

Averaging the wisdom of crowds

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The best decisions are made on the basis of the average of various estimates, as confirmed by the research of Dennie van Dolder and Martijn van den Assem, scientists at VU Amsterdam. Using data from Holland Casino promotional campaigns, they have researched whether it is true that when people make estimates, the average of their estimates is relatively close to reality. The results of the research have been published in *Nature Human Behaviour*.

During the last seven weeks of 2013, 2014 and 2015, Holland Casino visitors could participate in an estimation contest. The participant with the most accurate estimate of the number of pearls in a giant champagne glass won the tidy sum of €100,000. In total, no fewer than 1.2 million [people](#) participated over the three years. "For our research, we analysed the three enormous datasets of these promotional campaigns. The data showed that averaging all of the estimates yields significant accuracy gains," says Van den Assem. "We also looked at the estimates of people who participated multiple times."

Wisdom of crowds

More than a century ago, the famous British scientist Sir Francis Galton researched estimation contests that were very similar to the estimation contest at Holland Casino. At a cattle market, visitors could estimate the slaughter weight of an exhibited ox. Galton examined the estimates made by people and found that, surprisingly, the average estimate differed little from reality. The principle that averaging multiple estimates provides a relatively accurate outcome—often better than most underlying estimates and sometimes even better than all—has come to be known as the "Wisdom of Crowds principle." It is an important principle because accurate estimates are crucial for making good decisions.

Wisdom of inner crowds

Also important is the analysis of the estimates from people who participated multiple times. Recently, researchers have suggested that it is also useful to average estimates that come from the same person. Van Dolder and Van den Assem believe that averages from the same person do indeed work, and that therefore 'wisdom of inner crowds' also exists.

This is an attractive idea because it is often easier to make multiple estimates yourself than to involve other people. For issues that require a high degree of specialised expertise and for private matters, [decision](#) makers have to rely on themselves to make the decision. Which holiday will you book? Will you stay with your partner or not? And will you or will you not move to a particular city? The research suggests that to reach a good decision, it is better to think about it at different times of the day and with a few nights of sleep between each time.

However, in comparison, the accuracy improves more dramatically when you take the average of estimates from different people: the average of a large number of estimates from the same person is hardly ever better than the average of two estimates from different people. Van Dolder: "For the quality of estimates, it is therefore better if two people are both engaged in the same two projects than when each focuses entirely on an individual project."

Two heads really are better than than one, and for good decision making, taking the average of the [estimates](#) of various people remains the best approach.

More information: Dennie van Dolder et al, The wisdom of the inner crowd in three large natural experiments, *Nature Human Behaviour* (2017). [DOI: 10.1038/s41562-017-0247-6](https://doi.org/10.1038/s41562-017-0247-6)

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