



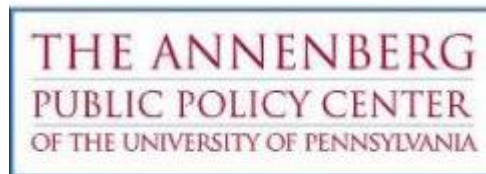
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Communication as Key to Regulating Animal Biotechnologies

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Risk Communication Involves Talking
about Both Risks and Benefits

Communicating Risks and Benefits

- People focus on and remember more negative information than positive information
 - Sometimes benefits must be emphasized
 - Talking about *overall* effects may be beneficial



Risk Communication Is an Integral and
Ongoing Part of the Process of Risk
Analysis

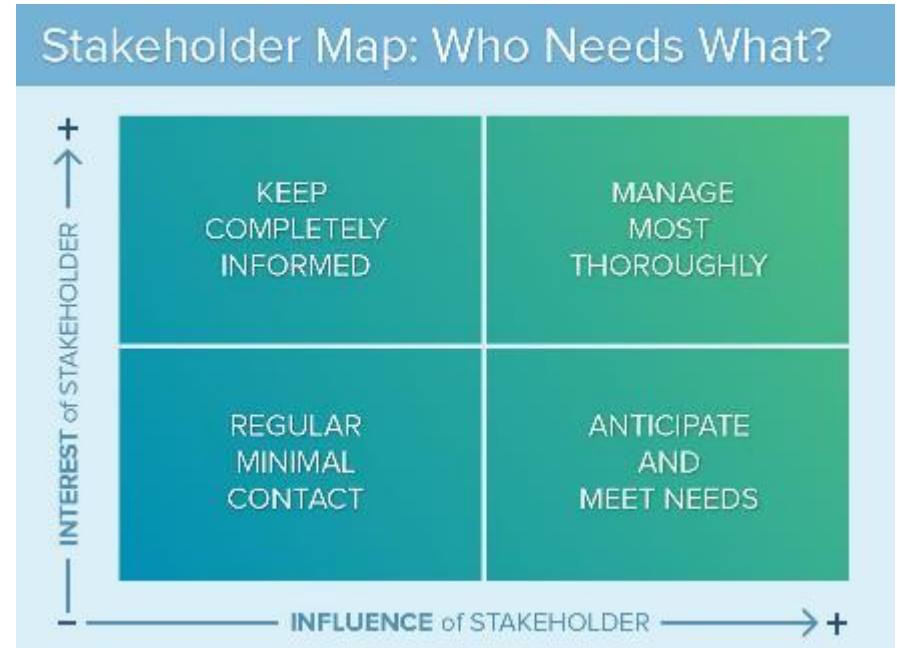
Risk Communication in the Risk Analysis Process



Risk Communication Involves Talking
with Key Stakeholders

Who are Your Stakeholders?

- Individuals, groups, and organizations that can influence, or be affected by the intended and unintended consequences of policy or regulatory decisions
 - Government
 - Consumers
 - Industry
 - Workers
 - NGOs
 - Academia
 - Political Leaders
 - Religious Leaders
 - Media
 - Others



Stakeholder Engagement

- Dialogue with key stakeholders can help:
 - Facilitate greater understanding of the nature of the problems and potential solutions
 - Identify gaps in knowledge
 - Understand stakeholders' risk perceptions and concerns
 - Include different perspectives in decision-making
 - Identify and address *unintended* consequences of the available options
 - Potentially create buy-in and build broad support for the decisions made



Stakeholder Engagement

- Dialogue with key stakeholders can help:
 - Identify potential communication barriers
 - Find preferred/most appropriate information sources and channels of communication
 - Facilitate the coordination of communication efforts among various governmental departments (e.g. health, agriculture, and trade) and other stakeholders sharing responsibility for the safety of food, agriculture and the environment



