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Dealing with expert disagreement

The necessity of trusting experts

The prevalence of expert disagreement

Can a layperson ever have good reason to trust one disagreeing expert over another?

Adjudication heuristics for trusting disagreeing experts

In today's informationally complex and highly specialized world, reliance on experts is all but unavoidable.

Consider just a few of the areas in which we have to rely on experts:

High-energy particle physics, nutrition, cardiovascular medicine, epistemology, Mycenaean history, neurobiology, art criticism, economics, psychiatry, Islamic studies, Constitutional law, computer engineering, musicology, child psychology, political strategy, literary criticism, molecular biology, marketing, analytical jurisprudence, gastronomy, criminal forensics...

Unfortunately, however, the experts in such areas of expertise often disagree about important issues in the areas.

E.g.:

The screenshot shows a web page from The New York Times. At the top, there are navigation links: HOME PAGE, TODAY'S PAPER, VIDEO, MOST POPULAR, TIMES TOPICS, MOST RECENT, Login, Register Now, Help. The page title is "The New York Times" and the section is "Health". A search bar is visible with the text "Search All NYTimes.com" and a "Go" button. Below the navigation, there are "COLLECTIONS > HELMET" and "ADS BY GOOGLE". The main article is titled "PRO FOOTBALL; Experts Disagree on Football Injury Prevention" by GERALD ESKENAZI, published on December 02, 1992. The article text discusses the debate over whether football-related spinal cord injuries are preventable. It mentions Dr. Joseph S. Torg, a surgeon at the University of Pennsylvania, who suggests teaching athletes never to use the helmet as a point of attack. It also mentions Dr. John Powell, a researcher at the University of Iowa, who describes the injury as a "rare incident." The article concludes with a quote from Powell: "You had Darryl Stingley in 1978 and then Mike Utley 13 years later," Powell said. "So now you have one back-to-back, but it could be another 13 years." To the right of the article, there are links for "SIGN IN TO E-MAIL", "PRINT", and "SINGLE-PAGE". Below the article, there is another "ADS BY GOOGLE" section with a link "Are You Writing a Book?" and a partial view of an advertisement for "STOKER NOW PLAYING".

Area of expertise: Sports medicine

Expert(s) 1: In (American) football, never using helmets for offensive maneuvers would significantly diminish the incidence of spinal cord injuries.

Expert(s) 2: In football, never using helmets for offensive maneuvers would not significantly diminish the incidence of spinal cord injuries.

LOSE THE WHEAT, LOSE THE WEIGHT,
AND FIND YOUR PATH BACK TO HEALTH



Area of expertise: Health nutrition

Expert(s) 1: Significant health benefits would occur for most humans by eliminating wheat from their diets.

Expert(s) 2: Significant health benefits would not occur for most humans by eliminating wheat from their diets.

When experts in a given area of expertise do disagree, can you—as a layperson, i.e., as someone who is not an expert in that area—have any good reason to trust one of these disagreeing experts over another? That is, can you have any good reason as a layperson to believe the say-so of one of these experts over the conflicting say-so of another expert who disagrees with her?

The contemporary philosopher Alvin Goldman has pointed out

(see his relevant article, Experts: Which one should you trust?

if you're interested; we'll draw a lot on themes from this article in what follows) that there's an argument to be given for the claim that you can't. Let's call it the "Skeptical Argument":

The Skeptical Argument

- Premise 1 In order for a layperson to have a good reason to trust one disagreeing expert over another, a layperson would have to be an expert in the area himself.
- Premise 2 A lay person cannot be an expert in the particular field.
- Conclusion Therefore, a layperson can't have a good reason to trust one disagreeing expert over another.

Clearly, this argument is logically strong (in the deductive sense: it has the valid form of *Modus Tollens*). But is the argument sound? It seems not, because there is, as

Goldman notes, good reason to doubt the premise of the argument.

The reason is this: A layperson can know that certain statements about the disagreeing experts are true, and knowing these statements can give the layperson good reason to trust one disagreeing expert over another.

For example, statements about:

- the dialectical performance of the experts** (i.e., how well the experts do dialectical contexts, where they are called upon to talk with others about their areas of expertise; e.g., how clearly they explain themselves to laypeople, how carefully they address the objections or criticisms of those they debate in public *fora*)
- how many independent experts in the area agree with the experts**

(here, "independent experts" means roughly "other experts in the field who are not close friends with or closely related to.")

- the relative strength of the experts' credentials** (e.g., their relevant degrees, training, experience, etc.)
- potential biasing interests of the experts** (i.e., interests of the experts that might cause them to be unreliable or inaccurate in what they claim)
- the past performance of the experts** (i.e., how well the expert in the past has explained things, predicted things and how much of it has turned out to be true.)

Corresponding to these different sorts of statements you can (even as a layperson) know about experts are some adjudication heuristics that you can make use of when trying to figure out which experts you should trust in situations where the experts disagree with each other.

