# Exploring Why We Fall for Misinformation (and What We Can Do About it)

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CENTER FOR AN INFORMED PUBLIC

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# How do we decide if something is true?

The unicorn is the national animal of Scotland

- When judging truth, people can rely on:
  - The content of the information
  - Whether or not something *feels* true

# Feelings of truth

> Information can feel easy or difficult to process

## The Epigenomics of Cancer

Peter A. Jones[1,*] and Stephen B. Baylin[2,*]
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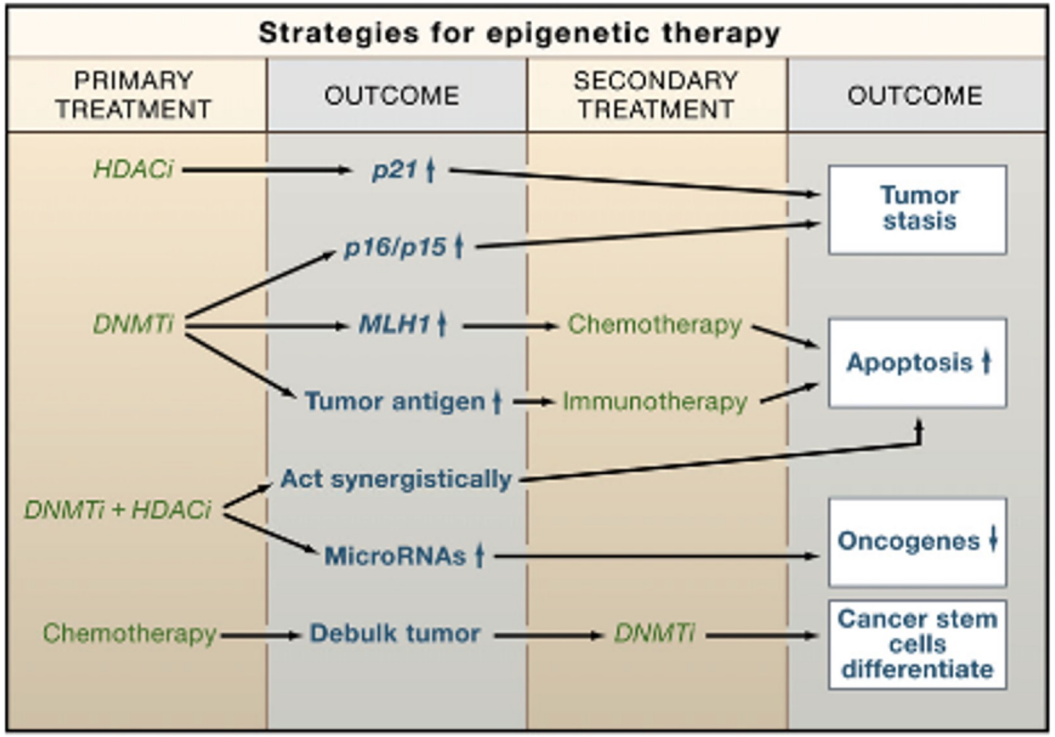


# Feelings of truth

> Information can feel easy or difficult to process

BuzzFeed

33 Products That'll Help You Get Your Health And Fitness Back On Track

# Feelings of truth

- When information feels easy to process, it also feels more true
- Ease of processing can be a valid cue that something is true
  - The arguments flow logically
  - It's consistent with what you already know
  - You've heard the information before from a credible source
- But processing ease can also result from factors unrelated to truth

