



Children's explanations for surprising events

Sally Berson & Lisa Feigenson

Department of Psychological and Brain Sciences, Johns Hopkins University



What kinds of explanations do children prefer for surprising events involving physical objects?

past work: teleological
(appeals to *purpose* or *function*)

Why is the knife sharp?



artifact

"So that it can cut things"

"Because it was filed down"

Why is the rock pointy?



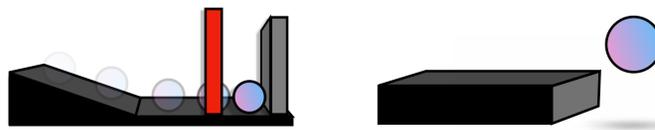
natural kind

"So that animals won't sit on it"

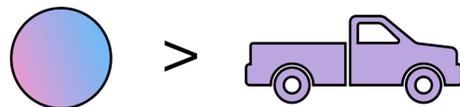
"Because bits of it chipped away over time"

but maybe...mechanistic?
(appeals to *underlying process*)

surprising physical events



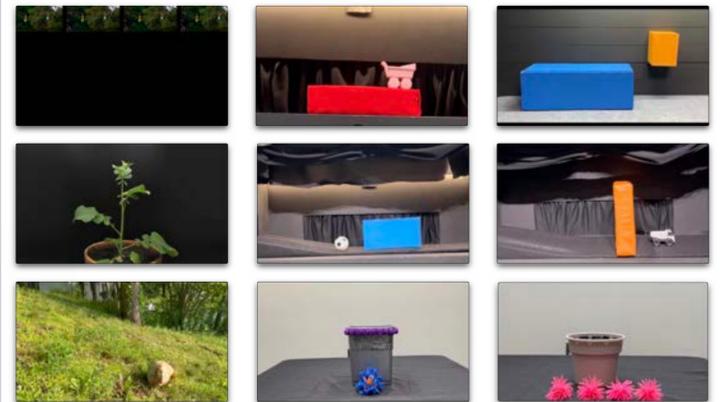
... drive explanation seeking in infants



method

Participants: 4-7-y/o children

control non-surprising surprising

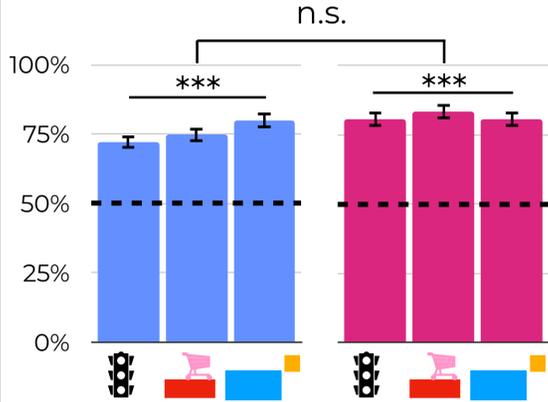


Why did [event] happen?
Is it because [explanation 1]
or
Is it because [explanation 2]?

Why did the block float?
Is it so that it wouldn't touch the ground?
Is it because there's a hidden string holding it up?
Is it because the block is orange?

experiments 1-2

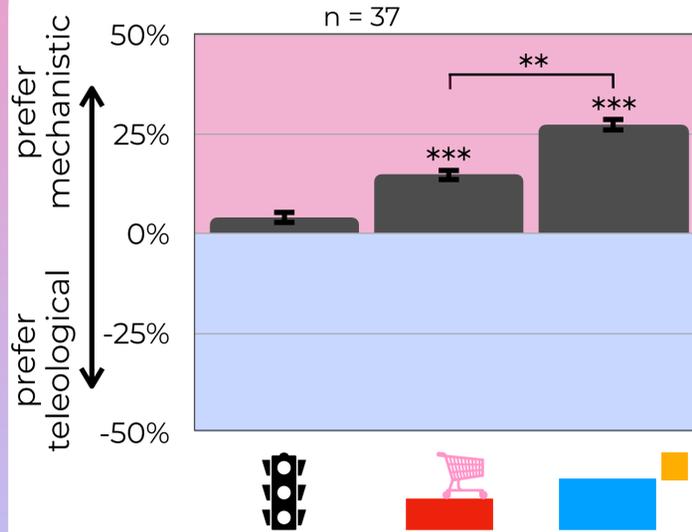
teleological or non-explanation? n = 25
mechanistic or non-explanation? n = 24



Children prefer **explanations** to non-explanations

experiment 3

teleological or mechanistic? n = 37



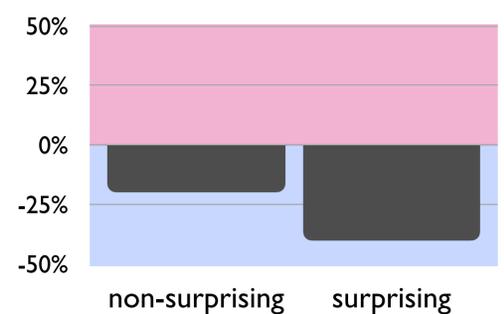
Children prefer **mechanistic** explanations for physical events, especially *surprising* ones

future directions

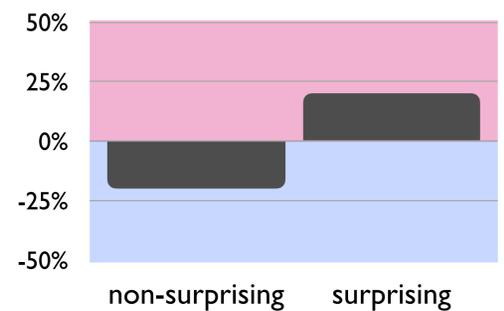
What *role* does surprise play in our explanations?

does surprise...

enhance existing preferences?

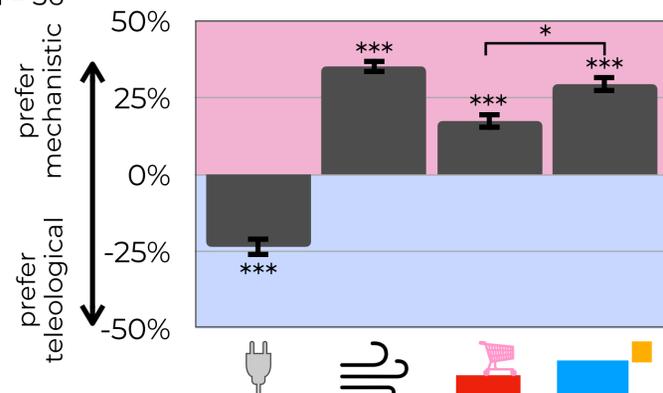
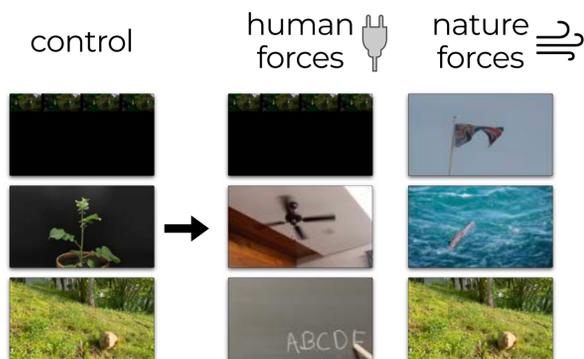


or drive mechanistic preferences?



experiment 4

teleological or mechanistic? n = 36



This preference even extends to forces of nature!