

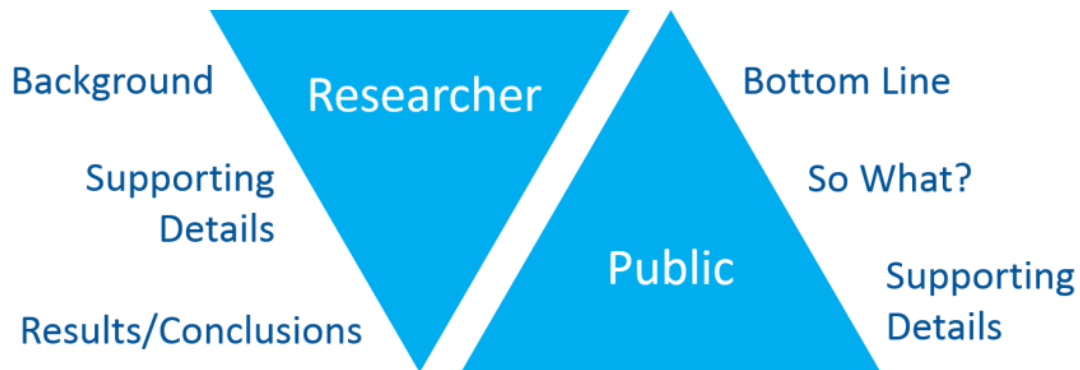
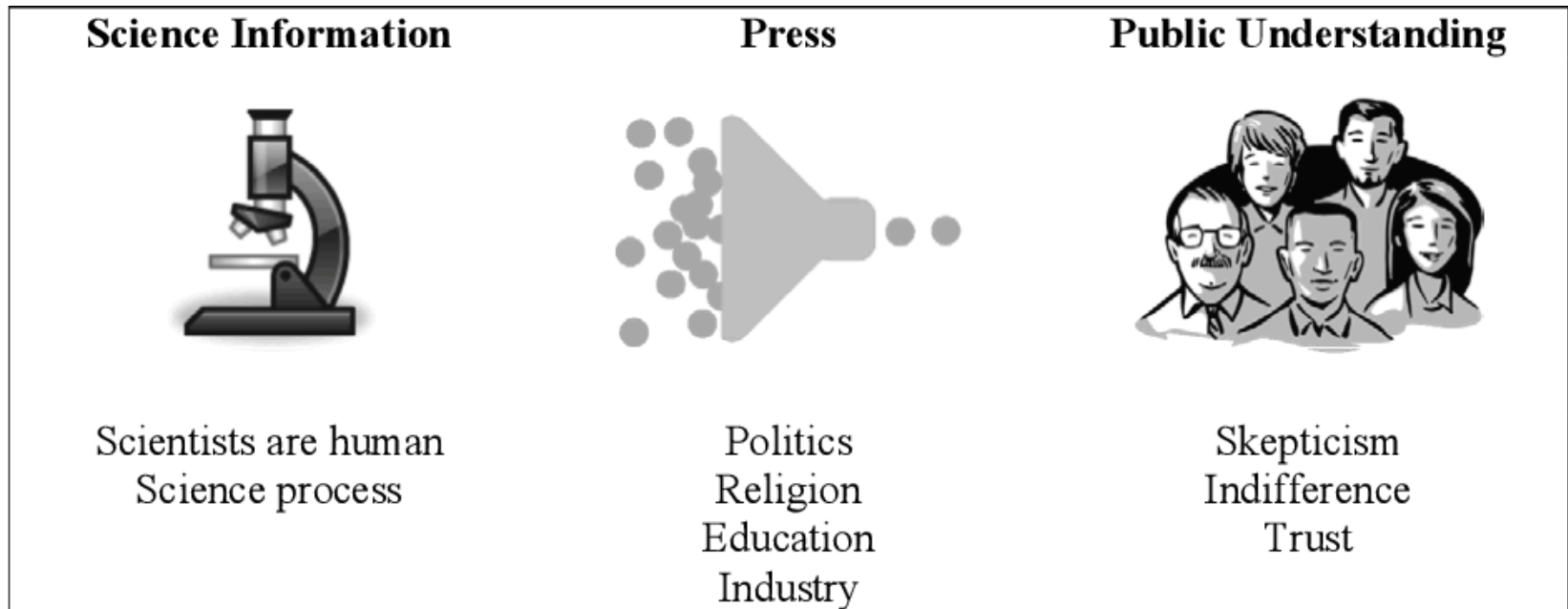
Open Science

