

# “That’s just like, your opinion, man”: the illusory truth effect on opinions

Paul Riesthuis

Josh Woods



## Factors affecting the forced confabulation effect: a meta-analysis of laboratory studies

Paul Riesthuis <sup>a,b</sup>, Henry Otgaar<sup>a,b</sup>, Glynis Bogaard<sup>b</sup> and Ivan Mangiulli <sup>a,c</sup>


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RESEARCH ARTICLE

WILEY

## Expert opinions on the smallest effect size of interest in false memory research


Paul Riesthuis<sup>1,2</sup>  | Ivan Mangiulli<sup>1,2</sup> | Nick I *General Article*

### Simulation-Based Power Analyses for the Smallest Effect Size of Interest: A Confidence-Interval Approach for Minimum-Effect and Equivalence Testing

Paul Riesthuis<sup>1,2</sup> 

<sup>1</sup>Faculty of Law and Criminology, KU Leuven, Leuven, Belgium, and <sup>2</sup>Faculty of Psychology and Neuroscience, Maastricht University, Maastricht, The Netherlands

  
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# The spread of true and false news online

Soroush Vosoughi,<sup>1</sup> Deb Roy,<sup>1</sup> Sinan Aral<sup>2\*</sup>

We investigated the differential diffusion of all of the verified true and false news stories distributed on Twitter from 2006 to 2017. The data comprise ~126,000 stories tweeted by ~3 million people more than 4.5 million times. We classified news as true or false using information from six independent fact-checking organizations that exhibited 95 to 98% agreement on the classifications. Falsehood diffused significantly farther, faster, deeper, and more broadly than the truth in all categories of information, and the effects were more pronounced for false political news than for false news about terrorism, natural disasters, science, urban legends, or financial information. We found that false news was more novel than true news, which suggests that people were more likely to share novel information. Whereas false stories inspired fear, disgust, and surprise in replies, true stories inspired anticipation, sadness, joy, and trust. Contrary to conventional wisdom, robots accelerated the spread of true and false news at the same rate, implying that false news spreads more than the truth because humans, not robots, are more likely to spread it.

## Fact-opinion differentiation

*Statements of fact can be proved or disproved with objective evidence, whereas statements of opinion depend on personal values and preferences. Distinguishing between these types of statements contributes to information competence. Conversely, failure at fact-opinion differentiation potentially brings resistance to corrections of misinformation and susceptibility to manipulation. Our analyses show that on fact-opinion differentiation tasks, unsystematic mistakes and mistakes emanating from partisan bias occur at higher rates than accurate responses. Accuracy increases with political sophistication. Affective partisan polarization promotes systematic partisan error: as views grow more polarized, partisans increasingly see their side as holding facts and the opposing side as holding opinions.*

BY MATTHEW METTLER

Department of Political Science,  
University of Illinois Urbana-Champaign,  
USA

JEFFERY J. MONDAK








Department of Political Science,  
University of Illinois Urbana-Champaign,  
USA

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doi:10.1017/mem.2024.14

**MMM**  
Memory, Mind & Media

### FIELD REVIEW

## Fake memories: A meta-analysis on the effect of fake news on the creation of false memories and false beliefs

Alexa Schincariol<sup>1,2</sup> , Henry Otgaar<sup>3,4</sup> , Ciara M. Greene<sup>5</sup> , Gillian Murphy<sup>6</sup> , Paul Riesthuis<sup>3,4</sup> , Ivan Mangiulli<sup>3,7</sup>  and Fabiana Battista<sup>7</sup> 

## Frequency and the Conference of Referential Validity

LYNN HASHER AND DAVID GOLDSTEIN

*Temple University*

AND

THOMAS TOPPINO

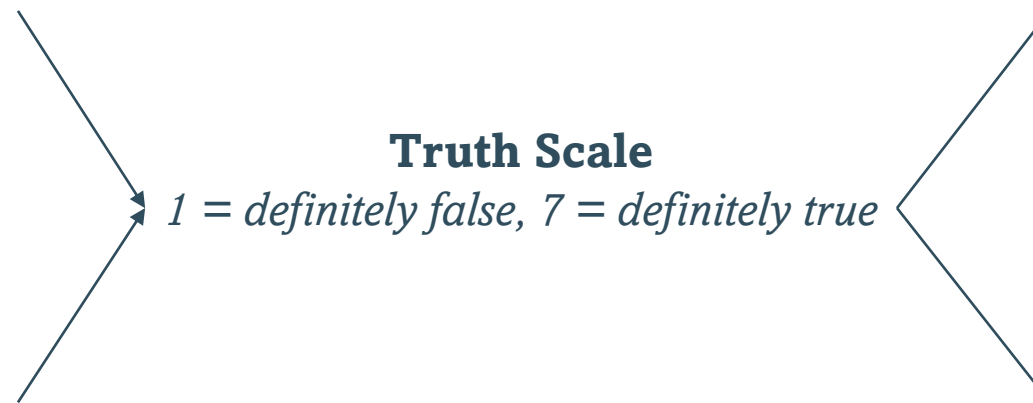
*Villanova University*

### True statements:

“In Malaysia, if a man goes to jail for being drunk, his wife goes too”

### False statements:

“Divorce is found only in technically advanced societies”



