Causatives of the world, unite! How efficiency can explain cross-linguistic generalizations

Natalia Levshina Leipzig University natalevs@gmail.com

Keywords: causatives, efficiency, frequency, iconicity, typology, corpora, artificial language learning

There is a widespread view in typological literature that forms and functions of causative constructions in languages of the world are correlated (e.g. Haiman 1983, Comrie 1989, Dixon 2000). In particular, it is argued that events that are more conceptually integrated are expressed by more cohesive or compact causative forms (e.g. lexical causatives), as in (1a), than events that are less conceptually integrated and which are often expressed by less cohesive forms (e.g. periphrastic causatives), as in (1b):

- (1) a. Harry Potter raised the goblet to his lips.
 - b. Harry Potter caused the goblet to rise to his lips.

This correlation has been regarded as an instance of iconicity (Haiman 1983). In my talk, I will argue that it can be best explained by efficiency as the tendency to minimize cost-to-benefit ratio in language communication. This ratio is minimized when more frequent causative meanings are expressed by shorter forms and less frequent ones are expressed by longer forms (cf. Haspelmath 2008).

In order to support my proposal, I will present evidence from several different sources:

- a sample of 59 typologically and genetically diverse languages;
- frequencies of different causation types from spoken corpora of English, Lao and Russian;
- an artificial language learning experiment.

The typological data demonstrate a) that conceptual integration is not the only distinction that is correlated with formal integration, or compactness, cross-linguistically (cf. Dixon 2000), and b) that the conceptual integration itself is more correlated with formal length than with grammatical autonomy or linguistic distance, as iconicity theory would predict, or with productivity, as argued by Shibatani and Pardeshi (2002). The corpus data clearly show that the functions that are expressed by the more compact forms are also the more frequent ones in each of the three languages. Finally, the artificial language learning experiment demonstrates that language users have a bias towards choosing shorter causative forms to express more frequent causative situations, and longer forms to express less frequent ones, independently of the degree of conceptual integration.

All this evidence converges, indicating that efficiency is the best and the most parsimonious explanation of the cross-linguistic variation of causatives. In order to show that this account is not teleological (cf. Bybee 1999), I will provide a pragmatic model at the level of the speaker and the hearer in Keller's (1994) fashion, which involves mechanisms that are similar to Levinson's (2000) I- and M-implicatures, and the 'invisible hand' processes. I will argue that this model can account for the emergence and conventionalization of efficient form-function pairings in expression of causation and in other conceptual domains.

References

Bybee, Joan L. (1999). Usage-based phonology. In: Michael Darnell, Edith A. Moravcsik, Frederic J. Newmeyer, Michael Noonan & Kathleen Wheatley (eds.), *Functionalism and formalism in linguistics. Volume I: General papers*, 211–242. Amsterdam: John Benjamins.

Comrie, Bernard (1989). Language Universals and Linguistic Typology. Oxford: Blackwell.

Dixon, R. M. W. (2000). A typology of causatives: Form, syntax and meaning. In R. M. W. Dixon & Alexandra Y. Aikhenvald (eds.), *Changing valency: Case studies in transitivity*, 30–83. Cambridge: Cambridge University Press.

Haiman, John (1983). Iconic and economic motivation. Language 59(4): 781–819.

Haspelmath, Martin (2008). Frequency vs. iconicity in explaining grammatical asymmetries. *Cognitive Linguistics* 19(1): 1–33.

Keller, Rudi (1994). *On Language Change: The invisible hand in language*. London: Routledge. Levinson, Stephen C. (2000). *Presumptive Meanings: The theory of generalized conversational implicature*. Cambridge, MA: MIT Press.

Shibatani, Masayoshi & Prashant Pardeshi. (2002). The causative continuum. In: M. Shibatani (ed.), *The Grammar of Causation and Interpersonal Manipulation*, 85–126. Amsterdam: Benjamins.