Tim Errington
Senior Director of Research,
Center for Open Science

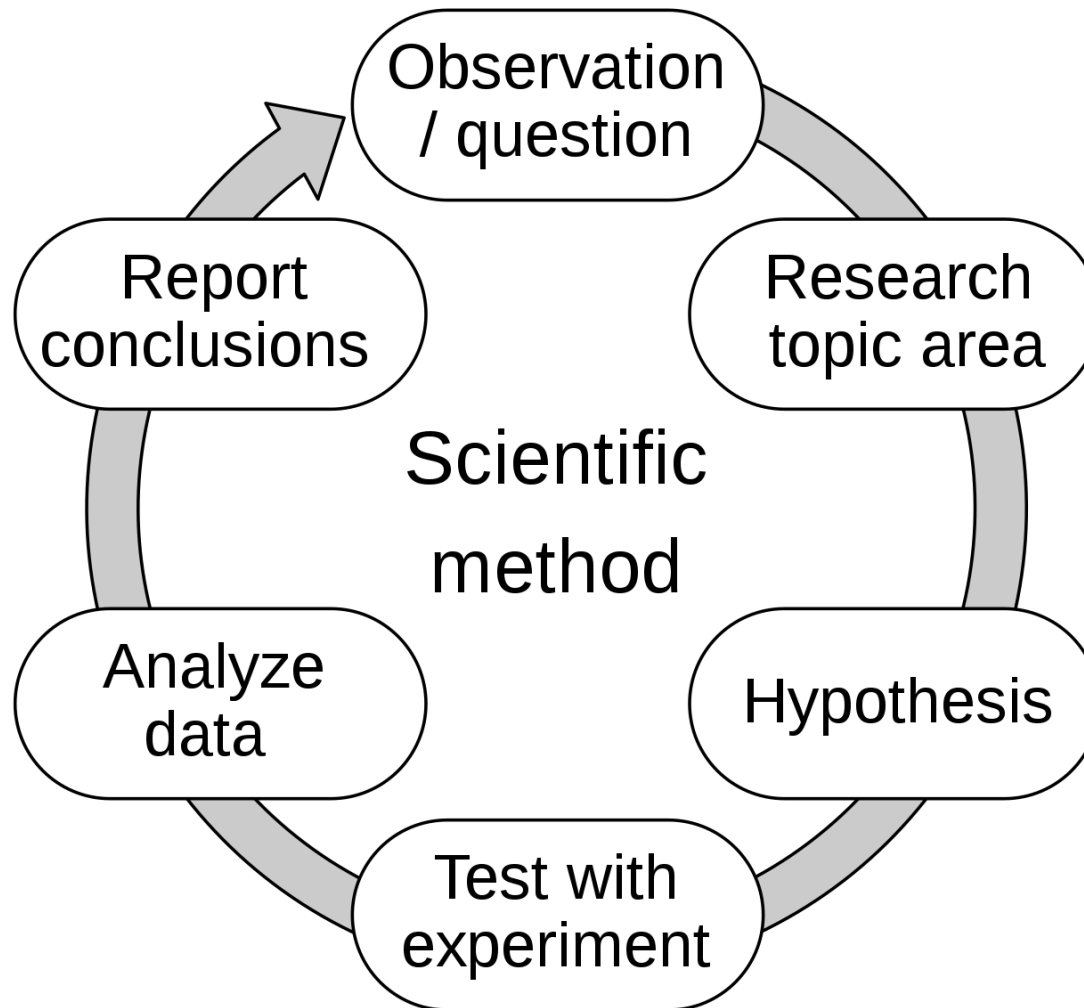
<https://cos.io>

These slides: <https://osf.io/5pk7r/>

Public understanding of science



Scientific method



Conveying uncertainty

Who will win the presidency?



