

Should Advisors Provide Confidence Intervals Around Their Numerical Estimates?

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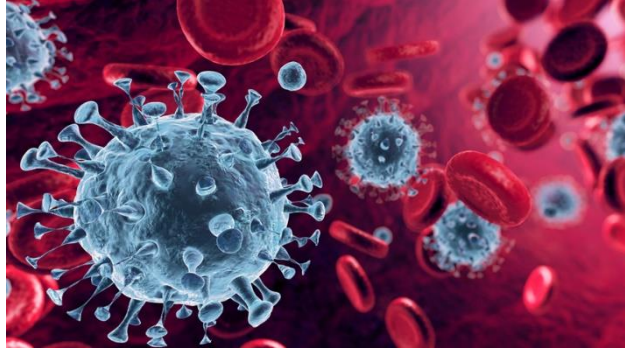
&

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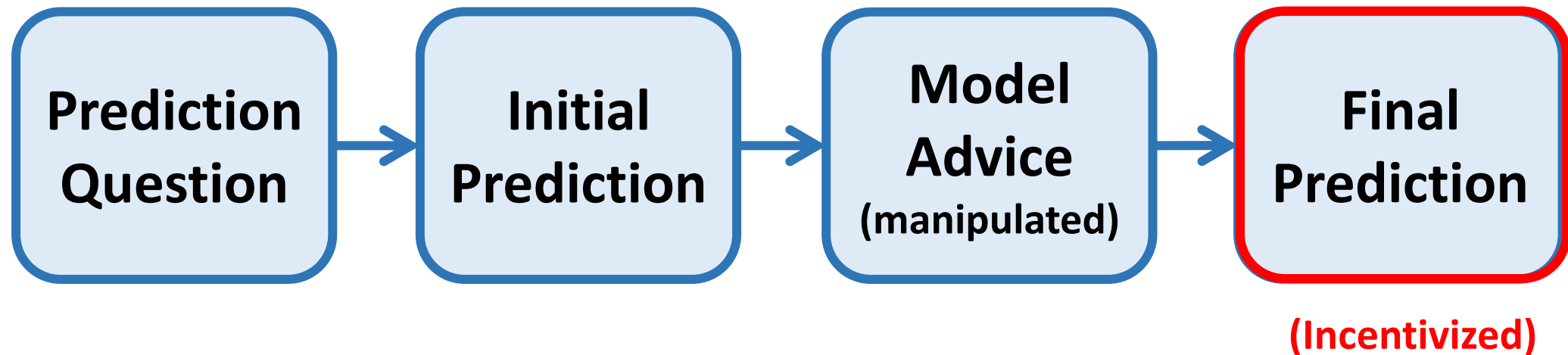
People Often Rely on Advice For Uncertain Events



Research Question: Are people more or less likely to follow advice when an advisor provides uncertainty in the form of a confidence interval around a numerical estimate?

Empirical Study: COVID-19 Predictions (N = 3,622)

- Participants predicted: “What will the number of confirmed deaths due to COVID-19 be in the U.S. on August 1, 2020?”



- \$0.25 bonus if prediction within 5% of true outcome (152,870)
- Conducted in July 2020; we showed participants the current number of deaths as of July 9 (133,290)

Empirical Study: COVID-19 Predictions (N = 3,622)

What will the number of confirmed deaths due to Covid-19 be in the U.S. on August 1, 2020?

No Confidence Interval

The statistical model's best prediction is that the number of confirmed deaths due to COVID-19 in the U.S. will be **151,000**.