# For example:

> Print font

The unicorn is the national animal of Scotland

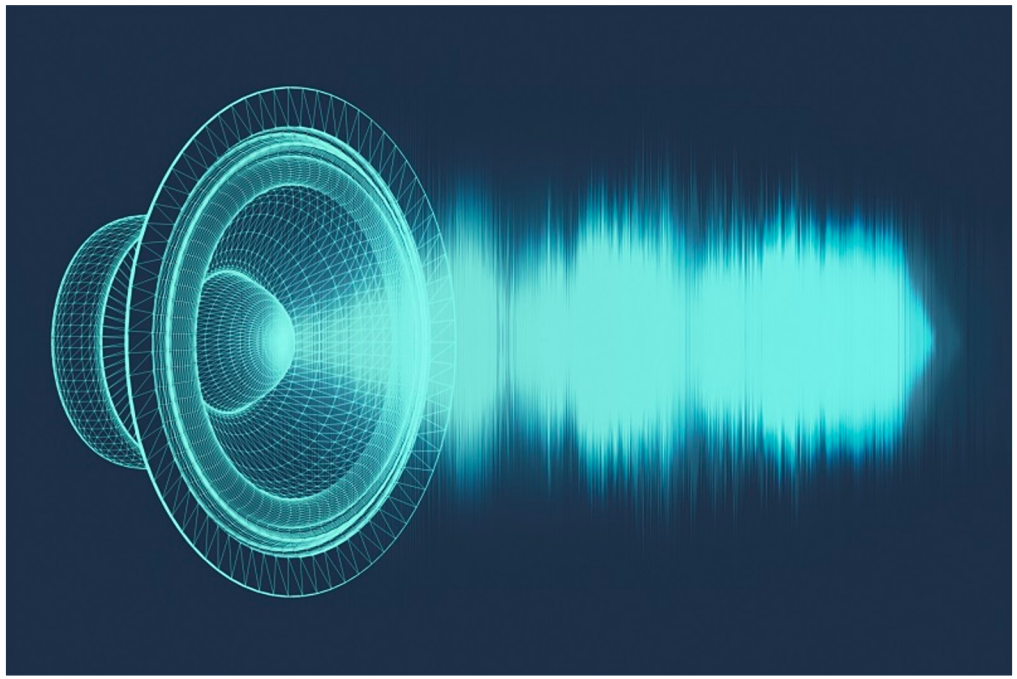
*The unicorn is the national animal of Scotland*

Song & Schwarz, 2008

# For example:

> Audio quality

The unicorn is the national animal of Scotland



Newman & Schwarz (2018)

# For example:

> Photos

The unicorn is the national animal of Scotland

Newman, Jalbert, Schwarz, & Ly, 2020;
Newman & Zhang, 2020 for a review

# For example:

> Repetition

The unicorn is the national animal of Scotland

The unicorn is the national animal of Scotland

The unicorn is the national animal of Scotland

> “Illusory Truth Effect”

Jalbert et al., 2020*;*
Hasher et al., 1977

**Question:**

How many animals of each kind did Moses take on the Ark?

# Intuitive and analytical processing

- We generally assume information is true
- **Intuitive processing** is often the default - we nod along if things feel right
- **Analytical processing** requires motivation and cognitive resources
- Distrust or suspicion can give us a reason to switch from intuitive processing to analytic processing
  - Something feels wrong
  - Explicit warnings
  - Suspicion for someone’s motives

# Truth Criteria

- **Compatibility:** Is it compatible with other things I know?
- **Coherence:** Is it internally coherent?
- **Credibility:** Does it come from a credible source?
- **Consensus:** Do other people believe it?
- **Evidence:** Is there supporting evidence?

- You can use intuitive or analytical processing to evaluate each of these criteria

Schwarz & Jalbert, 2020

# **Consensus:** Do other people believe it?

- Intuitive evaluation:
  - Does it feel familiar?

- Analytical evaluation:
  - What do my friends say?
  - What do the opinion polls say?

# **Credibility:** Does it come from a credible source?

- Intuitive evaluation:
  - Does the source *feel* familiar and trustworthy?

- Analytical evaluation:
  - Does the source have the relevant expertise?
  - Does the source have a vested interest?
  - Is the source trustworthy?