Risk Communication Involves Talking
About Science

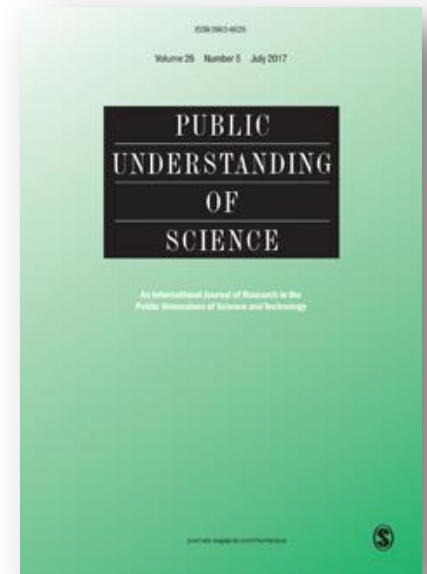
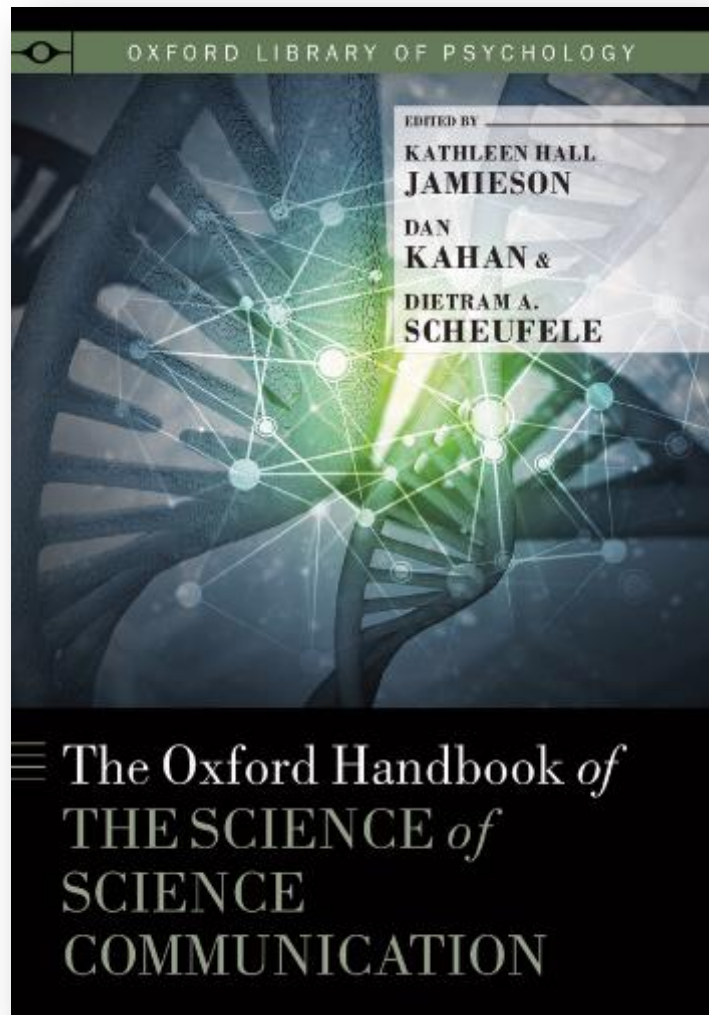
People Don't Know What they Don't Know

- They overestimate their own knowledge of Science and Agriculture
 - Increasing urbanization means fewer people around the world are involved with Agriculture
- People don't know what they don't know – so are unlikely to seek information.



There is a Science of Science Communication

Science of Science Communication



Even the best science can be overwhelmed by
people's worst fears



KFC Sues Over Alleged Eight-Legged Chicken Rumors



Apple Readies New Plan to Stream Music



The 109,894-Word Annual Report



Altera Deal Accelerates Intel Shift From PCs



Court Applies Searf



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BUSINESS

KFC Sues Chinese Companies Over Alleged Eight-Legged Chicken Rumors

Restaurant says three companies 'misleading the consumer' on Internet



A pedestrian walks past a KFC restaurant in Qiqihar city, northeast China in this November 2014 photo. KFC said it is suing three companies in China for allegedly spreading rumors about the quality of its food—including that its chickens have eight legs. PHOTO: ZUMA PRESS

By **LAURIE BURKITT**

June 1, 2015 9:45 a.m. ET

 **15 COMMENTS**

Lies only have to be plausible to be accepted

Sometimes Intuitive Plausibility is Enhanced

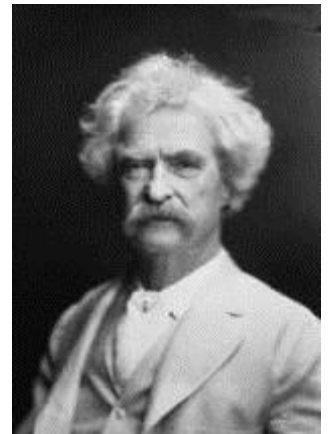


© Snopes

Internet hoax: KFC said one of the best-known fake rumors was that chickens used by the company are genetically modified and have six wings and eight legs (computer generated image)

