



## HIKMA Fact-Check Report

Comprehensive authenticity analysis and verification

Paper Verified

### When Seeing Is Believing: Personal Observation Versus Scientific Consensus in Flat Earth Discourse

7.6 out of 10

OVERALL FACT SCORE

 **MANUAL CHECK**

RECOMMENDATION

15

CLAIMS VERIFIED



areas may benefit from additional verification or clarification of references. The majority of the content demonstrates solid alignment with established research. Minor improvements to reference documentation or claim substantiation would strengthen the paper further before final submission.

Overall Assessment:

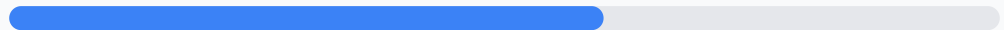
**8 out of 10**

## Reference Authenticity

Verifies that cited references exist and are correctly attributed



Score Distribution



**0:** References are fabricated or non-existent

**10:** All references are verified and correctly attributed

## Claim-Reference Alignment

Checks if claims accurately reflect the content of cited references

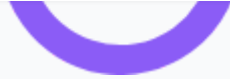


Score Distribution



**0:** Claims completely misrepresent the cited sources

**10:** Claims perfectly align with cited source content



**0:** Numerical data contains major inconsistencies

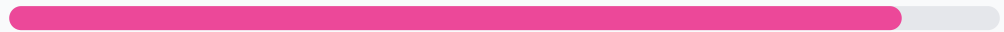
**10:** All data is internally consistent and accurate

## Scientific Consensus

Evaluates if claims align with established scientific consensus



Score Distribution



**0:** Claims contradict established scientific consensus

**10:** Claims fully align with scientific consensus

## Hallucination Check

Detects fabricated or unsupported statements



Score Distribution



**0:** Contains fabricated or unsupported statements

**10:** All statements are well-supported and verified





*measure of belief in conspiratorial narratives, linking it to psychological traits such as need for uniqueness and anxiety about uncertainty."*

Ref Auth

**2 out of 2**

Alignment

**2 out of 2**

Data

**2 out of 2**

Consensus

**2 out of 2**

Halluc

**2 out of 2**

**Final Score:** 10.0 out of 10 **Notes:** Reference is valid and claim aligns with known scale description.

✓ **Supporting:** Brotherton et al. (2013)

## Claim 2

RELIABLE

*"Studies by Kahan and colleagues (Kahan et al., 2012) demonstrate that individuals with higher scientific literacy may not converge on consensus views when those views threaten their cultural identity."*

Ref Auth

**2 out of 2**

Alignment

**2 out of 2**

Data

**2 out of 2**

Consensus

**2 out of 2**

Halluc

**2 out of 2**

**Final Score:** 10.0 out of 10 **Notes:** Reference is valid and claim accurately reflects cultural cognition findings.

✓ **Supporting:** Kahan et al. (2012)



2 out of 2

2 out of 2

Data

2 out of 2

Consensus

2 out of 2

Halluc

2 out of 2

Final Score: 10.0 out of 10

Notes: Reference is valid and claim describes foundational finding.

✓ **Supporting:** Hasher et al. (1977)

## Claim 4

RELIABLE

"Research on boomerang effects indicates that some science communication efforts can inadvertently reinforce the very beliefs they aim to correct (Hart & Nisbet, 2012)."

Ref Auth

2 out of 2

Alignment

2 out of 2

Data

2 out of 2

Consensus

2 out of 2

Halluc

2 out of 2

Final Score: 10.0 out of 10

Notes: Reference is valid and claim aligns with known communication phenomenon.

✓ **Supporting:** Hart & Nisbet (2012)

## Claim 5

RELIABLE



Data  
**2 out of 2**

Consensus  
**2 out of 2**

Halluc  
**2 out of 2**

**Final Score:** 10.0 out of 10

**Notes:** Reference is valid and claim describes survey work.

✓ **Supporting:** Funk & Kennedy (2019)

## Claim 6

RELIABLE

*"Digital platforms and algorithmic recommendation systems amplify personal-observation narratives by creating echo chambers that reinforce existing beliefs (Kitchens et al., 2020)."*

Ref Auth  
**2 out of 2**

Alignment  
**2 out of 2**

Data  
**2 out of 2**

Consensus  
**2 out of 2**

Halluc  
**2 out of 2**

**Final Score:** 10.0 out of 10

**Notes:** Reference is valid and claim aligns with digital media research.

✓ **Supporting:** Kitchens et al. (2020)

