

Learning argument structure generalizations*

ADELE E. GOLDBERG, DEVIN M. CASENHISER,
and NITYA SETHURAMAN

Abstract

General correlations between form and meaning at the level of argument structure patterns have often been assumed to be innate. Claims of innateness typically rest on the idea that the input is not rich enough for general learning strategies to yield the required representations. The present work demonstrates that the semantics associated with argument structure generalizations can indeed be learned, given the nature of the input and an understanding of general categorization strategies. Examination of an extensive corpus study of children's and mothers' speech shows that tokens of one particular verb are found to account for the lion's share of instances of each argument frame considered. Experimental results are reported that demonstrate that high token frequency of a single prototypical exemplar facilitates the learning of constructional meaning.

Keywords: learning; constructions; frequency; categorization.

1. Introduction

For some time, linguists have observed that, within a given language, there exist certain formal patterns that correlate strongly with the meaning of the utterance in which they appear. Such correlations between form and meaning have been variously described as linking rules projected from the main verb's specifications (e.g., Bresnan and Kanerva 1989; Davis 1996; Dowty 1991; Grimshaw 1990; Jackendoff 1983), as lexical templates overlain on specific verbs (Hovav and Levin 1998), or as phrasal form and meaning correspondences (*constructions*) that exist independently of particular verbs (Goldberg 1995; Jackendoff 2002).

One way to account for the association of meanings with particular forms is to claim that the association is innate (Baker 1988; Chomsky