

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

The Development of Creative Search Strategies

Permalink

<https://escholarship.org/uc/item/7634039b>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 42(0)

Authors

Hart, Yuval

Kosoy, Eliza

Liquin, Emily

et al.

Publication Date

2020

Peer reviewed

The Development of Creative Search Strategies

Yuval Hart

The Hebrew University of Jerusalem, Jerusalem, Israel

Eliza Kosoy

Berkeley, Berkeley, California, United States

Emily Liquin

Princeton, New Jersey, New Jersey, United States

Julia Leonard

University of Pennsylvania, Philadelphia, Pennsylvania, United States

Allyson Mackey

University of Pennsylvania, Philadelphia, Pennsylvania, United States

Alison Gopnik

Berkeley, Berkeley, California, United States

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.