

The conserving effect of morphosyntactic persistence in language change

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Usage-based approaches to language change have demonstrated the relevance of frequency for language change in that the repeated use of a linguistic element leads to its conservation (Bybee 2006). We propose that in a similar fashion, morphosyntactic persistence – the fact that due to recent activation, there is a higher likelihood of the same form being used in subsequent discourse – particularly strengthens obsolescing constructions and therefore has a conserving effect in language change. The reason behind this assumption is that the strength of persistence effects is dependent on surprisal: the less expected a linguistic element, the stronger its persistence effect (Jäger & Snider 2013). Obsolescing constructions will therefore display stronger persistence effects than more productive constructions.

To substantiate this claim, we employ multivariate analysis in R (logistic regression), as well as conditional inference trees and random forests (cf. Tagliamonte & Baayen 2012), to analyze the alternation between the Spanish past subjunctive forms ending in *-ra* and *-se* (as in *comiera* and *comiese* ‘had eaten’) in a corpus of nearly 4000 past subjunctive forms taken from the *Corpus del Español* (Davies 2002). *-Se* has been gradually replaced by *-ra* since the 13th century, leading to a low relative frequency of *-se* in contemporary Spanish. This makes the alternation a perfect example for the study of conserving effects in language change.

Our results reveal that persistence and frequency effects are the best predictors of the alternation. First, the probability of a prior *-se* to lead to the choice of *-se* over *-ra* in the following context is significantly greater than the probability of a prior *-ra* to lead to *-ra* over *-se*. Second, *-se* is significantly more likely to occur with high-frequency verbs than low-frequency verbs. Third, although *-se* is basically restricted to 3rd person singular morphology in contexts without persistence, thus demonstrating *paradigmatic atrophy*, when primed by *-se* these restrictions are drastically reduced.

The fact that persistence to some degree counteracts the paradigmatic atrophy experienced by obsolescing forms suggests that the persistence effect does not only activate a certain instantiation of the construction (such as *comiese*), but rather activates the entire representation of the construction (in this case, the V + *-se* construction). Persistence thereby produces an increase in abstract constructional knowledge corresponding to a rise in the overall productivity of the obsolescing form. Consequently, persistence should be viewed not only as a diagnostic of grammatical status (see Tamminga & Ecay 2014), but also as a factor that influences language change.

Our results shed important light on the relationship between frequency and persistence as competing factors in language change. Although both can result in conservation, the conserving effect of frequency can lead to irregularity (such as the paradigmatic atrophy of Spanish *-se* forms). However, persistence can serve to temporarily reestablish regularity with the result that, in persistence contexts, *-se* forms display lesser paradigmatic atrophy than in non-persistence contexts. The study therefore illustrates how persistence exerts not only well-known syntagmatic effects but also paradigmatic effects on language variation and change.

References

- Bybee, Joan L. (2006): "From usage to grammar: the mind's response to repetition", in: *Language* 82 (4), 711-733.
- Davies, Mark (2002): *Corpus del español (100 million words, 1200s-1900s)*. Available online at <http://www.corpusdelespanol.org>. Last access: 23 March 2015.
- Jäger, Florian & Neal E. Snider (2013): "Alignment as a consequence of expectation adaptation: Syntactic priming is affected by the prime's prediction error given both prior and recent experience", in: *Cognition* 127, 57-83.
- Tagliamonte, Sali & Harald Baayen (2012): "Models, forests and trees of York English: Was/were variation as a case study for statistical practice", in: *Language Variation and Change* 24 (2), 135-178.
- Tamminga, Meredith & Aaron Ecay (2014): "Priming as a diagnostic of grammatical status: two case studies". Talk given at Penn Linguistics Conference 38.