

Uncovering the Richness of the Stimulus: Structure Dependence and Indirect Statistical Evidence

Florencia Reali, Morten H. Christiansen
Department of Psychology, Cornell University

Abstract

The *poverty of stimulus argument* is one of the most controversial arguments in the study of language acquisition. Here we follow previous approaches challenging the assumption of impoverished primary linguistic data, focusing on the specific problem of auxiliary (AUX) fronting in complex polar interrogatives.

We develop a series of corpus analyses of child-directed speech showing that there is indirect statistical information useful for correct auxiliary fronting in polar interrogatives and that such information is sufficient for distinguishing between grammatical and ungrammatical generalizations, even in the absence of direct evidence. We further show that there are simple learning devices, such as neural networks, capable of exploiting such statistical cues, producing a bias toward correct AUX questions when compared to their ungrammatical counterparts. The results suggest that the basic assumptions of the poverty of stimulus argument may need to be reappraised.