# Why do we believe misinformation?

- Assuming information is true the default
- There may not be cues to analyze information more carefully
- Misinformation may feel easy to process
- Misinformation may meet (or feel like it meets) truth criteria like source credibility or social consensus
- We may not remember or use source information
- We don’t have a better explanation

# Why do we share misinformation?

- There are many reasons why people read and share information
  - To inform others
  - Entertainment
  - To build social bonds
  - To feel like part of the group
- Truth may not be relevant

The unicorn is the national animal of Scotland

# What can we do?

- Draw attention to truth when misinformation may be present
- Make the truth *feel* true
- Appeal to truth criteria when sharing the truth
  - Present factual information in a way that is **compatible** with the audience's prior knowledge
  - Make your story **coherent**
  - Draw attention to the **credibility** of the information's source
  - Point to the social **consensus** for that information
  - Share **evidence** for your claims

# The unicorn is the national animal of Scotland

- This is true!
- National Unicorn Day: April 9th

# Online misinformation

- What can users do when they encounter misinformation online to reduce its impact?

- Fact checks can be effective
  - e.g., Bode & Vraga, 2018; Vraga & Bode, 2021

- But…
  - Fact checks take time and effort
  - Not all information is fact-checkable
  - Users may be hesitant to correct peers, especially publicly

# Alternatives


- Democracy Yethu
  - NGO in South Africa
  - Run through the Centre for Analytics and Behavioural Change (CABC)

- Developed an intervention to combat election misinformation online
  - Based on dialogue facilitation techniques

- Volunteers trained to reply to problematic posts following specific guidelines

# Alternatives


- Example replies
  - “Have you ever been there, how do you know that?”
  - ”Do you have any proof for what you’re saying?”
  - ”Where is the evidence for this?”

- Noticed that many example replies drew attention to truth

- Reminded us of interventions that involve shifting attention to accuracy
  - Pausing (Fazio, 2020)
  - Accuracy nudges (Pennycook et al., 2021)
  - Warning of falsehoods (Jalbert, Newman, & Schwarz, 2021)

- Also involves communicating social consensus of peers

# Social Truth Query Studies

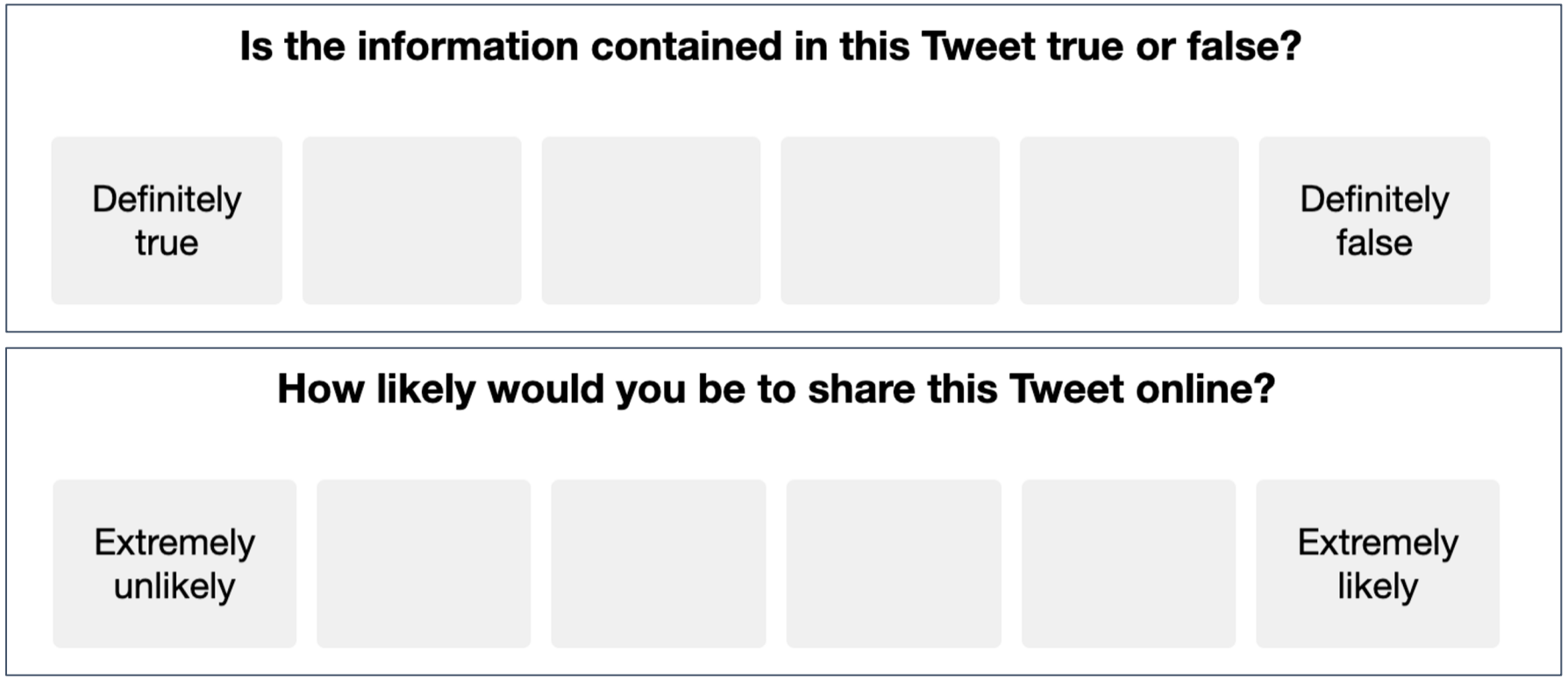
- Truth queries = Questions that appeal to truth or truth criteria
- Can social “truth queries” posted by users reduce the impact of false information posted on online?
- Conducted three initial experiments to test this