Chance of winning



Conveying uncertainty

Forecasting the race for the House



Updated Nov. 6, 2018, at 11:06 AM

7 in 8

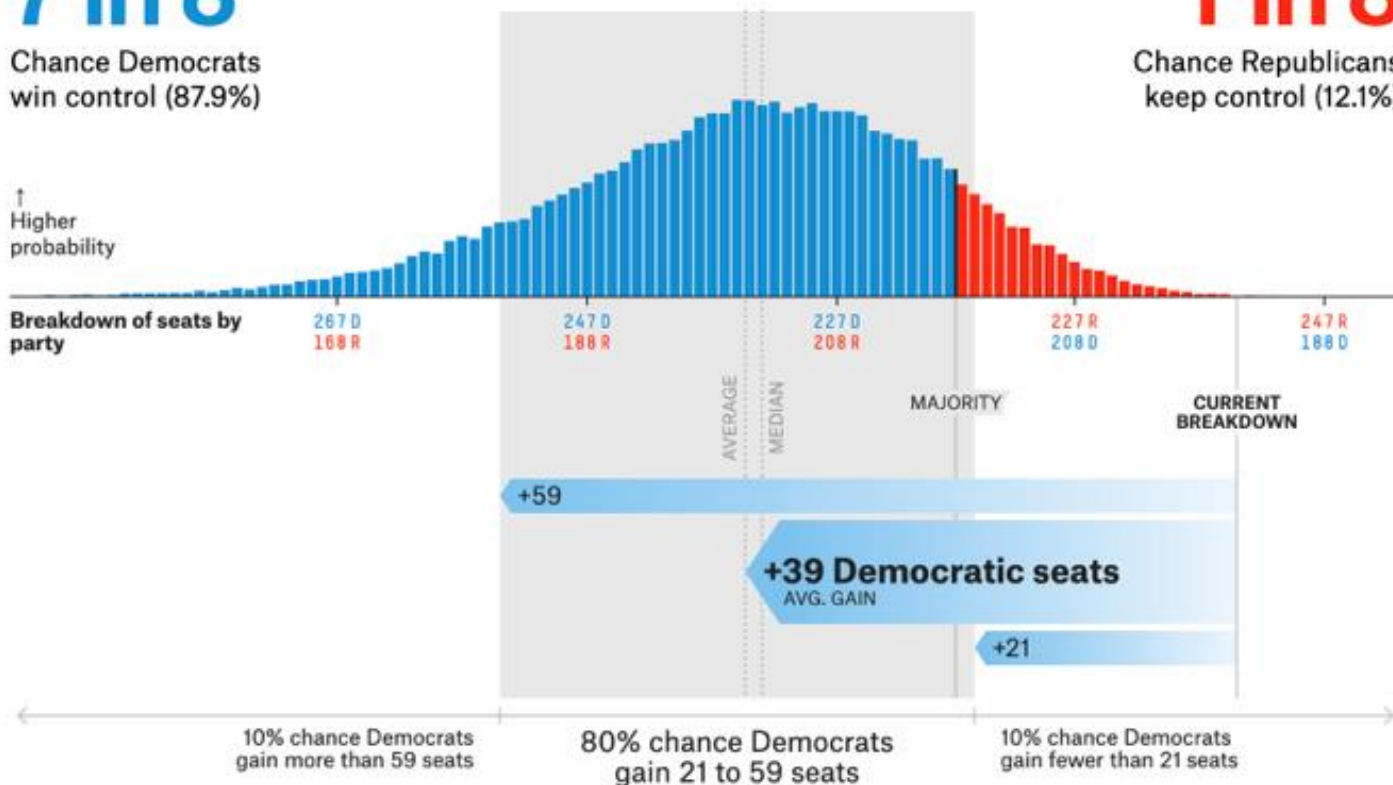
Chance Democrats win control (87.9%)

