

How to find the right answer when the "wisdom of the crowd" fails?

Description

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Dizekes, P. (2017). **Better wisdom from crowds**. *MIT Office News*. Retrieved from <http://news.mit.edu/2017/algorithm-better-wisdom-crowds-0125> PDF copy [pdf copy](#)

Ross, E. (n.d.). **How to find the right answer when the "wisdom of the crowd" fails**. *Nature News*. <https://doi.org/10.1038/nature.2017.21370>

Prelec, D., Seung, H. S., & McCoy, J. (2017). **A solution to the single-question crowd wisdom problem**. *Nature*, 541(7638), 532-535. <https://doi.org/10.1038/nature21054>

Dizekes: The wisdom of crowds is not always perfect. But two scholars at MIT's Sloan Neuroeconomics Lab, along with a colleague at Princeton University, have found a way to make it better. Their method, explained in a newly published paper, uses a technique the researchers call the "surprisingly popular" algorithm to better extract correct answers from large groups of people. As such, it could refine "wisdom of crowds" surveys, which are used in political and economic forecasting, as well as many other collective activities, from pricing artworks to grading scientific research proposals.

The new method is simple. For a given question, people are asked two things: What they think the right answer is, and what they think popular opinion will be. The variation between the two aggregate responses indicates the correct answer. [Ross: In most cases, the answers that exceeded expectations were the correct ones. Example: If Answer A was given by 70% but 80% expected it to be given and Answer B was given by 30% but only 20% expected it to be given then Answer B would be the "surprisingly popular" answer].

In situations where there is enough information in the crowd to determine the correct answer to a question, that answer will be the one [that] most outperforms expectations," says paper co-author Drazen Prelec, a professor at the MIT Sloan School of Management as well as the Department of Economics and the Department of Brain and Cognitive Sciences.

The paper is built on both theoretical and empirical work. The researchers first derived their result mathematically, then assessed how it works in practice, through surveys spanning a range of subjects, including U.S. state capitols, general knowledge, medical diagnoses by dermatologists, and art auction estimates.

Across all these areas, the researchers found that the "surprisingly popular" algorithm reduced errors by 21.3 percent compared to simple majority votes, and by 24.2 percent compared to basic confidence-weighted votes (where people express how confident they are in their answers). And it reduced errors by 22.2 percent compared to another kind of confidence-weighted votes, those taking the answers with the highest average confidence levels.

But â??â? Prelec and Steyvers both caution that this algorithm wonâ??t solve all of lifeâ??s hard problems. It only works on factual topics: people will have to figure out the answers to political and philosophical questions the old-fashioned wayâ?•

Rick Davies comment: This method could be useful in an evaluation context, especially where participatory methods were needed or potentially useful

Category

1. Uncategorized

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