**2-week delay**

**4-week delay**

## Credibility of Repeated Statements: Memory for Trivia

Frederick T. Bacon  
McMaster University, Hamilton, Canada



## Prior Exposure Increases Perceived Accuracy of Fake News

Gordon Pennycook, Tyrone D. Cannon, and David G. Rand  
Yale University



ELSEVIER



COVID-19 Express Empirical Article

## Mere Repetition Increases Belief in Factually True COVID-19-Related Information

Christian Unkelbach\*, Felix Speckmann

University of Cologne, Germany



## Knowledge Does Not Protect Against Illusory Truth

Lisa K. Fazio  
Vanderbilt University

Nadia M. Brashier  
Duke University

B. Keith Payne  
University of North Carolina at Chapel Hill

Elizabeth J. Marsh  
Duke University

## The Generality of the Relation between Familiarity and Judged Validity

HAL R. ARKES

*Ohio University, U.S.A.*

CATHERINE HACKETT

*University of Wisconsin-Oshkosh, U.S.A.*

LARRY BOEHM

*Ohio University, U.S.A.*

### The generality of the relation between familiarity and judged validity

[HR Arkes](#), C Hackett, L Boehm - *Journal of Behavioral Decision ...*, 1989 - Wiley Online Library

Using factual information of uncertain truth value as the stimulus material, previous investigators have found that repeated statements are rated more valid than non-repeated statements. Experiments 1 and 1A were designed to determine if this effect would also occur for opinion statements and for statements initially rated either true or false. Subjects were exposed to a 108-statement list one week and a second list of the same length a week later. This second list was comprised of some of the statements seen earlier plus some statements ...

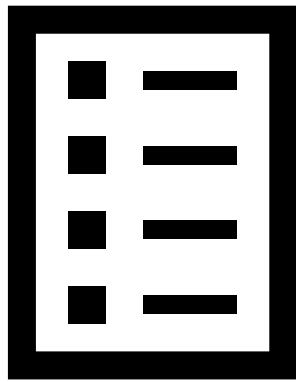
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The next three-way interaction we examined to ascertain the generality of these results was trial × repetition by actual statement type. This interaction only approached significance,  $F(2, 194) = 2.73$ ,  $p < .07$ . We nevertheless display it in Exhibit 4 to show that for *all* three types of statement—actually true, actually false, and opinions—the repeated statements rose in rated validity compared to their non-repeated counterparts.<sup>1</sup>

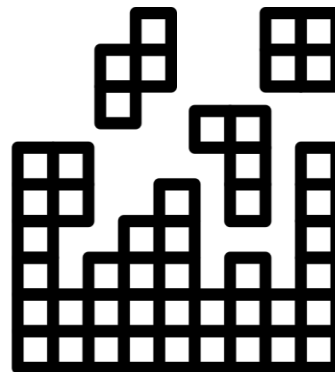
# Experiment 1

## Types of statements

- True:
  - Misinformation:
  - General Opinion:
- The refrigerator **was invented in 1748** by William Cullen
  - The refrigerator **was invented in 1898** by William Cullen
  - The refrigerator **was the greatest invention** of the 1700s



Fact or Opinion?




Tetris



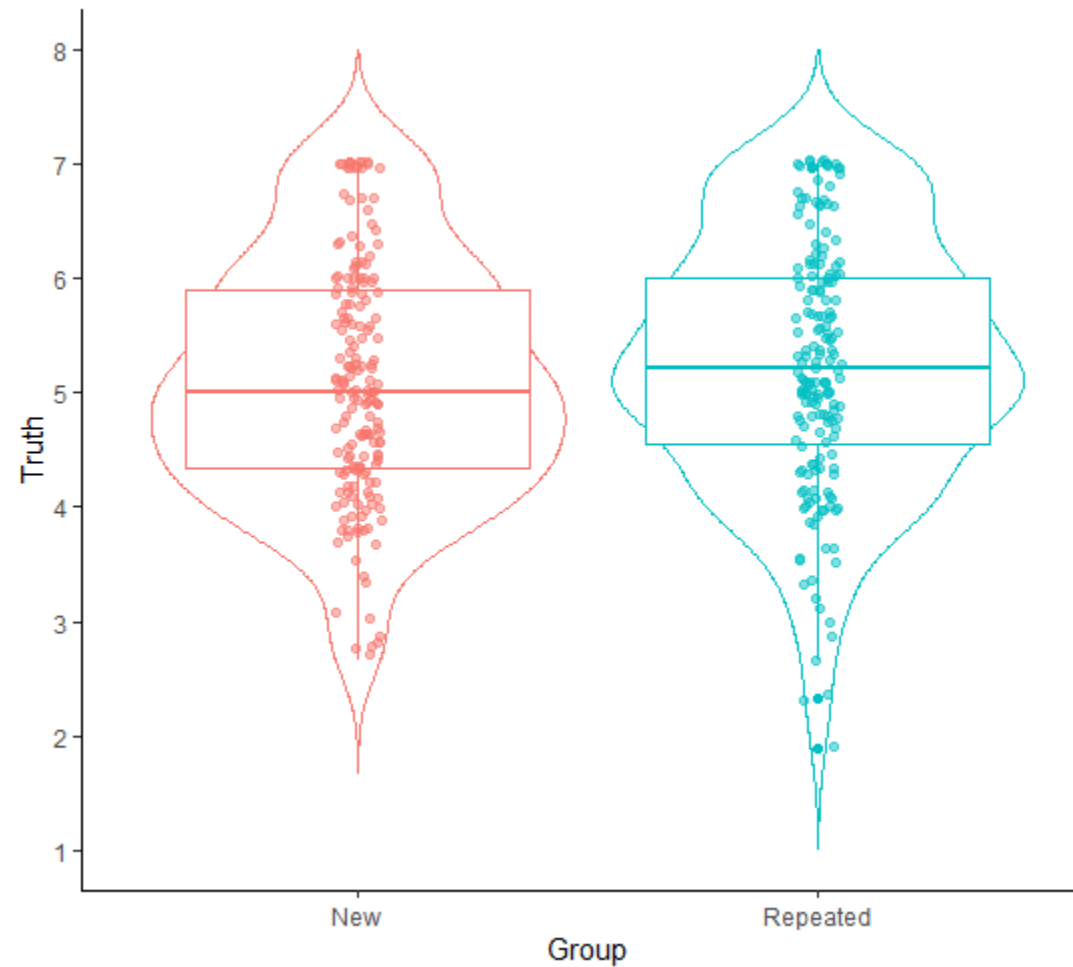
**Truth Scale**  
*1 = not truthful, 7 = very truthful*