1 in 8

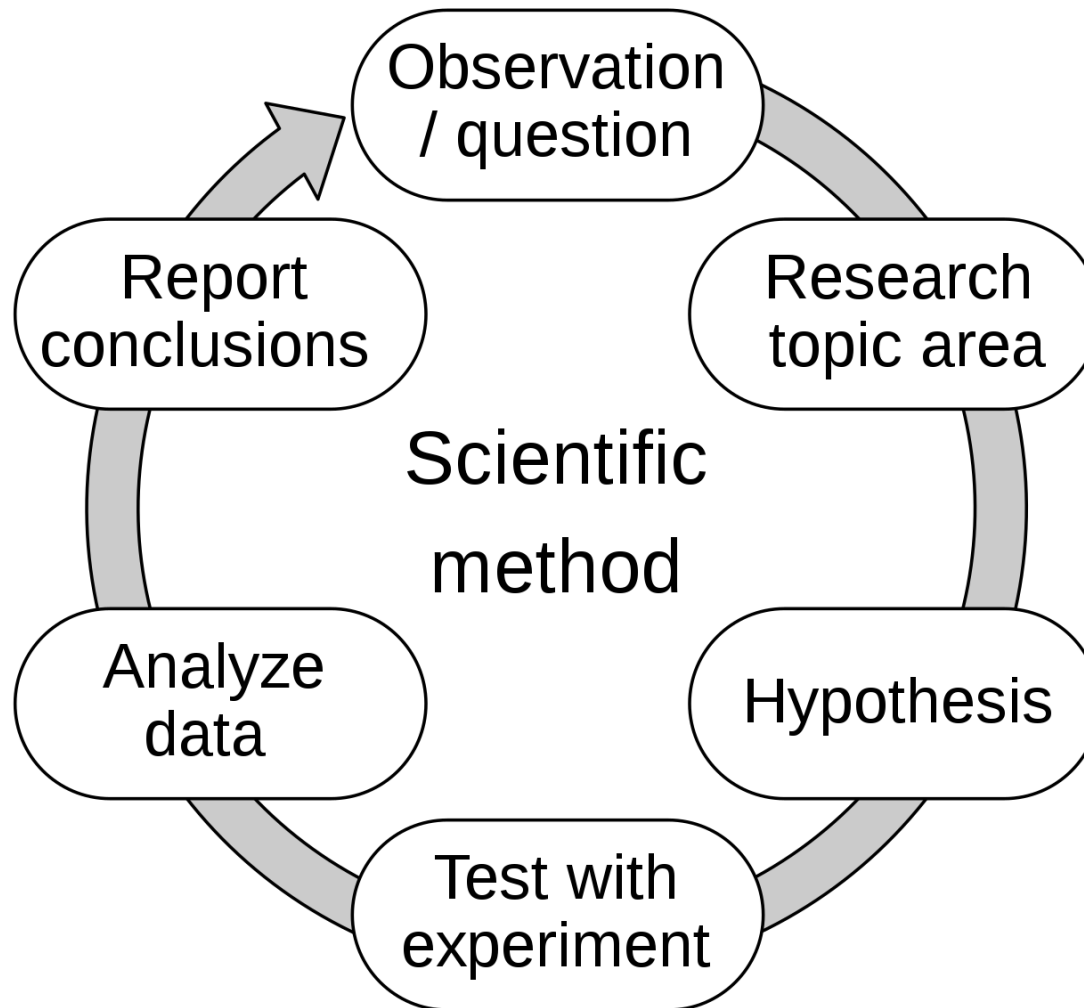
Chance Republicans keep control (12.1%)