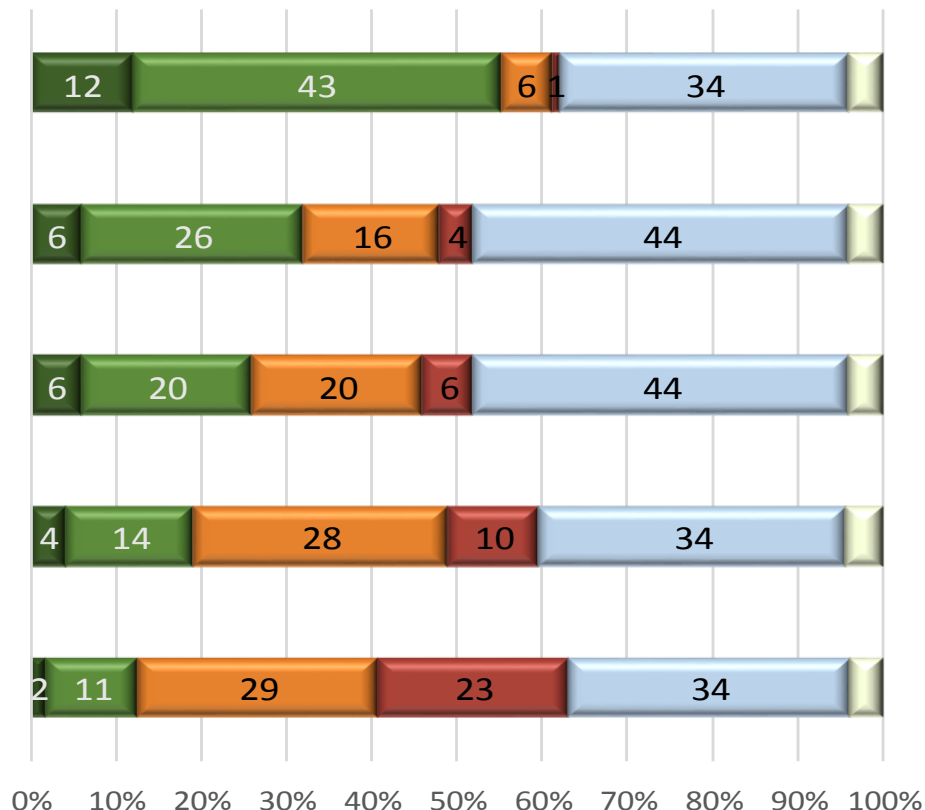
**“A lie can travel halfway around the world
while the truth is putting on its shoes.”**

- Mark Twain



Beliefs about Eating GM Foods

- Some people have had allergic reactions to genetically modified foods.
- Eating genetically modified wheat has caused more people to become sensitive to gluten.
- Eating genetically modified foods has caused an increase in cancer.
- Eating genetically modified foods is more likely to cause obesity than eating non-genetically modified foods.
- By eating a genetically modified fruit, a person's genes could also become modified.



■ TRUE
■ Likely True
■ Likely false
■ FALSE
■ Unsure
■ Refused

Beliefs about GMOs

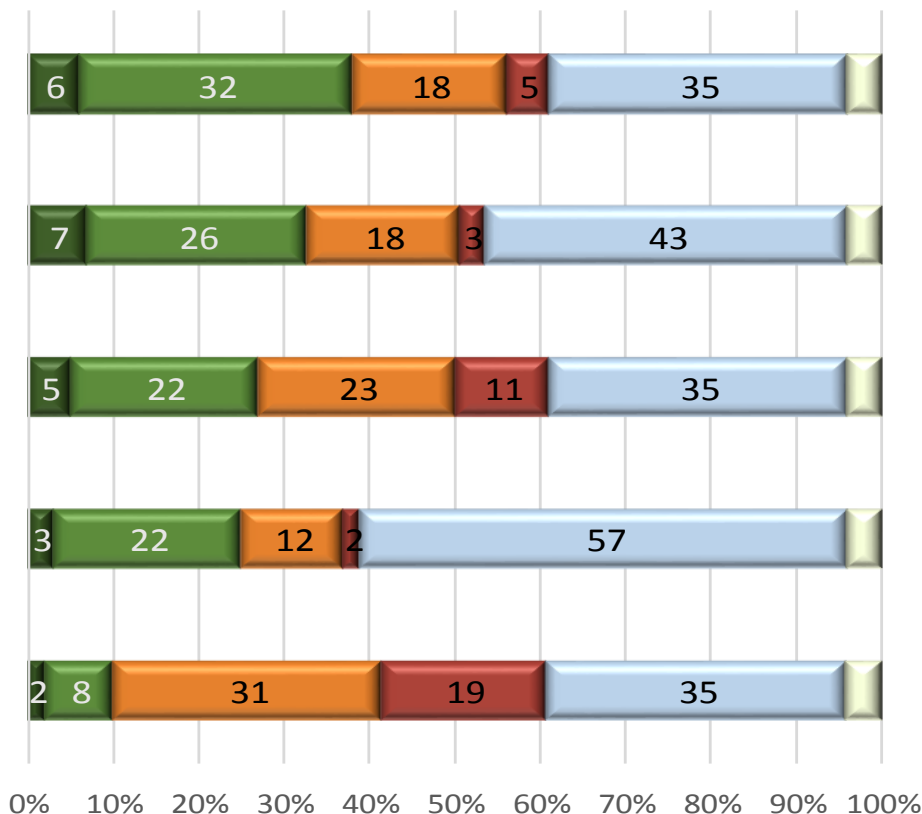
Sugar made from genetically modified sugar beets is different from sugar made from regular sugar beets.