# Power Analysis & Smallest Effect Size of Interest

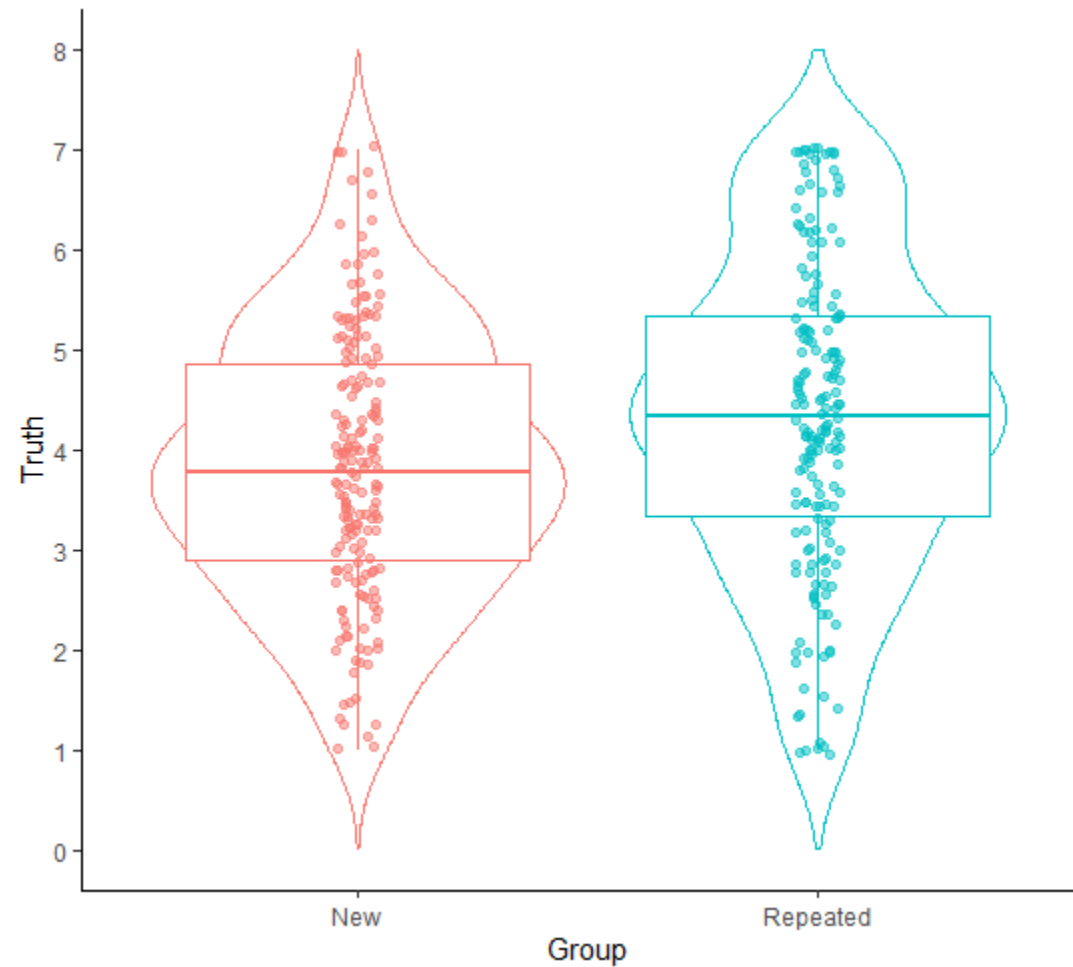
- Within subject design
  - Two-tailed paired sample t-test
    - $\beta = 0.80$ ,  $\alpha = 0.05$ , Cohen's  $d_z = 0.21$
    - 180 participants were needed
- Smallest effect size of interest
  - .20 raw mean difference
    - Low cost
    - Ambiguous statements
    - Multiple repetitions  illusory truth effect (Hassan & Barber, 2021)



