

Retreat from overgeneralization errors: Broad verb classes are harder to induce than narrow classes

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Abstract

One of the biggest puzzles in language acquisition is concerned with how children retreat from overgeneralization errors in valence alternations, for example the ditransitive alternation. Pinker (1989) proposes that children are susceptible to overgeneralization when they acquire broad verb semantic classes initially and they recover when they acquire narrow verb classes later. To empirically test this hypothesis, we devised a computational framework that automatically induces verb classes from text data, by combining state-of-art word embeddings (Pennington, Socher & Manning, 2014) with graph algorithms (Steyvers & Tenenbaum, 2005; Von Luxburg, 2007). We selected three representative valence alternations from Levin (1993) and tested Pinkers hypothesis on five naturalistic language production corpora. Our results demonstrate that contrary to Pinkers predictions, broad verb classes are harder to induce than narrow classes and that semantic classes may not be the primary mechanism that accounts for childrens retreat from overgeneralization errors.