

# Learning by observation reduces cognitive bias, research suggests

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Credit: AI-generated image ([disclaimer](#))

Research from the Business School (formerly Cass) suggests that observing others' decision-making can teach people to make better decisions themselves.

The research, co-authored by Professor Irene Scopelliti, Professor of

Marketing and Behavioural Science, tested the effectiveness of a new debiasing training strategy and reports first evidence that watching others make decisions can improve our own [decision](#) making.

The authors carried out three experiments, which involved participants making a set of judgements before and after a training intervention designed to improve their decision-making.

## **Experiment One: comparing observational learning to other common debiasing strategies**

The first experiment compared observational learning to three other interventions known to reduce [cognitive bias](#). Researchers tested participants' susceptibility to common decision-making biases across three scales, with participants receiving one of four debiasing interventions before repeating the questions: a five-minute break; a 30-minute instructional video about debiasing techniques; playing a video game for 90 minutes; and anonymously observing another participant playing the game.

## **Experiment Two: weight on advice**

The second experiment examined whether observing others could teach people an 'averaging rule,' where complementing our own estimates with another person's estimate generally results in greater accuracy.

Participants were asked to estimate the weight of ten objects from pictures, before seeing the estimate of a fellow participant and being given the option to revise their response. The difference between first and revised responses was calculated as the "weight on advice."

Participants were then presented with one of four debiasing interventions: information about averaging estimates, a video of a

participant making a revised estimate based on the estimate of a fellow participant; both the information and the video; and neither the information nor the video. All participants then estimated the weights of each object again, and once again made revisions based on an anonymous peer's estimate.

The average weights on advice for both sets of estimates of estimates was then calculated and compared.

A repeat of the second experiment was then carried out using advice generated by a computer algorithm instead of by humans—unbeknown to participants—which would produce greater accuracy if incorporated in participants' estimates.

Key findings from the three experiments were:

- Observing others was an effective debiasing intervention. In Experiment 1, the observational learning intervention improved decision-making by reducing susceptibility to all three cognitive biases: anchoring, social projection, and representativeness.
- The observational learning intervention in Experiment 1 was also more effective overall than the instructional video and the control condition.
- In Experiment 2, observational learning interventions were more effective than practice alone at teaching people how to effectively use advice, and the interventions increased participants' advice-taking.
- Combining observational and information-based learning was also more effective than the information-based [intervention](#) on its own in mitigating bias. In other words, seeing someone else use a decision rule had unique benefits for teaching that decision rule.

Professor Scopelliti said the research demonstrated the value of observational training as a debiasing tool to improve judgements and decisions in our personal and professional lives.

"Before this work, debiasing interventions mostly focused on teaching people abstract rules and providing them with feedback about their own decisions.

"Social learning interventions like observational learning are not only promising in their effectiveness; they are relatively inexpensive to implement and scalable. The findings could benefit all kinds of cases where people have to make decisions under uncertainty (i.e. without all the facts), from which gift to buy a friend to major business, law, and policy decisions.

"We hope this strategy for debiasing decision making is added to the many training interventions used by teachers, government officials, and industry to help people make better decisions."

Haewon Yoon, Assistant Professor of Marketing, Indiana University Kelley School for Business, said:

"Our research suggests that observational learning has the potential to be used to reduce decision biases and improve decision making.

"For example, as people observe others playing video games, they're able to see inside the game player's decision process and learn from their mistakes. Likewise, in a business setting, observing how others demonstrate decision biases or avoid such biases can reduce one's own decision biases—which would be a more cost-effective way to teach employees than through extensive training with feedback."

Professor Carey Morewedge, Professor of Marketing, Boston University

Questrom School of Business, said:

"Debiasing is an exciting new area of research.

"In the last six years, the field has shown that people benefit from direct feedback showing the biases in their own decision making.

"Our new work is the first to find that people don't have to learn from direct experience. We can pull from other people's actions how to become less biased and improve our decision making."

"Decision making can be improved through [observational learning](#)," by Irene Scopelliti, Haewon Yoon and Carey Morewedge, is published in *Organizational Behavior and Human Decision Processes*.

**More information:** Haewon Yoon et al. Decision making can be improved through observational learning, *Organizational Behavior and Human Decision Processes* (2020). [DOI: 10.1016/j.obhdp.2020.10.011](https://doi.org/10.1016/j.obhdp.2020.10.011)

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