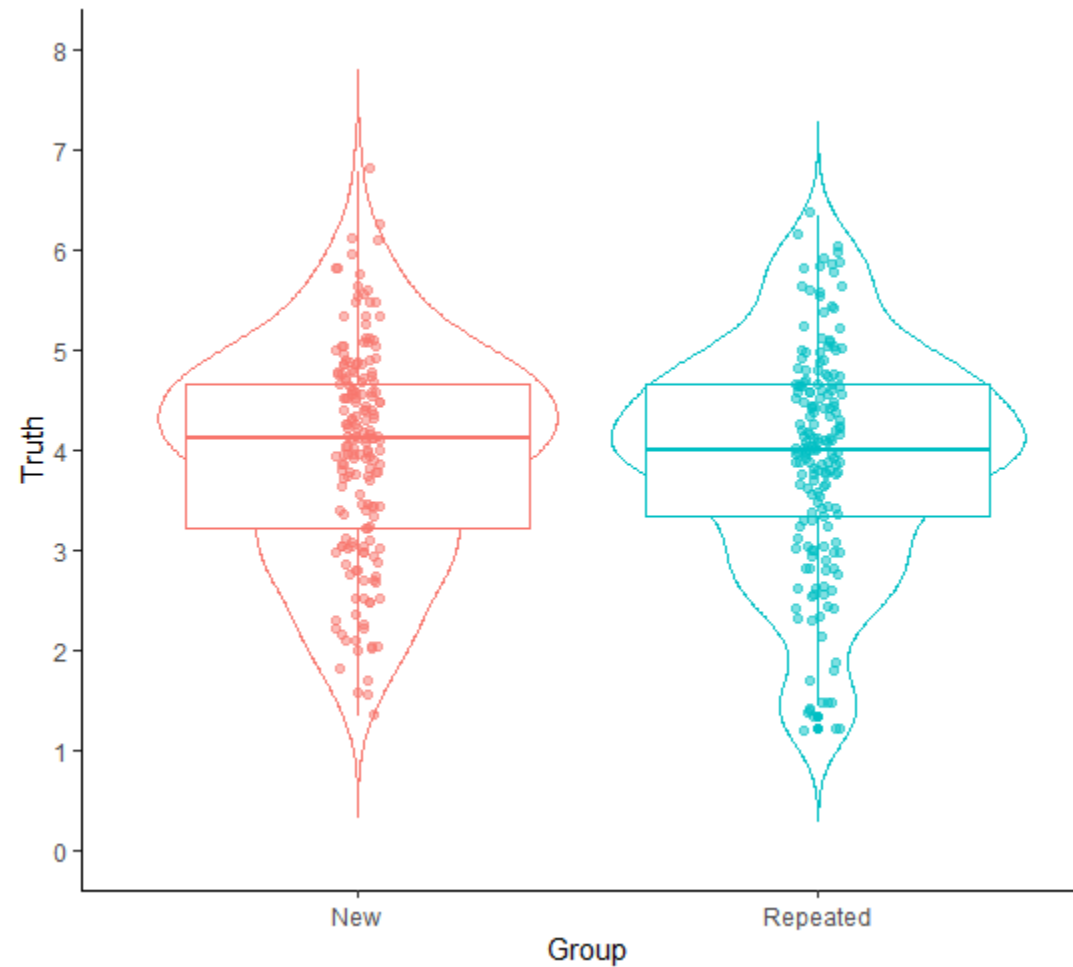
# True Information



# Misinformation



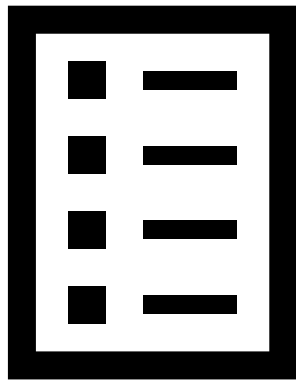
# General Opinion



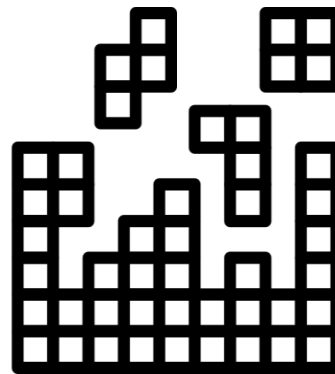
# Experiment 2

## Types of statements

- True: - The refrigerator **was invented in 1748** by William Cullen
- General Opinion: - The refrigerator **was the greatest invention** of the 1700s
- Social Political Opinion: - The death penalty is **one of the best deterrents** for violent crime



Fact or Opinion?

