

NWO Symposium  
Saturday, November 19, 2016  
BGSU

TITLE: How does one decide what to believe when one is not an expert?

ABSTRACT: We will present studies about how people judge authority to make decisions relating to topics they are not expert in. We hope to encourage a lively discussion.

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Zalman Usiskin

University of Chicago  
School Mathematics Project

(Just spoke at OCTM Annual Meeting.)

Ottawa Hills High School  
used textbooks.

Implied messages.

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## Smoking

Google: Smoking does not cause cancer.

Smoking does not cause cancer, radiation does!

<http://owndoc.com/cancer/radiation-true-cause-of-cancer/>

Google: Smoking and cancer.

The CDC (experts?) sets it straight.

[https://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/health\\_effects/effects\\_cig\\_smoking/#cancer](https://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/#cancer)

But (CDC)...

<https://www.cdc.gov/nceh/radiation/smoking.htm>

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## Smoking

IN FACT: Google: Smoking cures cancer!

<https://www.sott.net/article/226999-Smoking-Helps-Protect-Against-Lung-Cancer>

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## Flat Earth Society

<http://www.theflatearthsociety.org/home/index.php>

The first frequently asked question is "Are You Serious?"

Their answer is "Yes."

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## Earth Center of Universe

Documentary Review: Wiesner, Matthew P. 2016 Does the Universe Revolve around Me? (Documentary: The Principle) Skeptical Inquirer, Vol 40, Issue 4.

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## Climate Change

Americans are more skeptical of climate change than other developed countries.

Skeptical Science App



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## Naomi Oreskes

### Why we should trust scientists

[https://www.ted.com/talks/naomi\\_oreskes\\_why\\_we\\_should\\_believe\\_in\\_science/transcript?language=en](https://www.ted.com/talks/naomi_oreskes_why_we_should_believe_in_science/transcript?language=en)

“Scientists don’t like talking about science as a matter of belief.”

“We can’t really judge scientific claims for ourselves in most cases...this is actually true for most scientists as well outside of their own specialties.”

“Scientists judge, and they judge by judging evidence.”

“Science is the appeal to authority, but it’s not the authority of the individual; it’s the authority of the collective community.”

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## The Nizkor Project

### Fallacy: Appeal to Authority

<http://www.nizkor.org/features/fallacies/appeal-to-authority.html>

1. The person has sufficient expertise in the subject matter in question.
2. The claim being made by the person is within her area(s) of expertise.
3. There is an adequate degree of agreement among the other experts in the subject in question.
4. The person in question is not significantly biased.
5. The area of expertise is a legitimate area or discipline.
6. The authority in question must be identified.

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**James Lett**  
**A Field Guide to Critical Thinking**

Skeptical Inquirer, Vol 14.2

[http://www.csicop.org/si/show/field\\_guide\\_to\\_critical\\_thinking](http://www.csicop.org/si/show/field_guide_to_critical_thinking)

"Public education, ... generally fails to teach students the essential skills of critical thinking."

Six rules of evidential reasoning:

- Falsifiability
- Logic
- Comprehensiveness
- Honesty
- Replicability
- Sufficiency

He calls this: FiLCHeRS

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**Scientific American**  
**September 18, 2010**

<https://www.scientificamerican.com/podcast/episode/we-only-trust-experts-if-they-agree-10-09-18/>

"We think we trust experts. But a new study finds that what really influences our opinions, more than listening to any expert, is our own beliefs."

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**Scientific American**

<https://www.scientificamerican.com/article/why-do-some-people-believe-in-conspiracy-theories/>

"The attractiveness of conspiracy theories may arise from a number of cognitive biases that characterize the way we process information."

- Confirmation bias
- Proportionality bias
- Projection

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Robert Baker  
Improving Scientific Reasoning  
Book review: The Myth of Scientific  
Literacy by Morris Shamos  
[http://www.csicop.org/sb/show/improving\\_scientific\\_literacy](http://www.csicop.org/sb/show/improving_scientific_literacy)

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DISCUSSION...

Thank you.

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