Facts, beliefs, and identity: The seeds of science skepticism

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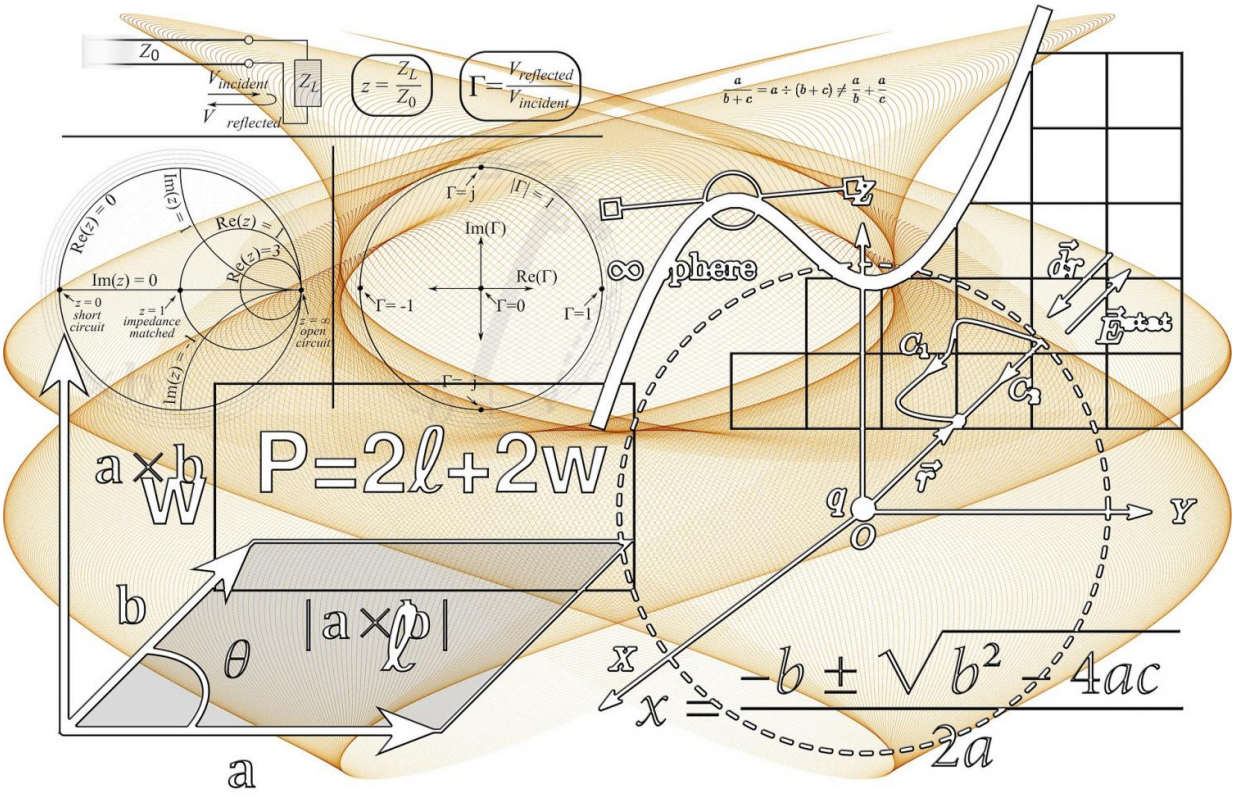

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Psychological researchers are working to understand the cognitive processes, ideologies, cultural demands, and conspiracy beliefs that

cause smart people to resist scientific messages. Using surveys, experiments, observational studies and meta-analyses, the researchers capture an emerging theoretical frontier with an eye to making science communication efforts smarter and more effective.

Protecting "Pet Beliefs"

One striking feature of people who hold science-skeptic views is that they are often just as educated, and just as interested in science, as the rest of us. The problem is not about whether they are exposed to information, but about whether the information is processed in a balanced way. It manifests itself in what Matthew Hornsey (University of Queensland) describes as "thinking like a lawyer," in that people cherry-pick which pieces of information to pay attention to "in order to reach conclusions that they want to be true."

"We find that people will take a flight from facts to protect all kinds of belief including their religious belief, their political beliefs, and even simple personal beliefs such as whether they are good at choosing a web browser," says Troy Campbell (University of Oregon).

Dan Kahan (Yale University) agrees, finding in their research that "the deposition is to construe evidence in identity-congruent rather than truth-congruent ways, a state of disorientation that is pretty symmetric across the political spectrum."

Changing Minds

Merely talking about "evidence" or "data" does not typically change a skeptic's mind about a particular topic, whether it is climate change, genetically modified organisms, or vaccines. People use science and fact to support their particular opinion and will downplay what they don't

agree with.

"Where there is conflict over societal risks - from climate change to nuclear-power safety to impacts of gun control laws, both sides invoke the mantel of science," says Kahan.

"In our research, we find that people treat facts as relevant more when the facts tend to support their opinions," says Campbell. "When the facts are against their opinions, they don't necessarily deny the facts, but they say the facts are less relevant."

One approach to deal with science skepticism is to identify the underlying motivations or "attitude roots," as Hornsey describes in his recent research (American Psychologist, in Press).

"Rather than taking on people's surface attitudes directly, tailor the message so that it aligns with their motivation. So with climate skeptics, for example, you find out what they can agree on and then frame climate messages to align with these."

Kahan's recent research shows that a person's level of scientific curiosity could help promote more open-minded engagement. They found that people who enjoyed surprising findings, even if it was counter to their political beliefs, were more open to the new information. As Kahan and his colleagues note, their findings are preliminary and require more research.

Hornsey, Campbell, Kahan and Robbie Sutton (University of Kent) will present their research at the symposium, Rejection of Science: Fresh Perspectives on the Anti-Enlightenment Movement. The talks take place on Saturday, January 21, 2017, at the SPSP Annual Convention. More than 3000 scientists are in attendance at the conference in San Antonio from January 19-21.