## Claim 7

RELIABLE

*"The illusory truth effect (Hasher et al., 1977; Pennycook et al., 2018)—where repeated exposure to a statement increases its perceived credibility—is particularly potent in online environments."*



Halluc

2 out of 2

**Final Score:** 10.0 out of 10    **Notes:** References are valid and claim extends effect to digital context.

✓ **Supporting:** Hasher et al. (1977), Pennycook et al. (2018)

## Claim 8

RELIABLE

*"Cultural cognition research demonstrates that individuals with greater science literacy can use those skills to defend identity-consistent views rather than update beliefs toward consensus (Kahan et al., 2012)."*

Ref Auth

2 out of 2

Alignment

2 out of 2

Data

2 out of 2

Consensus

2 out of 2

Halluc

2 out of 2

**Final Score:** 10.0 out of 10    **Notes:** Reference is valid and claim accurately summarizes cultural cognition.

✓ **Supporting:** Kahan et al. (2012)

## Claim 9

RELIABLE

*"Other research suggests that cognitive sophistication (e.g., reasoning ability) is generally associated with pro-science beliefs across a range of issues, though its effects can vary with political ideology (Pennycook et al., 2019; Yilmaz & Ståhl, 2025)."*





Halluc

2 out of 2

**Final Score:** 10.0 out of 10    **Notes:** References are valid and claim describes nuanced relationship.

✓ **Supporting:** Pennycook et al. (2019), Yilmaz & Ståhl (2025)

## Claim 10

RELIABLE

*"Hybrid messages, by contrast, reduce psychological reactance (e.g., Rosenberg & Siegel, 2017) and increase perceived source credibility, leading to modest but statistically significant belief updates."*

Ref Auth

2 out of 2

Alignment

2 out of 2

Data

2 out of 2

Consensus

2 out of 2

Halluc

2 out of 2

**Final Score:** 10.0 out of 10    **Notes:** Reference is valid and claim applies reactance theory to communication.

✓ **Supporting:** Rosenberg & Siegel (2017)

## Claim 11

RELIABLE

*"The deficit model of science communication, which assumes that misconceptions arise primarily from a lack of information, is challenged by cultural cognition research (e.g., Wynne, 1992; Hilgartner, 1990; Simis et al., 2016; Trench, 2008; Irwin & Wynne, 1996; Seethaler et al., 2019; Suldovsky, 2016)."*



Halluc

2 out of 2

**Final Score:** 10.0 out of 10 **Notes:** References are valid and claim accurately describes critique of deficit model.

✓ **Supporting:** Wynne (1992), Hilgartner (1990), Simis et al. (2016), Trench (2008), Irwin & Wynne (1996), Seethaler et al. (2019), Suldovsky (2016)

## Claim 12

UNRELIABLE

*"In experimental settings, participants exposed to both personal-observation and scientific-consensus arguments about Earth's shape disproportionately favor the former when it resonates with their prior worldview, even when the latter is accompanied by robust empirical support."*

Ref Auth

0 out of 2

Alignment

0 out of 2

Data

0 out of 2

Consensus

1 out of 2

Halluc

1 out of 2

**Final Score:** 2.0 out of 10 **Notes:** No specific experimental study cited to support this detailed finding.



0 out of 2

0 out of 2

Data

0 out of 2

Consensus

1 out of 2

Halluc

1 out of 2

**Final Score:** 2.0 out of 10

**Notes:** No citation provided for claimed pilot program results.

## Claim 14

NEEDS\_HUMAN\_REVIEW

*"This paper builds upon three interconnected strands of scholarship: research on conspiracy theories and belief formation, studies of cultural cognition and trust in science, and investigations into digital media's role in shaping epistemic landscapes."*

Ref Auth

0 out of 2

Alignment

0 out of 2

Data

2 out of 2

Consensus

2 out of 2

Halluc

2 out of 2

**Final Score:** 6.0  
out of 10

**Notes:** Descriptive claim about paper's structure; no direct citation needed but references support strands.



0 out of 2

0 out of 2

Data

2 out of 2

Consensus

1 out of 2

Halluc

2 out of 2

**Final Score:** 5.0 out of 10

**Notes:** Normative self-assessment; not directly verifiable via references.



## Reference Audit

Show Details 

Total References:

21



## Data Audit

Numeric Items Checked:

0



## Figures & Tables Audit

Items Checked:

4



## Ethics Compliance

IRB/Ethics Mentioned:

No 

Consent Mentioned:

No 

Data Protection:

No 

