Explaning developmental differences in category learning using COVIS

Ingmar Visser
University of Amsterdam

Abstract: Categorization forms a primary cognitive ability. Recent models/theories of categorization propose that there are multiple systems underlying this ability: an implicit learning system and an explicit, verbal, system. One successfull neurocomputational model of categorization is COVIS (Ashby, 1998), which is used to explain eg categorization deficits in Parkinson's patients (Hélie, 2012). Here we study categorization in children and use COVIS simulations to explain developmental differences. Using changes in the rule-selection and perseveration parameters, we were able to explain developmental differences in a rule-based vs a family-resemblance task from Minda (2008).