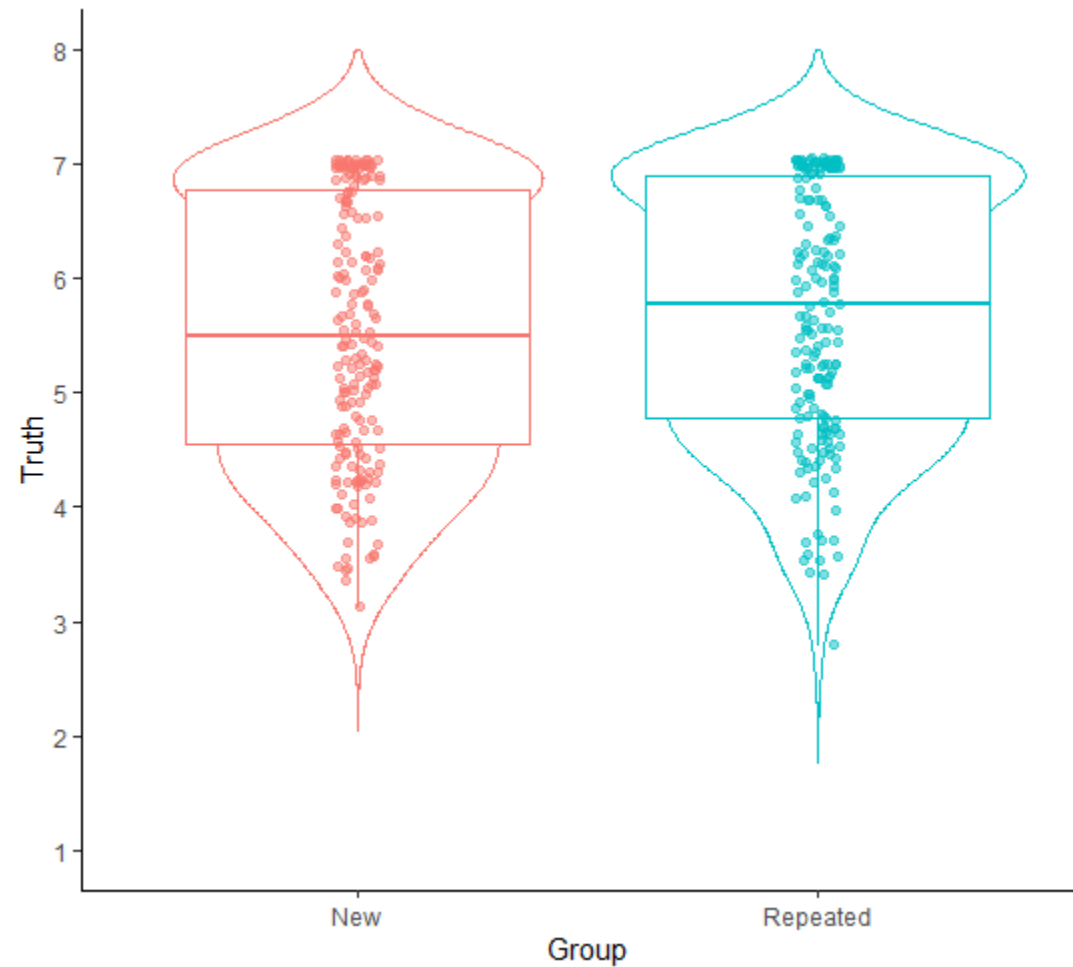


Tetris

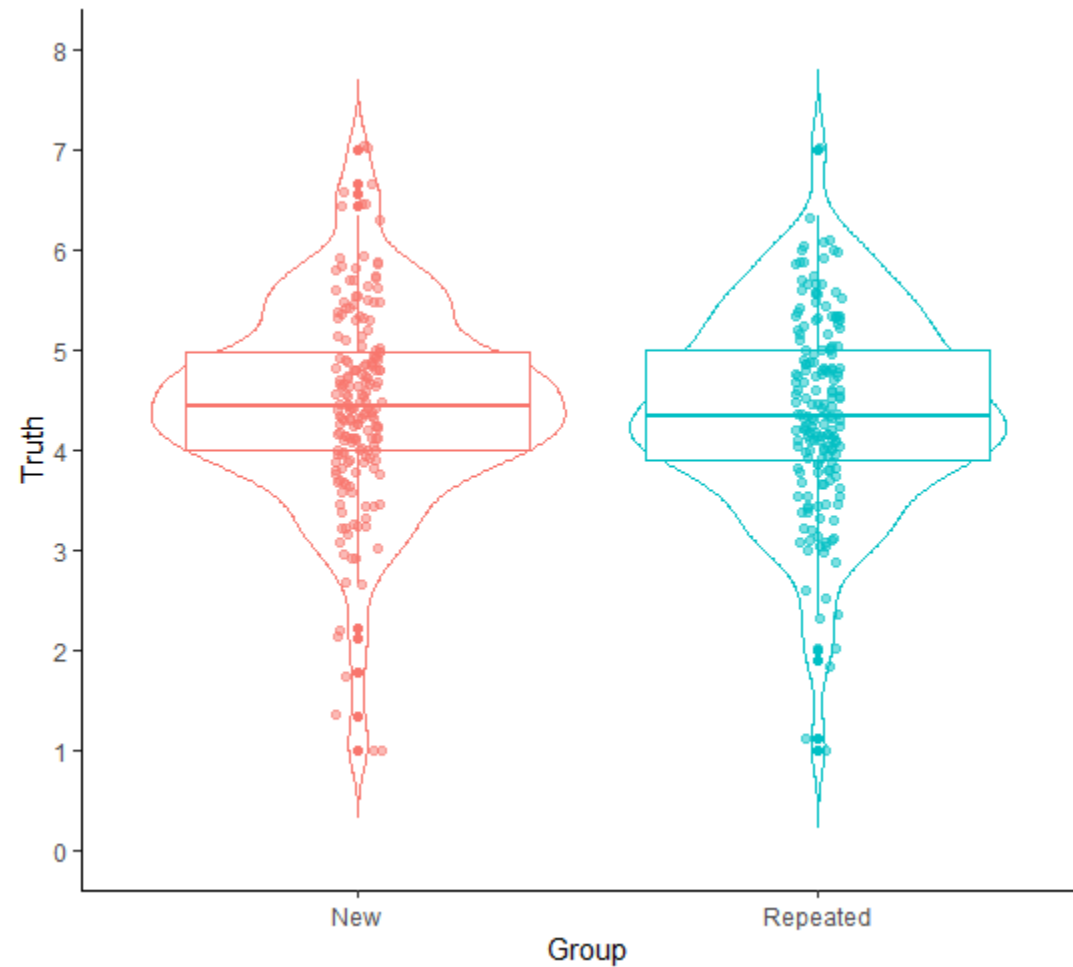


**Truth Scale**  
*1 = not truthful, 7 = very truthful*

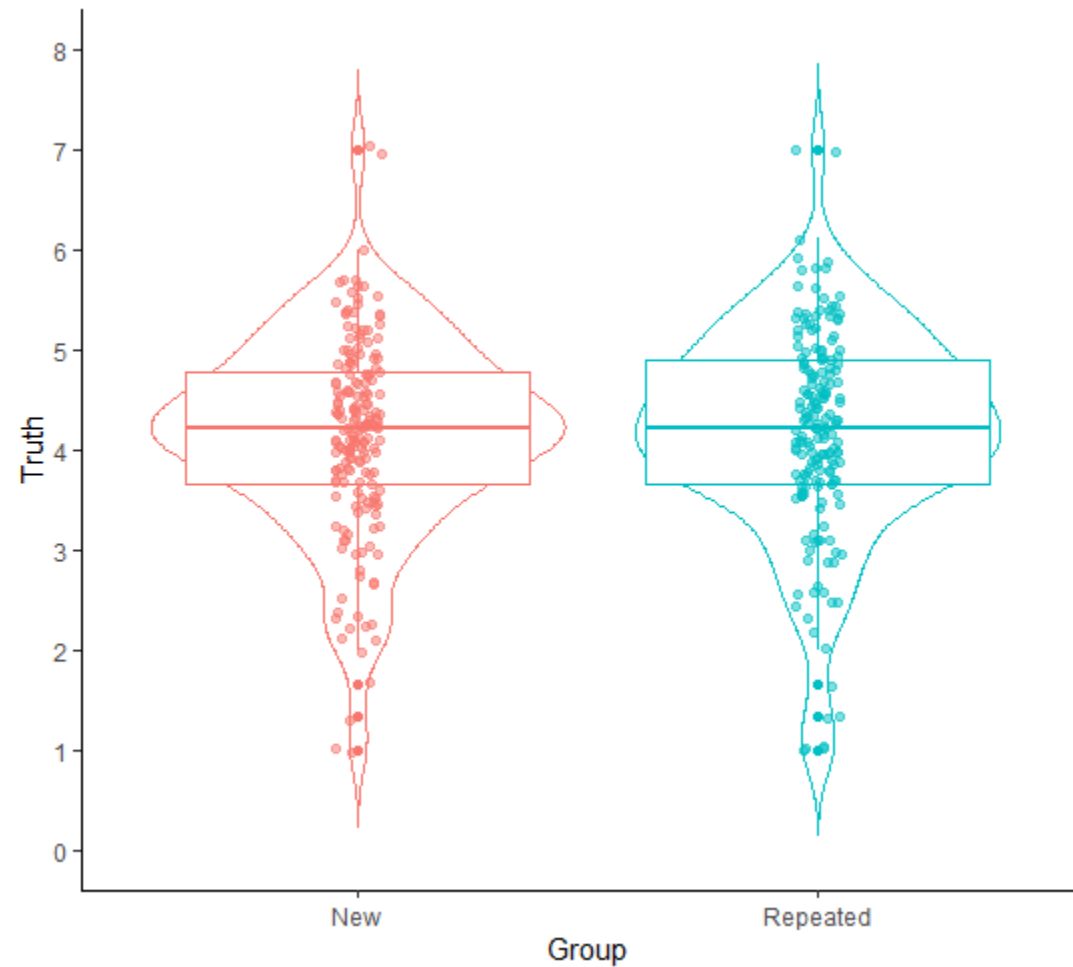
# True Information



# General Opinion



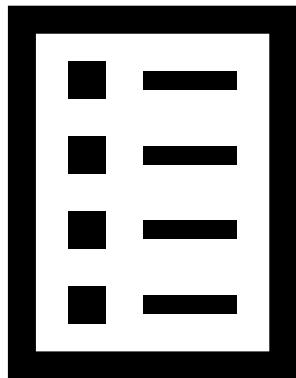
# Social Political Opinion



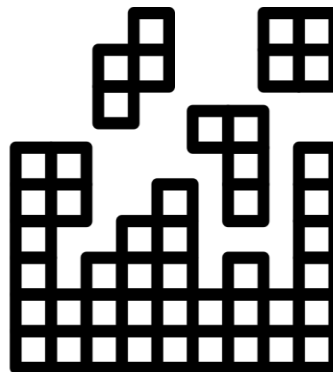
# Experiment 3

## Types of statements

- True: - The refrigerator **was invented in 1748** by William Cullen
- General Opinion: - The refrigerator **was the greatest invention** of the 1700s
- Social Political Opinion: - The death penalty is **one of the best deterrents** for violent crime



