

# **Recursive Language is Learned by Using it, not by Exposure to it.**

**Fenna Poletiek**

Leiden University

**Padraic Monaghan**

Lancaster University

**Keywords:** ; ; ; ; ; ;

**Abstract:** How do we process complex sentences like the dog the man walks barks? How are hierarchical grammars actually learned? And what is actually learned? Syntactical rule knowledge or the skill to use the hierarchical system for communicating meaning? Three Artificial Grammar Learning experiments investigated this question. The first experiment tested learning after exposure to exemplars of a complex center embedded grammar. The test task was grammaticality judgments of new sentences. In two subsequent experiments, participants were exposed to the same artificial sentences, now with pictures displaying their meaning. A sentence-picture matching task tested their comprehension of new sentences of the complex grammar. No learning was found in the first experiment. However, participants did learn to ‘understand’ the meaning of the same test sentences (in Experiment 2 and 3) that participants in Experiment 1 were unable to judge the grammaticality of.