Genetically modified crops are harmful to bees.

A large fast-food company used chickens so altered by genetic modification that they can't be called chicken anymore.

Pollen from genetically modified corn was shown to kill butterfly larva in a laboratory.

Tomatoes genetically modified with genes from catfish would probably taste fishy.



■ TRUE
■ Likely True
■ Likely false
■ FALSE
■ Unsure
■ Refused

Risk Communication Is More Than Education

If People Just Understood the Facts

- They would do the right thing.
- There wouldn't be a problem.
- We could have a rational discussion.
- They would reach the right conclusion.
- Everything would be fine.



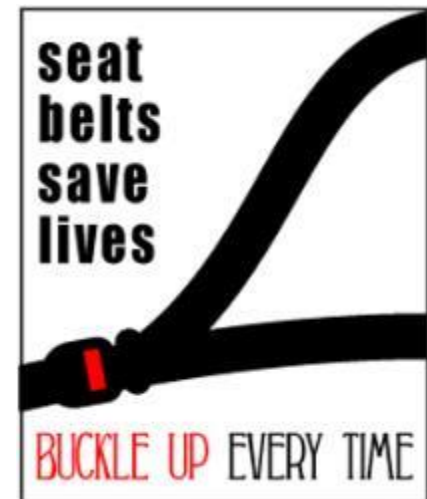
The Educational Deficit Model

- Really attractive to analytical people.
 - Given the same assumptions and data, there can be only be a restricted set of conclusions and actions.
- Defining the problem as an 'educational deficit' leads inexorably to the one true solution.
 - educating people



Education Alone Doesn't Work

- Many have written about the inadequacy of the 'educational deficit' model
- Plenty of evidence from behavioral research.
 - The correlation between knowledge and action rarely exceeds .20
 - People know the 'facts' about:
 - Smoking and continue to smoke
 - Diet and continue to be overweight
 - Safe sex . . .
 - Drinking and Driving . . .



Why Education Alone Doesn't Work

- Simply providing *facts* rarely meets an individual's specific situational needs, wants, or expectations.



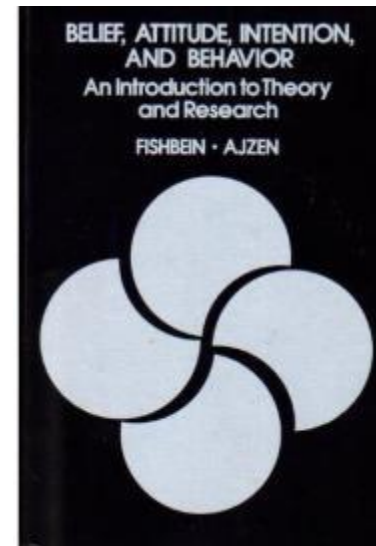
Why Education Alone Doesn't Work

- New information is often twisted in ways to support exiting beliefs, decisions, and actions.



Why Education Alone Doesn't Work

- Distance between knowledge, beliefs, attitudes, intentions, behaviors
 - Even the correlation between intention and behavior can be very low
 - What people say they will do and what they actually do are often quite different



Why Education Alone Doesn't Work

- They often assume:
 - a base level of knowledge that doesn't exist.
 - a base level of interest in the details that doesn't exist.



Risk Communication Involves Talking
About Shared Values

Key Questions - Trust

- Do the people who get to decide, share my values?
- Would they make the same decision that I would make?
- Are they making decisions that are in the best interests of the public?
- How do I know?



Key Questions - Goals

- What is the problem or opportunity involved?
- Is this a problem or opportunity worth pursuing?
- Is this a problem or opportunity worth pursuing using biotechnologies?

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Download our whitepaper here:

http://humeco.rutgers.edu/documents_PDF/news/GMlabelingperceptions.pdf