Categories



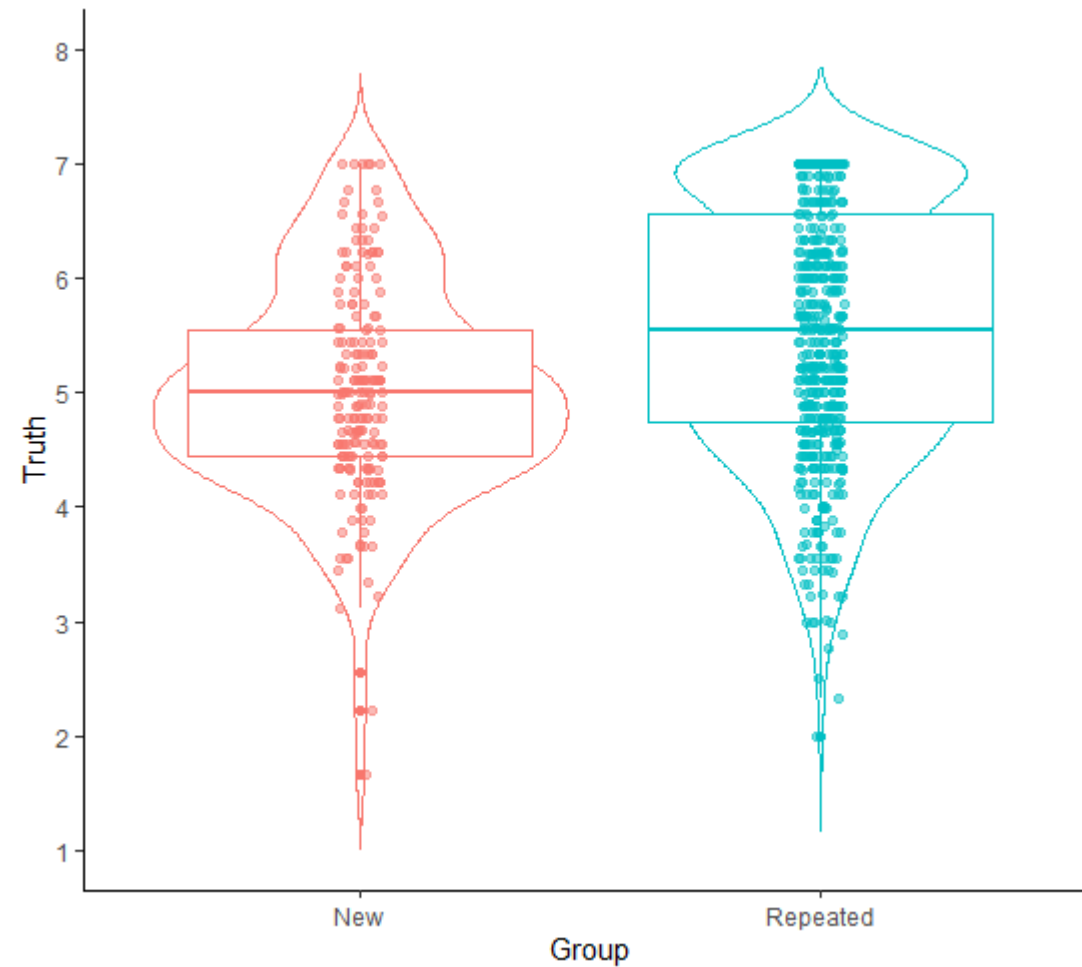
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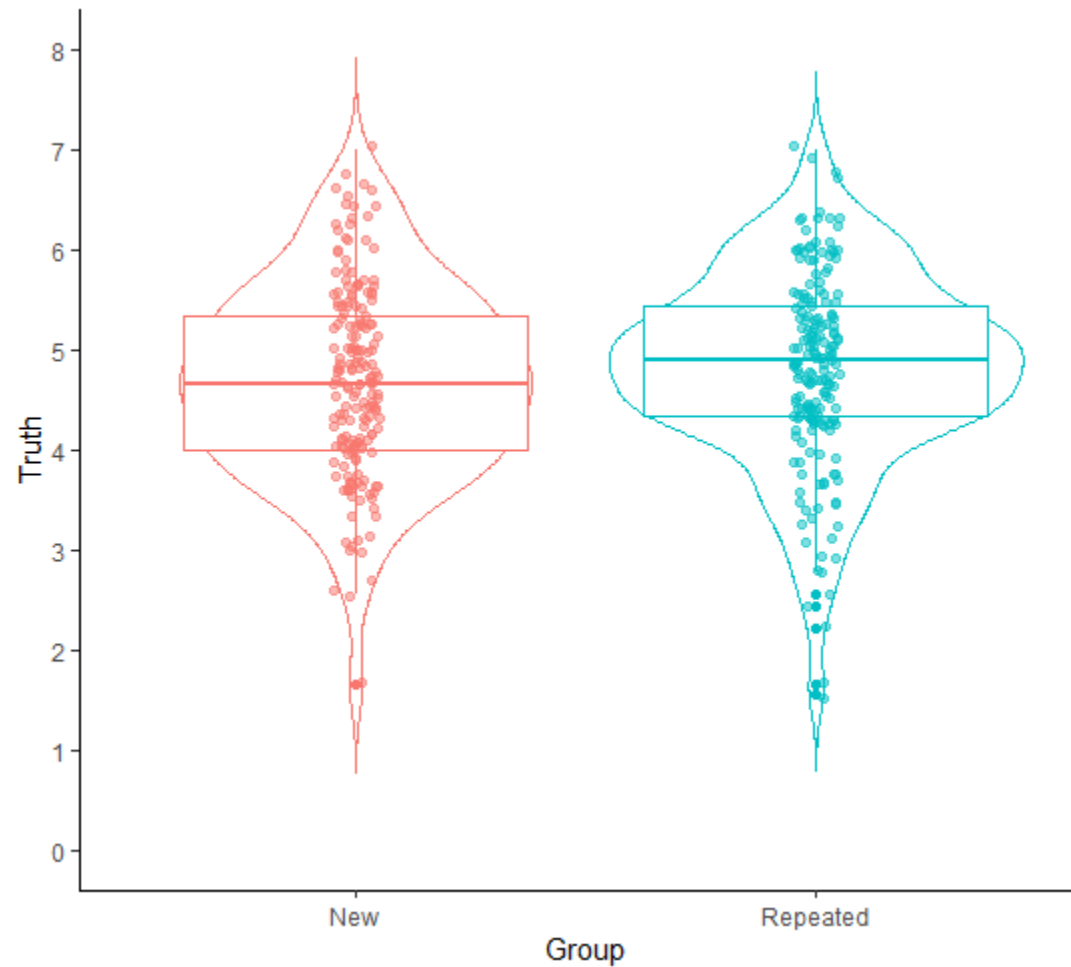
**Truth Scale**  
*1 = not truthful, 7 = very truthful*



