The Development of Creative Search Strategies

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Abstract

What is creativity and how does it develop? Intuitively, it seems that children are often especially creative, but it is difficult to find measures that are precise and comparable across development. In this study we use a creative foraging task that involves the exploration of a high-dimensional space. This task precisely measures elements of creativity, which we compare between 4- to 8-year-olds and adults. We find that children show exploration-exploitation behavior in their creative search resembling adults search. However, children are more exploratory in nature - compared to adults, they spend a higher percentage of their search in exploration mode, and their exploitation phases are less optimal compared to adults. Moreover, the products of childrens creative search are more often unique, compared to those of adults; and younger children create more unique shapes than older children. Together, these results support the hypothesis that creative search may change across development, both in how the space of possibilities is navigated and what ideas are ultimately generated. These findings inform not only our understanding of why childrens learning may sometimes be superior than that of adults, but also may inform our understanding of creativity and the creative process across development.