

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Believing is Seeing: Children's Causal Beliefs Affect Visual Exploration and Prediction

Permalink

<https://escholarship.org/uc/item/27t848fq>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 31(31)

ISSN

1069-7977

Authors

Bonawitz, Elizabeth Baraff

Brenman, Stephanie

Schulz, Laura

Publication Date

2009

Peer reviewed

Believing is Seeing: Children's Causal Beliefs Affect Visual Exploration and Prediction

Elizabeth Baraff Bonawitz
MIT

Stephanie Brenman
MIT

Laura Schulz
MIT

Abstract: Does attention to variables change dependent on the beliefs of the observer and the context of the scene? Bonawitz, Lim, and Schulz (2007) found that children with different naïve theories of balance exhibited different patterns of exploratory play. Here, we ask whether beliefs and context influence how children visually explore a scene. We use childrens initial predictive beliefs about balance to group them according to their theories. Using an eye-tracker, we then compare childrens visual exploration of unevenly weighted blocks in two contexts: a causal context shows blocks just prior to balancing on a stand; a non-causal context shows blocks just prior to placement in a box. We find that children with different theories attend to different aspects of the objects in the causal scenes, but less so in non-causal scenes, suggesting that beliefs and context guide not only childrens exploratory play, but also their visual exploration of a scene.