↑ Higher probability

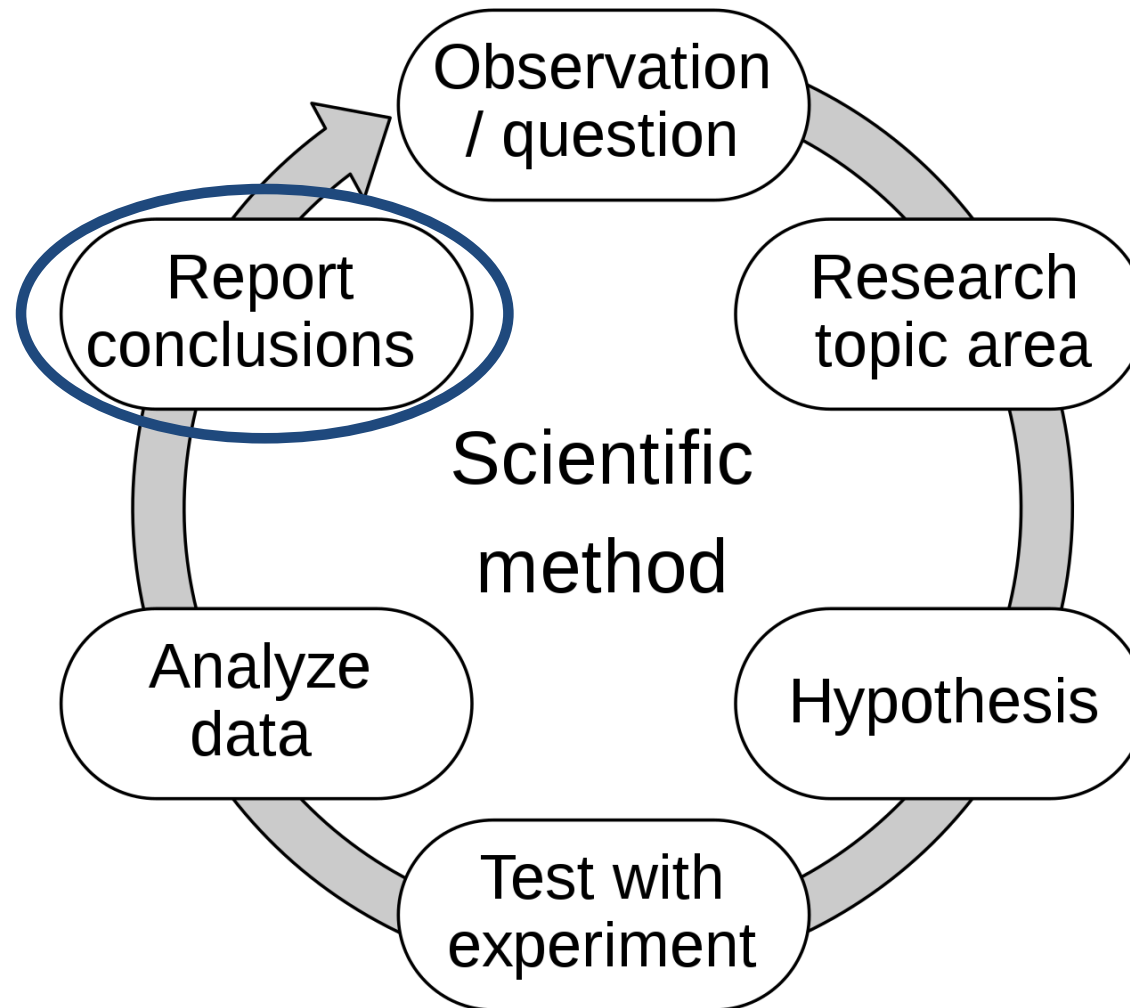
Breakdown of seats by party



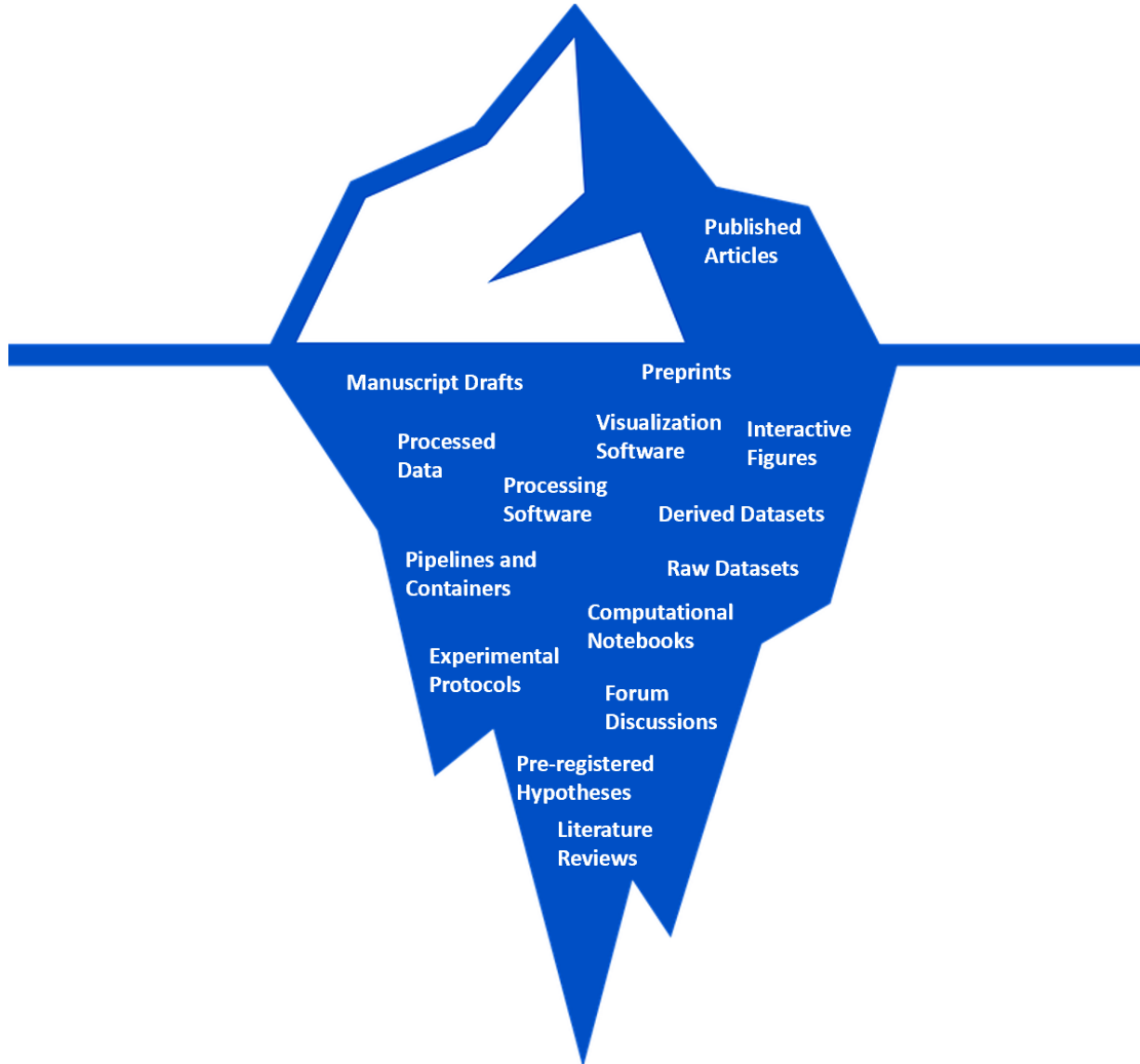
Scientific method



Scientific method



More than just papers