# Methods

- Participants
  - Twitter users on Mturk (Exp. 1-2) and Prolific (Exp 3)
  - *N*s = 200, 600, 600, respectively

# Methods

- Viewed a series of Tweets
- Rated truth or sharing for each Tweet



# Methods

- Tweets
  - Key Tweets containing false information
    - 8 Tweets, 6 Tweets, 24 Tweets, Exp. 1-3 respectively
  - 4 fillers containing true information

- Tweet content
    - Myths fact-checked on Snopes (or similar websites)
    - Chosen based on norming to not be obviously true or false

# Methods


Tommy Brennan
@Tommyfbrennan
Good to be reminded of this with the warm weather ahead: A bottle of hand sanitizer can spontaneously combust if left in a hot car.
2:05 PM · Apr 3, 2022 · Twitter for iPhone

# Methods


Amanda Gallagher
@MandyGallagher
One more reason to celebrate on Mother's Day: there's less crime than any other day of the year!
8:22 AM · May 8, 2022 · Twitter for Web App

# Methods

- Tweets appeared in one of three reply conditions (within-subjects):
  - With no reply
  - With a user reply containing a truth query
  - With a neutral reply unrelated to truth (Exp. 2+3)

# Methods

- Condition:
  - **With a user reply containing a truth query**

# Methods

- Condition:
  - **With a user reply containing a truth query**

# Methods

- In Experiments 1 and 2, always paired the same truth query reply with the same Tweet

- In Experiment 3, more systematically tested different truth queries
  - Tweets appeared with different truth queries (between-subjects)

# Methods: Experiment 3 Truth Queries

| **Truth Criteria**<br>(Schwarz & Jalbert, 2020) | **Truth Query** |
|---|---|
| Compatibility:<br>Is it compatible with other things I know? | 1. Does that make sense given everything else you know? |
| Credibility:<br>Does it come from a credible source? | 2. Where did you learn this?<br>3. How do you know that? |
| Consensus:<br>Do other people believe it? | 4. Do other people believe that? |
| Evidence:<br>Is there supporting evidence? | 5. What evidence is there for that?<br>6. Is there proof of that? |
| General appeal to truth | 7. Why would that be the case?<br>8. How do you know this is true? |

