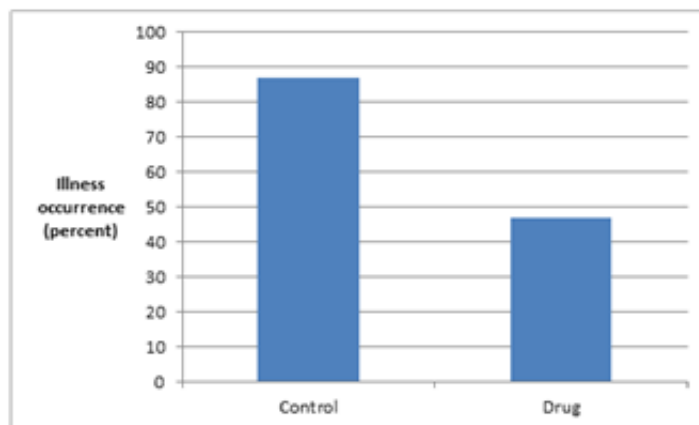


Blinded by science: Trivial scientific information can increase our sense of trust in products

October 15 2014, by Katherine Baildon

Graph displayed with study 1



Credit: Robyn Wishna

Do you believe in science? Your faith in science may actually make you more likely to trust information that appears scientific but really doesn't tell you much. According to a new Cornell Food and Brand Lab study, published in *Public Understanding of Science*, trivial elements such as graphs or formulas can lead consumers to believe products are more effective. "Anything that looks scientific can make information you read a lot more convincing," says the study's lead author Aner Tal, PhD, "The scientific halo of graphs, formulas, and other trivial elements that look

scientific may lead to misplaced belief."

In one study, Tal and co-author Brian Wansink, PhD (author of *Slim by Design: Mindless Eating Solutions for Everyday Life*) recruited 61 individuals to read information about a new medication. Half of the participants read a paragraph about the medication and the other half read the same paragraph with an accompanying [graph](#). The graph did not provide any new information. Afterwards participants were asked: "Does the medication really reduce illness?" Graphs helped convince almost all of the participants that the medication worked: 96.6% of those who saw the graph believed that the medication would effectively reduce illness, whereas only 67.7% of those who saw only the text believed that that it would reduce illness.

Two additional studies supported the researchers' hypotheses that individuals are influenced by "scientific looking" elements not because they help with understanding or information retention, but because "scientific looking" information is perceived as true. In the second study 56 participants were presented with either the paragraph and graph from the first study or just with the paragraph with an added sentence repeating that the medication reduced illness by 20%. Afterwards all participants were asked to estimate how much the medication reduced illness and their level of agreement with the statement: "I believe in [science](#)." Retention of information was the same for both groups - graphs did not appear to increase their understanding of the information or their recall of the percentage by which it reduced illness. Those who indicated a belief in science and who were shown the graph expressed the strongest confidence in the effectiveness of the medication. This shows that belief in science can make individuals more likely to be persuaded by trivial, "scientific looking" graphs."A general faith in science may lead people to believe things that just look scientific, but aren't," explains Tal.

In the third study the paragraph was shown to participants as in the two prior studies. This time, instead of a graph, half of the 57 participants in this study were given the chemical formula of the drug's active ingredient. Those who were shown the chemical formula believed the medication would work for 2 hours longer than those who were given its text description: 5.9 hours vs. 3.8 hours, an increase of 56.8%. These results support the idea that increased confidence was due to participants' trust in information that appears to add scientific validity.

Researchers concluded that presenting consumers with "scientific looking" information increases product confidence because individuals believe that science denotes truth. Dr. Tal cautions consumers, "What this means is that when you read claims about new products, whether it's a medication or a new technology, you should ask yourself, 'what's the actual scientific support for the claims being made?' Don't let things that look scientific but don't really tell you much fool you. Sometimes a graph is just a graph! Scrutinize what you read so that you're not blinded by what looks like science, but might not be!"

Provided by Cornell Food & Brand Lab

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