What is open science? Practices

Open Outcomes

Open access, Preprints, Reporting all results

Open Content

Data, Materials, Code, Software

Open Process

Preregistration, Peer review, Collaboration

Why open science? Principles

Transparency

Sharing

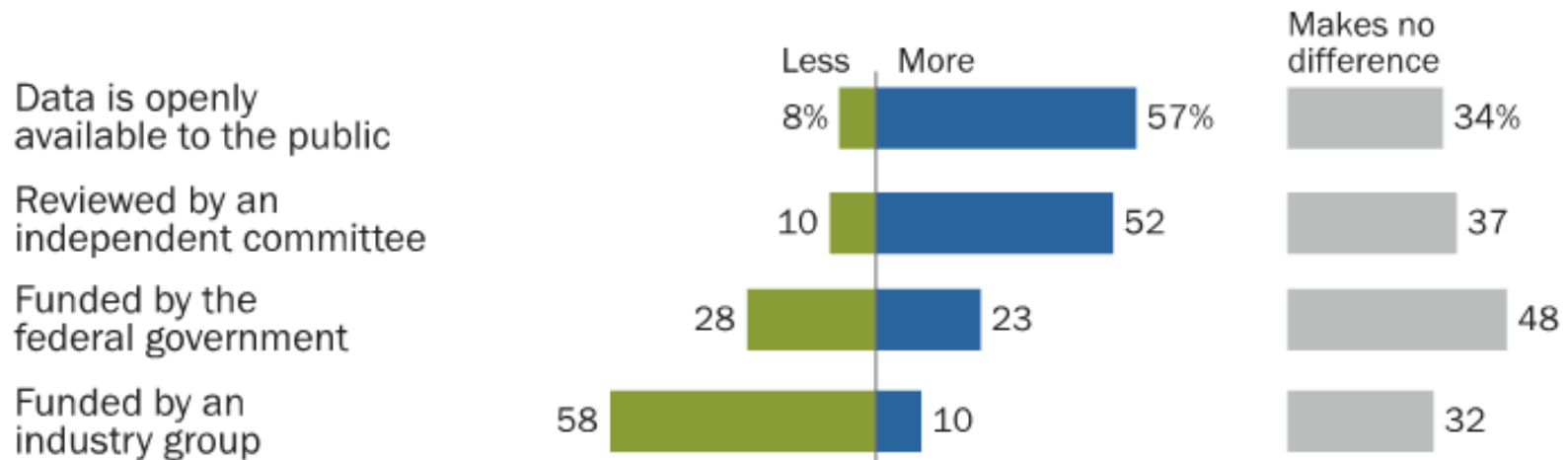
Rigor

Inclusion

What the public trusts

Majority of Americans say they are more apt to trust research when the data is openly available

