Decisions, decisions: Feedback influences decision making

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Every day we are faced with a multitude of choices, but the majority of these fall into two categories: descriptive choice (based on what we are told) and experiential choice (based on our own personal experience). An example of these choices would be deciding whether or not to wear a helmet while cycling. If we are told that wearing a helmet is for our safety, then choosing to wear one or not would be a descriptive choice. However, if instead we see that our friends never wear helmets and that they have never been hurt, then choosing to wear one or not would be an experience-based choice.

Numerous studies have shown that people will choose differently, depending on whether they are choosing based on experience or description. But, what is it that causes people to choose differently in the two situations?

Indiana University psychologists Ryan Jessup, Anthony Bishara and Jerome Busemeyer were interested in testing if feedback in experiential choice is the cause of the different behavior between the two choice situations. In their study, participants had to select one monetary option from each of two situations. The first option in both situations resulted in them earning very little money, but they were guaranteed to receive it. The second option provided a very good chance (but not certain) to win a slightly larger amount of money in one situation whereas in the other situation they had a chance of earning a lot more money, but the odds of earning it were very low (participants were provided with the probability of success for each option before making their choice). Participants were randomly assigned to groups receiving either no feedback on their choices or receiving feedback (indicating their winnings in previous trials).

The results, reported in the October issue of *Psychological Science*, a journal of the Association for Psychological Science, suggest that feedback plays a key role in decision making. The psychologists discovered that participants responded differently, depending on whether or not they received feedback, even though they were presented with complete descriptive information. In other words, when people were given feedback about a situation, they began to ignore what they were explicitly told about the situation. The participants who did not receive feedback tended to overweight small probabilities. This resulted in them preferring the small guaranteed outcome when compared to the slightly larger but uncertain outcome while preferring the larger, but more uncertain outcome when compared to the same small guaranteed outcome. The individuals who received feedback showed the exact opposite pattern of preference. They underweighted small probabilities, preferring the slightly larger but uncertain outcome over the small guaranteed win, but chose the small, but certain win over the large but rare outcome. Contrasting with prevailing theories of individual choice in economics, the researchers note that the group receiving feedback began to treat the small probabilities in a more objective way, suggesting that feedback after repeated choice may drive people towards rational decision making.

The authors conclude that this study "has implications for behavioral choice theories in economics and psychology, as well as for neurophysiological studies aimed at uncovering the neural substrates underlying choice behavior."

Source: Association for Psychological Science