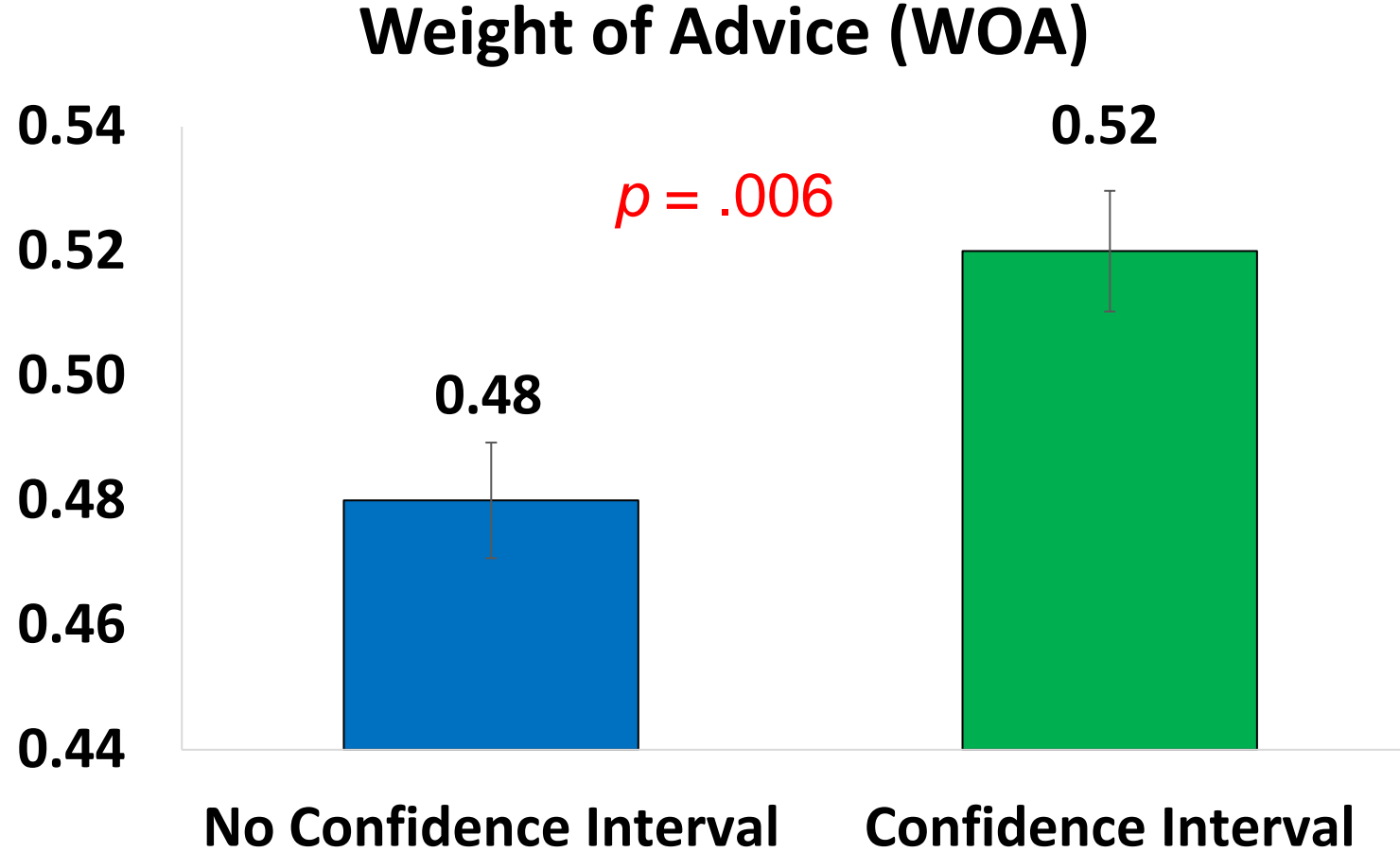
Confidence Interval

According to the statistical model, there is a **95% chance** that the number of confirmed deaths due to COVID-19 in the U.S. will be **between 141,000 and 168,000**. Its best prediction is that it will be **151,000**.

Participants were randomly assigned to model advice from one of 16 models that were posted on FiveThirtyEight.com at the time the study was run; the models' best predictions ranged from 141,000 to 166,000.



Empirical Study: COVID-19 Predictions (N = 3,622)



WOA measures extent to which participants adjust their initial prediction to the model advice.

$$WOA = \frac{Final\ Prediction - Initial\ Prediction}{Model's\ Prediction - Initial\ Prediction}$$

In Total: 12 Incentivized Studies (N = 17,615)

12 studies in different domains, e.g., COVID-19 predictions, sports predictions, other people's preferences.

Participants were either directionally or significantly more likely to follow the advice when the advice was accompanied by a confidence interval.

This suggest that advisors may be more persuasive when they provide confidence intervals around their estimates...

... and has important practical implications for communicating advice.

All Materials, Data, and Code available on: <https://researchbox.org/357>



Thank you!

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All Materials, Data, and Code for this project are available on:
<https://researchbox.org/357>

Reference:

Gaertig, C., & Simmons, J. P. (2023). Are people more or less likely to follow advice that is accompanied by a confidence interval? *Journal of Experimental Psychology: General*, 152(7), 2008–2025.