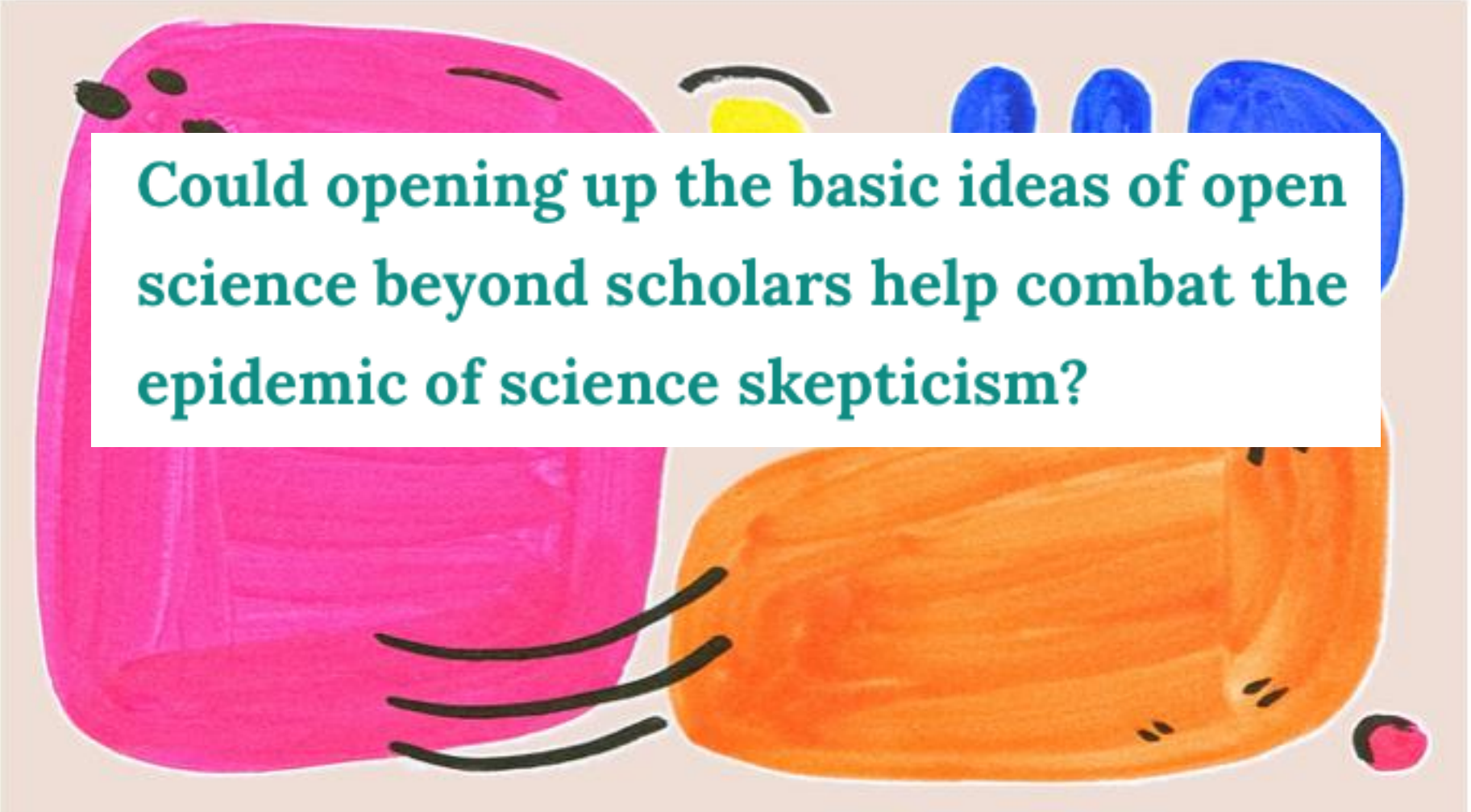
% of U.S. adults who say when they hear each of the following, they trust scientific research findings ...



Opening up Science—to Skeptics

By Rohan R. Arcot and Hunter Gehlbach

April 12, 2022

A colorful illustration featuring two large, rounded, cartoonish figures. The figure on the left is pink with black dots for eyes and a black line for a mouth. The figure on the right is orange with black dots for eyes and a black line for a mouth. They are connected by three black lines, suggesting a conversation or interaction. In the background, there are blue shapes and a yellow shape, possibly representing other figures or elements. A small pink and black dot is visible in the bottom right corner.

Could opening up the basic ideas of open science beyond scholars help combat the epidemic of science skepticism?

Thanks!

You can find me at: tim@cos.io

These slides: <https://osf.io/5pk7r/>

The Kindergartener's Guide

1) Show your work

2) Share

What gets published?

More Likely

Positive results

Novel results

Tidy results

Less Likely

Negative results

Replication results

Messy results