# Science Misinformation: A Challenge Without Remedy?

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# The challenge



## The challenge, continued



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- Yet false beliefs are not immune to interventions
- Despite our enormous divides, exposure to accurate scientific information can help reduce belief in scientific misinformation

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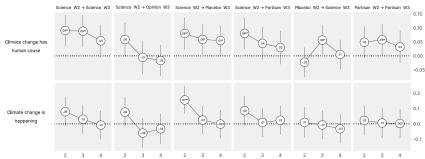
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- By randomizing type of article and measuring beliefs about climate change, we can understand effects of articles on beliefs

#### Effects on scientific beliefs

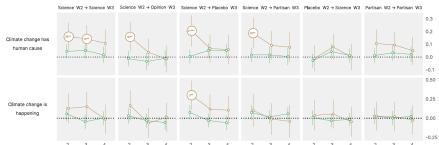
#### Treatment effects on scientific understanding



# Effects among deniers

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Effects reported among participants who accept or reject anthropogenic climate change (pre-treatment)

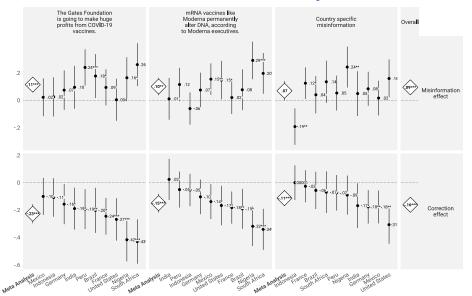


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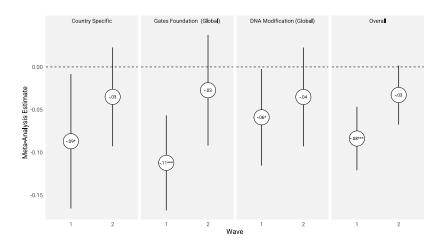
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- Conducted multi-wave experiments in Brazil, France, Germany, India, Indonesia, Mexico, Nigeria, Peru, South Africa, and the U.S.
- Randomized sequence of exposure to fact-checks and exposure to misinformation

# Treatment effects on belief accuracy



# Correction effect durability



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- No effects of corrections on vaccination uptake or attitudes—in either direction.
- We were 80% powered to detect conventionally small effects for both vaccine outcomes.

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- Exposure to science news and exposure to fact-checks can make people understand science better
- This can be true even among those who were previously skeptical of science
- Yet improving scientific understanding does not necessarily result in permanent improvement
- Nor does it always affect other outcomes we care about

#### **Further Information**

- ➤ First study published in *Proceedings of the National Academy of Sciences* as "Time and skeptical opinion content erode the effects of science coverage on climate beliefs and attitudes", available at https://www.pnas.org/doi/10.1073/pnas.2122069119
- Second study appears in "Correcting COVID-19 Vaccine Misinformation in Ten Countries," forthcoming from Royal Society Open Science