

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

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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.