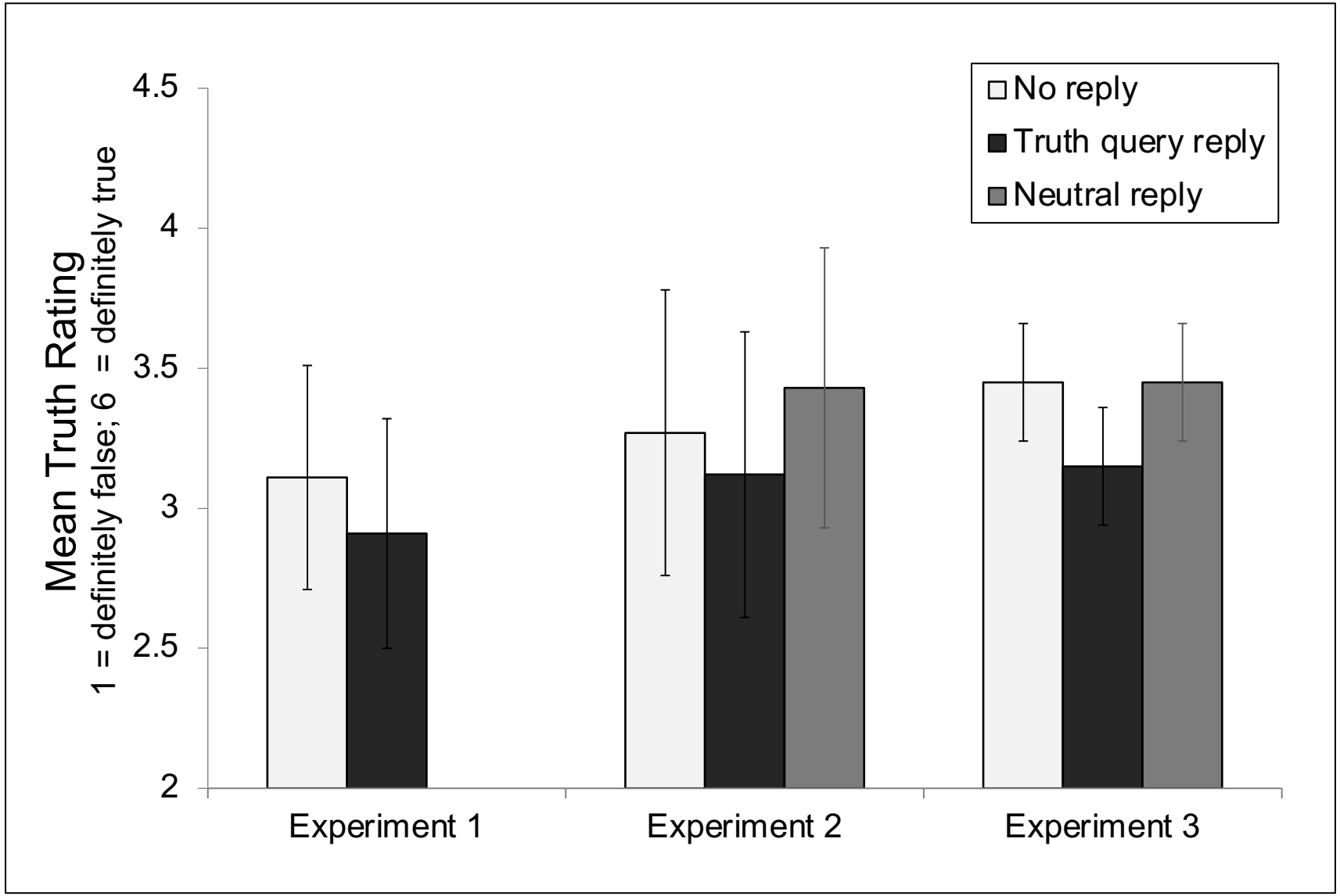
# Methods

- Condition:
  - **With a neutral reply unrelated to truth**

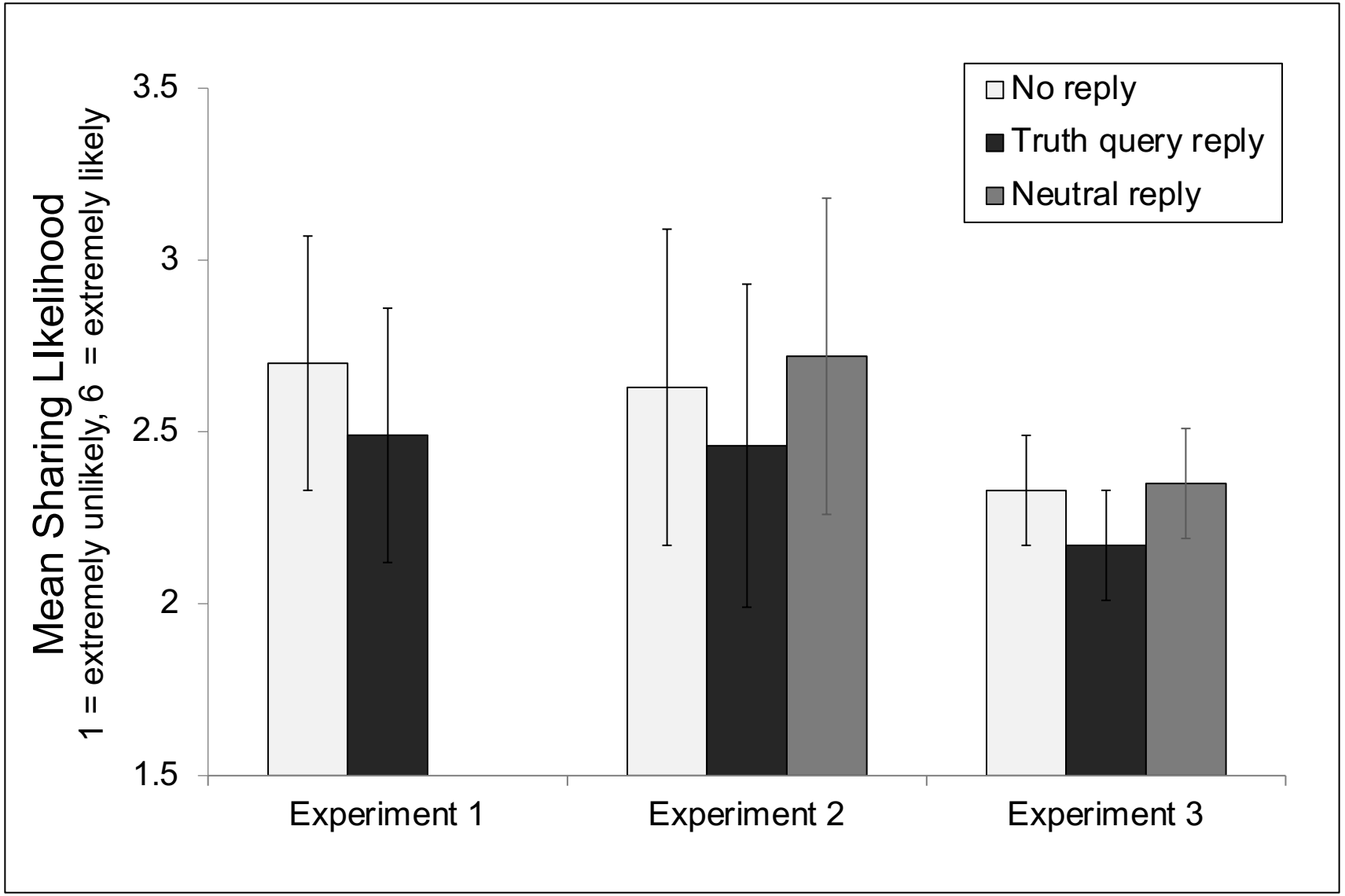
# Methods

- Condition:
  - **With a neutral reply unrelated to truth**

# Truth Ratings

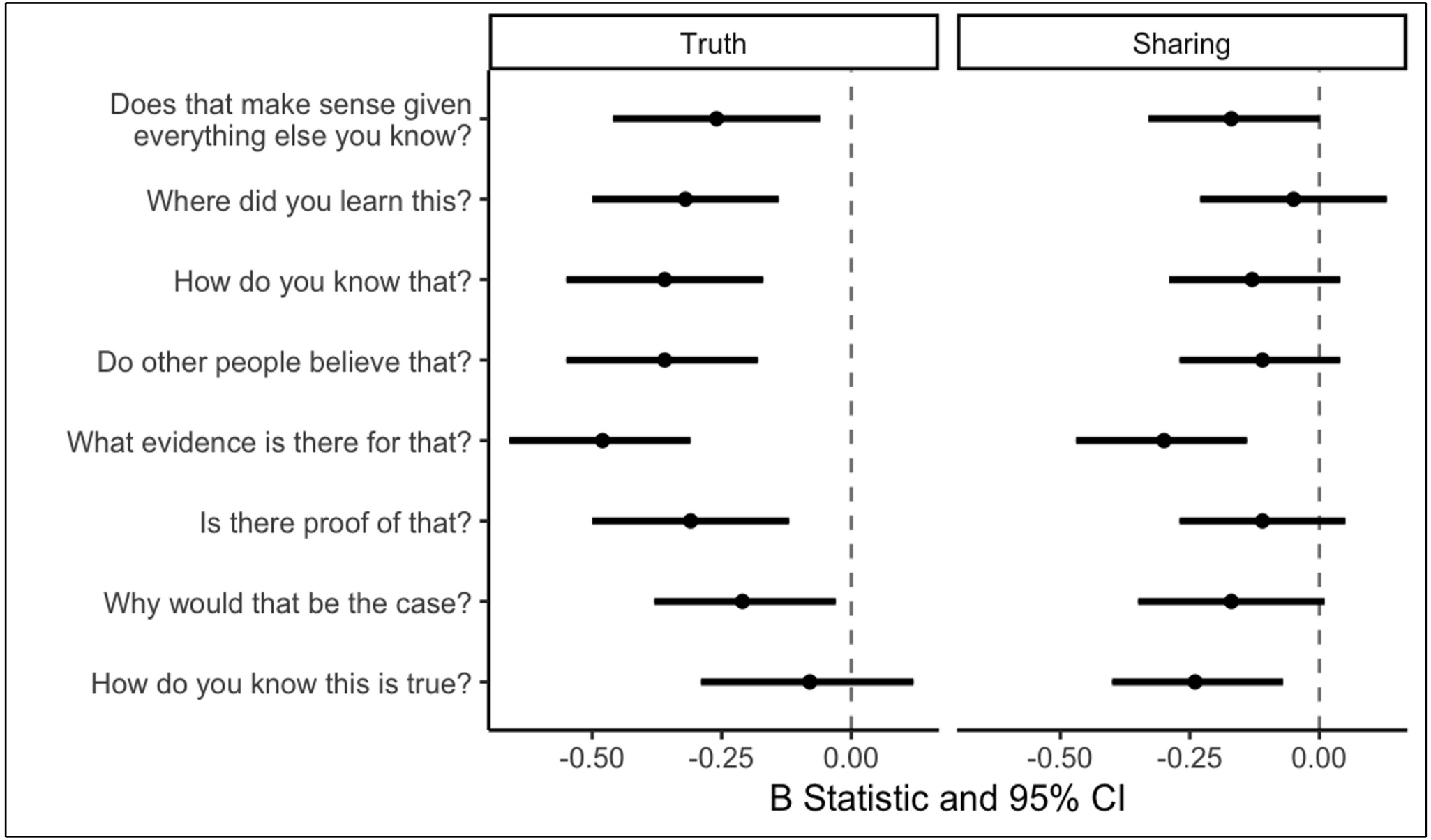


# Sharing Ratings



# Individual Truth Queries (Exp. 3)

Truth Query Reply vs. No Reply



# Discussion

- We find initial evidence for truth queries as flexible, user-driven strategy for addressing online misinformation

- Several potential reasons for this effectiveness
  - Attention to accuracy
  - Communicating a lack of social consensus from peers
  - Social presentation

- A broad range of truth queries appealing to different truth criteria were effective

- Truth queries may be most be the effective for people who are the most susceptible to believing and sharing false information

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# Discussion

- Still many unknowns about when truth queries are the most likely to be effective

- Other considerations include:
  - Impact on true information
  - The presence of other replies
  - The specific affordances of the social media platform
    - Algorithms that prioritize posts with more engagement
    - Comment order
    - Whether comments appear with shared posts

- Lots of possibilities for follow-ups!

# Thank you!

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