False Balance

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General Information

False Balance

For years, a best practice in journalism and in scientific circles has been to present both sides of an argument. However, what should be done when one side of an argument is based on misinformation? Researchers have studied the effects of this false balance. How does presenting fact alongside false information affect people's understanding of a topic?

Variables

- **The variable you can control:** The information presented to the participant.
- **The variable you can measure:** What the participant believes about what they have read.

Potential Theory

Cook et al. (2017) described the inoculation theory:

> Inoculation theory proposes that people can be "inoculated" against misinformation by being exposed to a refuted version of the message beforehand [14]. Just as vaccines generate antibodies to resist future viruses, inoculation messages equip people with counterarguments that potentially convey resistance to future misinformation, even if the misinformation is congruent with pre-existing attitudes.

> There are two elements to an inoculation: (1) an explicit warning of an impending threat and (2) a refutation of an anticipated argument that exposes the imminent fallacy. For example, an inoculation might include (1) a warning that there exist attempts to cast doubt on the scientific consensus regarding climate change, and (2) an explanation that one technique employed is the rhetorical use of a large group of "fake experts" to feign a lack of consensus. By exposing the fallacy, the misinformation (in this case, the feigned lack of consensus) is delivered in a "weakened" form. Thus, when people subsequently encounter a deceptive argument, the inoculation provides them with a counterargument to immediately dismiss the misinformation. (p. 4)

Reference

Cook, J., Lewandowsky, S., & Ecker, U. K. H. (2017). Neutralizing misinformation through inoculation: Exposing misleading argumentation techniques reduces their influence. *PLoS One, 12*(5). https://doi.org/10.1371/journal.pone.0175799

Hypothesis

Exposure to false balance will [increase or decrease] belief in misinformation.

Experimental Materials

You are provided with three different experimental materials.

The **Demographic Questionnaire** can be used to collect basic demographic information about your participants. For this data, you can use descriptive statistics.

Consensus Information: This is the factual information.

Experimental Condition: This is the false information.

Study Measure: This is the measurement you will use to gather data on the dependent variable. There are two options.

Option 1: The multiple-choice option provides you with data that could be viewed as nominal data but is truly ordinal data. Chi-square or a nonparametric statistical test would be appropriate.

Option 2: This is a Likert scale. Technically a Likert scale provides ordinal data, but the social sciences often treat them as an interval scale. Nonparametric statistical tests, *t* tests, or Pearson's r would be appropriate.

Use of the Materials

As you consider how you want to design your experiment, you can use these materials in different ways.

The consensus information can be presented on its own if you have a control group. If you have three or more groups, it could be presented in conjunction with the experimental condition.

The experimental condition can be presented with the consensus Information to your experimental group if you are using two or more groups.

The study measure can be used as a posttest or as both a pretest and posttest if you choose to do so.

CRITICAL NOTES:

* This choice REQUIRES a pretest, posttest design. You must first establish the participant's beliefs before administering any of the materials. False balance is essentially testing the impact of inoculation (consensus information) on beliefs. The real questions being tested are, does the inoculation reinforce beliefs that vaccines do not cause autism spectrum disorder? (stronger beliefs in the post-test), and does the consensus information change beliefs in those who start out believing vaccines cause autism spectrum disorder? (shift from absolutely yes to absolutely no).

- These are all nominal or ordinal level variables. Interval level analysis cannot be done on the nominal variables at all nor on the ordinal variable unless it is converted to a Likert-type scale— not just a numbered list. If this conversion is done, it must be explained in the procedures after data collection and before analysis.

Demographic Questionnaire

Age: Select one of the following that describes you.

A. 25 years old or younger.
B. 26–30 years old.
C. 31–35 years old.
D. 36–40 years old.
E. 41–45 years old.
F. 46–50 years old.
G. 51–55 years old.
H. 56–60 years old.
I. 61–65 years old.
J. Older than 65 years old.

Gender: Select one of the following that describes you.

A. Female.
B. Male.
C. Non-binary or non-conforming.
D. Prefer not to disclose.

Race: Select one of the following that describes you.

A. White.
B. Black or African American.
C. American Indian or Alaska Native.
D. Asian.
E. Native Hawaiian or Other Pacific Islander.
F. Multiracial.
G. Prefer not to say.

Ethnicity: Select one of the following that describes you.
A. Hispanic or Latino.
B. Not Hispanic or Latino.

Consensus Information

In science and public health circles, that issue has long since been considered settled, with multiple studies over many years discounting the findings of a small study published more than 20 years ago that has since been expunged from the medical literature.

But the size of this study—involving 657,461 Danish children born between 1999 and 2010 — should, in theory, bolster the argument that doctors and public health professionals still find

themselves forced to make in the face of entrenched and growing resistance to vaccination in some quarters.

"We found no support for the hypothesis of increased risk for autism after MMR vaccination in … Danish children; no support for the hypothesis of MMR vaccination triggering autism in susceptible subgroups characterized by environmental and familial risk factors; and no support for a clustering of autism cases in specific time periods after MMR vaccination," Hviid and his co-authors wrote.

Experimental Condition

You won't hear anything about it from the mainstream media, but the federal government's kangaroo "vaccine court" has once again conceded, albeit quietly, that the combination measles, mumps and rubella (MMR) vaccine does, indeed, cause autism. In a recently published ruling, part of which was censored from public view, a young boy was awarded hundreds of thousands of dollars after it was determined that the MMR vaccine led to a confirmed diagnosis of autism spectrum disorder (ASD).

Of particular note in the case is the fact that concession documents by the government remain under seal. While the court and the government at large openly admitted that the MMR vaccine caused Ryan's encephalitis, it did not make public its opinion on whether or not that encephalitis led to Ryan's other injuries, including those that fall into the category of ASD. But the fact that these documents remain censored shows that the government is hiding something of importance from the public, which most definitely has to do with the connection between the MMR vaccine and autism.

Study Measure

Option 1

1. Do vaccines, specifically the MMR vaccine, cause autism spectrum disorder?
    a. Absolutely, yes it does.
    b. It probably does.
    c. I don't know; the evidence is inconclusive.
    d. I doubt it.
    e. Absolutely not.

Option 2

Rate the statement "Vaccines, specifically the MMR vaccine, cause autism spectrum disorder." on a scale from 1 (I absolutely do not believe), 2 (I doubt it), 3 (I don't know, the evidence is inconclusive), 4 (It's probably true), 5 (I completely agree).

Potential References

Cook, J., Lewandowsky, S., & Ecker, U. K. H. (2017). Neutralizing misinformation through inoculation: Exposing misleading argumentation techniques reduces their influence. *PLoS One, 12*(5), 1–17. https://doi.org/10.1371/journal.pone.0175799

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