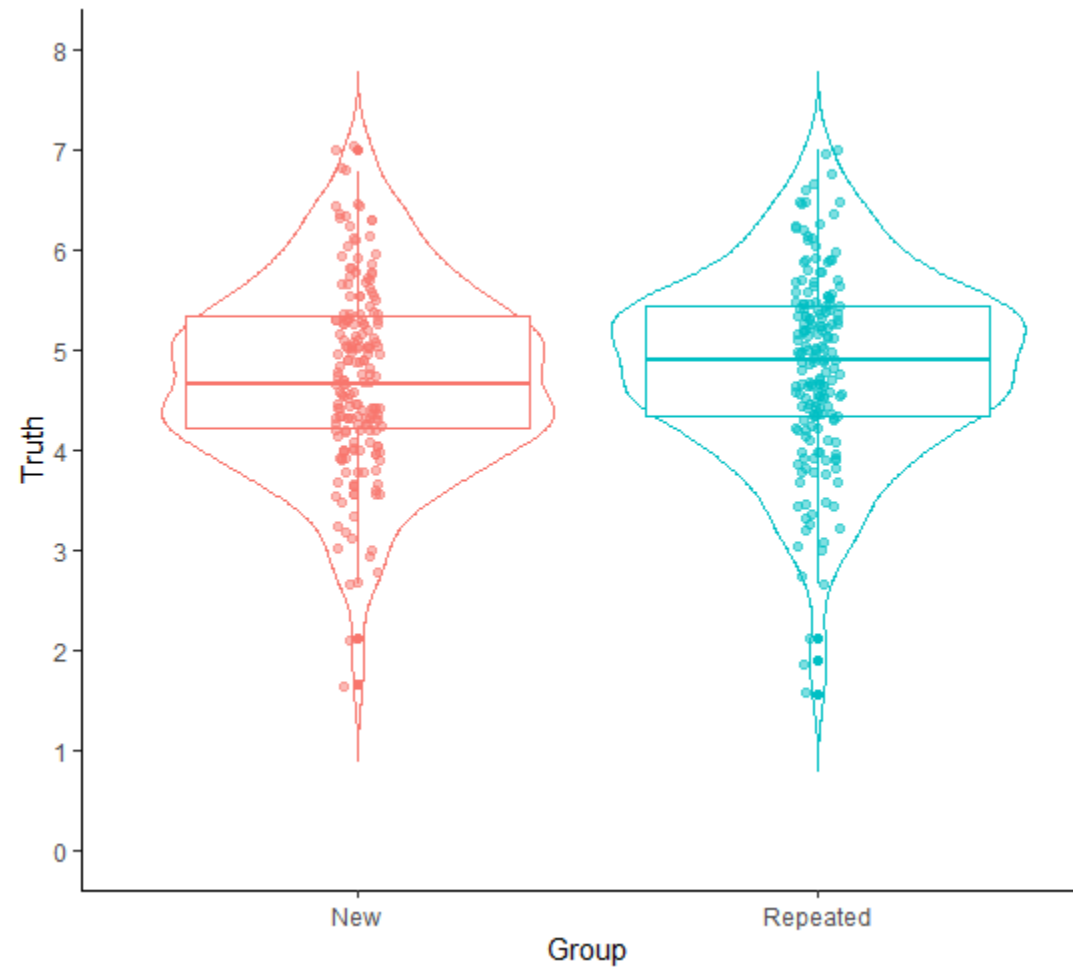
# True Information



# General Opinion



# Social Political Opinion



# Conclusions

- Illusory truth effect
  - True information
  - Misinformation
  - General opinion
  - Social political
- Type of encoding



# Thank you!



Paul Riesthuis

[paul.riesthuis@kuleuven.be](mailto:paul.riesthuis@kuleuven.be)

