variables, the predictors, and the statistically significant predictors in these regressions.

**Simulation evidence**

We investigated the role of syntactic priming in the dynamics of syntactic change by incorporating priming into a simulation of iterated production and comprehension.

The simulation created a population of language speakers, each of which learned a grammar with 3 permissible word orders. Speakers within the same generation conversed with each other, and the transcripts of their conversations served as input to the next generation of speakers.

Model details are posted at http://linguistics.berkeley.edu/~shira/CUNY2009.html.

The following example illustrates how the model simulates a change in word order without reanalysis.

Each word belongs probabilistically to several word classes.

A sentence occasionally has a recent parse that is suboptimal, but whose score passes the threshold. The words in such a sentence gain increased probability of belonging to other classes. Over several generations, these tendencies compound, causing words to switch classes and parses to change in frequency.

The result can be a change in standard word order.

Thus, syntactic priming in comprehension and production enables structural innovation and diffusion. Ongoing investigations are testing different values of (1) threshold, (2) memory size, and (3) grammatical structure.

**References**

