The interaction of usage and function in the emergence of constructions

Florent Perek & Adele Goldberg
Universität Basel & Princeton University

One aspect of linguistic generalizations particularly emphasized by Cognitive Construction Grammar (Goldberg, 2006) is their emergence from exemplars of language use. A consequence of this approach is that statistical regularities found in usage are particularly important in shaping constructions. Compelling evidence for this view comes from a number of studies using an artificial grammar learning paradigm. For example, Wonnacott et al. (2008) and Wonnacott (2011) find that learners of a 'lexicalist' language, in which each verb is restricted to one construction, tend to be lexically conservative (with both familiar and novel verbs). They also show that if instead learners are exposed a class of alternating verbs, they are markedly more likely to assume other verbs also alternate.

One might assume on the basis of these and other studies that statistical regularities in the input play *the* determinant role in the emergence of constructions. However, the novel constructions used in these experiments are functionally identical, a situation that rarely occurs in natural languages. In this talk, we examine how statistical regularities interact with the function of constructions using results from an artificial language learning experiment in which both factors were manipulated (Perek & Goldberg, to appear).

The artificial language used in the experiment contained six novel verbs and two non-English word order constructions, SOV and OSV. In two of the three conditions, the novel constructions were distinguishable in terms of their discourse function, i.e., OSV order was exclusively used with a pronominal patient argument. As in previous work, when each verb was used in a single construction in the input (three verbs occurred exclusively in SOV and three in OSV), participants were lexically conservative, but the proportion of lexical conservatism was markedly lower when the constructions were functionally distinguished than when they were equivalent (67% *vs.* almost 100%). When only two of the six verbs were witnessed alternating (two verbs occurred only in SOV, two only in Pro-SV, and two occurred in both equally often), participated demonstrated a ready tendency to use a previously unwitnessed verb~construction combination, in that they used the most contextually appropriate construction with all verbs regardless of their attested behavior. In sum, although speakers could learn the specifics of the input, they showed a tendency to take advantage of a functionally-distinct alternation, even when no verbs were witnessed alternating, and especially when even a low proportion of verbs was witnessed alternating. Our results indicate that while usage is important, the functions of particular constructions play a key role in determining which dimensions are relevant for generalization.

Goldberg, A. E. (2006). *Constructions at work: The nature of generalization in language*. Oxford: Oxford University Press.

Perek, F. & Goldberg, A. E. (to appear). Generalizing beyond the input: the functions of the constructions matter.

Wonnacott, E. (2011). Balancing generalization and lexical conservatism: An artificial language study with child learners. *Journal of Memory and Language* 65, 1–14.

Wonnacott, E., E. Newport, and M. Tanenhaus (2008). Acquiring and processing verb argument structure: Distributional learning in a miniature language. *Cognitive Psychology* 56, 165–209.