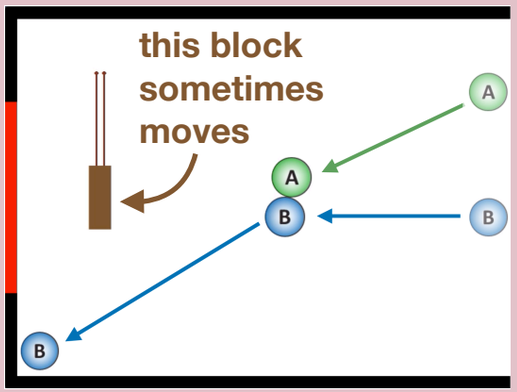
What explains causal judgments? Counterfactual versus hypothetical simulations

we do! Tobias Gerstenberg & Jingren Wang

What's the **question**?

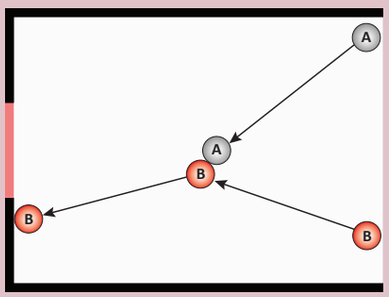


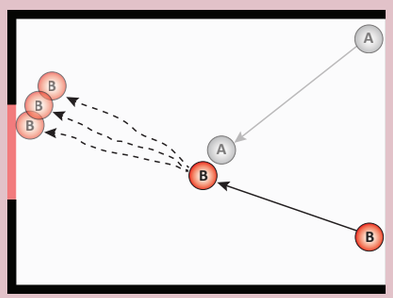
Did A prevent B from going through the gate?

What does the **model** say?

The **counterfactual** simulation model of causal judgment

People compare what actually happened ...





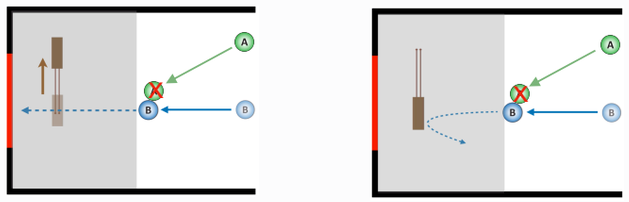
... with what **would have happened** if the cause hadn't been there.

Reviewer #2: But counterfactuals and hypotheticals don't come apart here!

So maybe **hypotheticals** are enough?

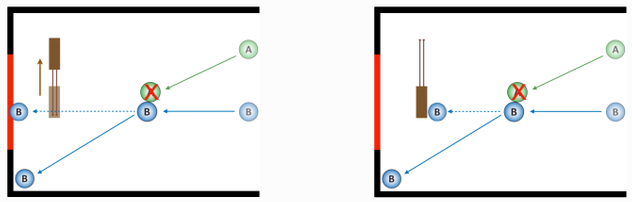
Hypothetical

What would happen if A wasn't there?

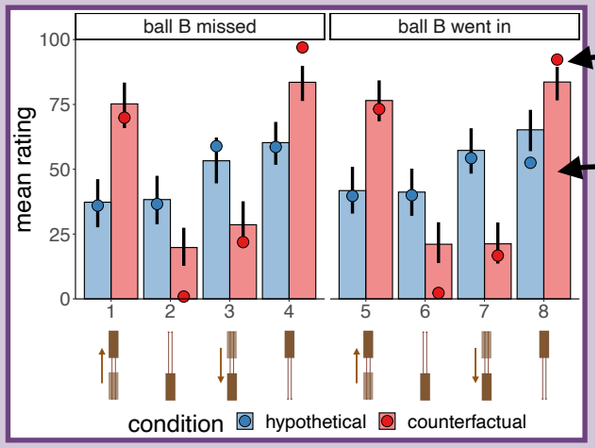


Counterfactual

What would have happened if A hadn't been there?

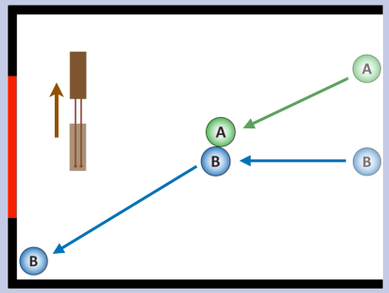


Simulation judgments and model predictions

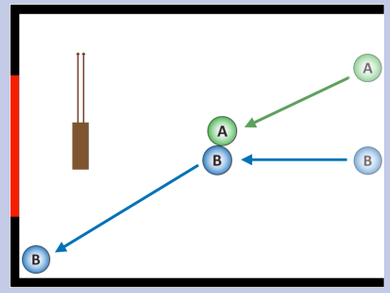


The model captures participants' **hypothetical** and **counterfactual** judgments well.

What do **people** say?

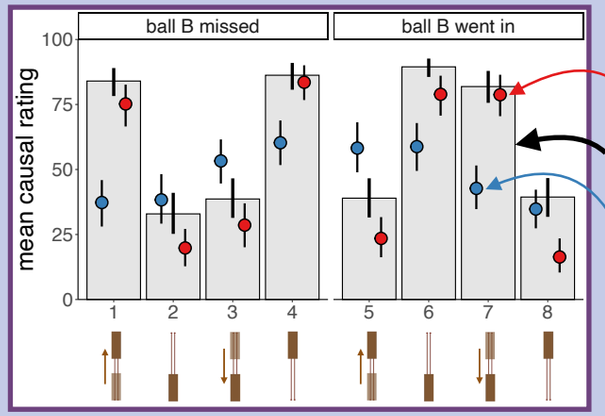


"A prevented B"
(it would have gone through)



"A didn't prevent B"
(it wouldn't have gone through)

Causal judgments and model predictions



Causal judgments are predicted by **counterfactuals** and not by **hypotheticals**.

References

Gerstenberg, T., Peterson, M. F., Goodman, N. D., Lagnado, D. A., & Tenenbaum, J. B. (2017). Eye-Tracking causality. *Psychological Science*.

Gerstenberg, T., Goodman, N. D., Lagnado, D. A., & Tenenbaum, J. B. (2021). A counterfactual simulation model of causal judgments for physical events. *Psychological Review*.