We'll consider five such adjudication heuristics. (Note that here, we're dealing with adjudication heuristics *for disagreeing experts*--general guidelines, or "rules of thumb," for deciding when to trust one disagreeing expert's say-so over another's; these are to be contrasted with the adjudication heuristics *for competing explanations* that we considered earlier in the course.)

Dialectical Superiority:

if you know that one expert E1 displays better dialectical performance than expert E2, then *ceteris paribus*, you should trust E1 over E2.

Here's an example to which you can apply this adjudication heuristic:

<http://www.cbc.ca/q/blog/2013/02/07/are-wheat-free-diets-a-fad/>

The forum: Jian Ghomeshi's CBC radio show, "Q"

Area of expertise: nutritional health policy

Expert 1: William Davis, cardiologist, author of *Wheat Belly*

Expert 2: Timothy Caulfield, Canada Research Chair in Health Law & Policy, University of Alberta

(Note Caulfield's objections (at 10:00ff.) that Davis's evidence is anecdotal, and that we don't know which variable is operative. Note how Davis responds.)

Independent Agreement: If you know that considerably more independent experts in the area agree with an expert E1 than with a disagreeing expert E2, then, *ceteris paribus*, you should trust E1 over E2.

An example that this adjudication heuristic applies to:

<http://www.youtube.com/watch?v=Zuxt8la5HeA>

Area of expertise: climatology/geology/earth sciences

Expert 1: William Gray, Emeritus Professor of Atmospheric Science at Colorado State University

Expert 2: Any of the authors of the UN Intergovernmental Panel on Climate Change reports.



(Relevant information: In a *Science* review article (2004) by Naomi Oreskes, 928 peer-reviewed scientific articles on the climate-change issue were reviewed, and *all* of them agreed that global warming is primarily caused by human activity.)



Superior Credentials:

If you know that an expert E1 has better credentials than a conflicting expert E2, then *ceteris paribus*, you should trust E1 over E2.

A relevant example:

Area of expertise: U.S. constitutional history

Expert 1: David Barton, evangelical Christian minister, cultural critic, constitutional commentator.



Expert 2: Richard Beeman, constitutional scholar, Professor of History at the University of Pennsylvania.



Topic of disagreement: Whether U.S. constitution, as originally drafted, is consistent with the country being a Christian nation.

(Observation: Barton lacks any academic degrees in history or constitutional law; he also lacks peer-reviewed scholarly work in these areas.)

Biasing Interests: _____

If you know an expert E1 has significant biasing interest but another conflicting expert E2 does not, then ceteris paribus, you should trust E2 over E1.

Commentaries

Does pharmaceutical industry funding bias research?

February 15, 2009
By: STEVEN MILES

Funding by industry biases research.

Industry-sponsored studies, when published in peer-reviewed journals, are four times more likely to be favorable to the sponsor's drug, device, or treatment than are non-industry sponsored studies, according to a meta-analysis of 30 studies (BMJ 2003;326:1167-71).



As a further example of how this adjudication heuristic might apply, consider a situation in which a woman who is a candidate for a job--let's call her Jane Doe--has (a) a lukewarm letter of recommendation from Expert 1, who is known for his sexist attitudes, but (b) a glowing letter of recommendation from Expert 2, who is known for his fair attitudes about sex and gender.

Here, the two letter writers are putative experts on the relevant job-skills and abilities of Jane Doe. They conflict because the one says she's so-so in terms of her skills and abilities, and the other says she's great. The employer reading the letters

is in effect a contradiction about Jane Doe's skills and abilities.

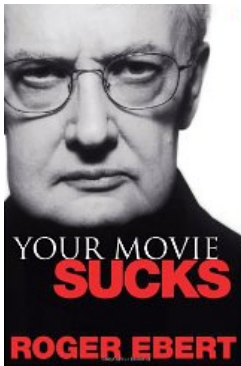
But if the employer knows that Expert 1 is a sexist, unlike Expert 2, then she (she employer) can, according to the Biasing Interests heuristic, have good reason to accept the say-so of Expert 2 over the say-so of Expert 1, since Expert 1's sexism

amounts to biasing interest.

A fifth and final adjudication heuristic when dealing with disagreeing experts:

Past Performance: If you know that an expert E1's past performance has been considerably worse than a disagreeing expert E2's past performance, then, *ceteris paribus*, you should trust E2 over E1.

A simple illustration of how this heuristic can apply involves conflicting movie critics: In the case of one of the conflicting critics (about the merits of a given movie), it might well be the case that one of these critic's past performance has been considerably worse than the other's (e.g., in your past experience, one of the critics has more regularly caused you to see bad movies).



Exercise 8.1: Find two examples, in print or electronic media, of expert disagreement. Then (a) state what you think the area of expertise is, (b) state who the disagreeing experts are supposed to be, (c) state the conflicting things these experts are essentially claiming, and (d) consider whether any of the adjudication heuristics we have looked at in this section might apply to the examples.