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The Role of Expectation and Memory in the Hindsight Bias Effect:
A Test of Cognitive Reconstruction Models.

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The Hindsight Bias Effect (HBE) describes the observation that once people are aware of the outcome to a situation, they have the tendency to falsely believe that they would have predicted the true outcome (see Guilbault et al., 2004). Historically, the most popular explanations for this effect can be described as Cognitive Reconstruction Models of retrospective judgment formation (Hawkins & Hastie, 1990). These theories propose that hindsight bias occurs when people do not or cannot directly recall their initial judgment at the point of retrospection. Therefore, people attempt to reconstruct their original predictive judgment by re-judging the situation anew. All of these theories propose that the knowledge of the outcome somehow affects the information or cues used in this reconstruction process, thereby leading to retrospective judgments that are more in favor of the given outcome. However, these Cognitive Reconstruction theories all propose different mechanisms for reconstruction which lead to diverging predictions about what variables should moderate the HBE.

A Creeping Determinism Model predicts that outcome knowledge reinforces outcome supporting information so that it is more available at the time of reconstruction (Wasserman, Lempert & Hastie, 1991). An Anchor and Adjust Model predicts that people will use the given outcome as an anchor and reconstruct their judgment by adjusting away from the given outcome based on ones expertise in the domain (Schwarz & Stahlberg, 2003). A Sense-making Model proposes that unexpected outcomes cause people to engage in problem solving processes to reconcile their situation model with the unexpected outcome, thereby leading to a new representation that gives more weight to the outcome supporting information (Pezzo, 2003). Finally, a Meta-cognitive Cue Model proposes that people reconstruct their initial opinion by assessing their feeling of surprise based on the outcome as a cue. This theory proposes expected outcomes lead people to feel overconfident about their predictive accuracy (Ofir & Mazursky, 1997). These models produce different predictions about the role that expectation should play in moderating the HBE and the role of memory in the phenomenon.

Method

The present study used a within-subjects, scenario based hindsight bias paradigm to test the predictions of the opposing Cognitive Reconstruction Models of the Hindsight Bias Effect. One hundred thirty-five undergraduates were asked to read a text about an upcoming tennis match that described the strengths and weaknesses of each player. Participants were randomly assigned to one of two texts that presented 21 pieces of information favoring one player (More Supported Player) and 13 pieces of information favoring the other player (Less Supported Player). Participants then rated the probability of the possible outcomes (Prediction). Next, participants were randomly assigned an outcome passage that informed them which player won the match. This created two Expectation conditions (more supported player outcome = Expected, less supported player outcome = Unexpected). Then participants rated how surprising they found the outcome. A week later participants returned and attempted to remember their original rating (Retrospection) and performed a free recall memory test.

Results and Discussion

Results supported that our Expectation manipulation was successful. Those in the Unexpected condition rated the outcome as significantly more surprising than those in the Expected condition. Comparison of the Predictive and Retrospective Judgments revealed a significant effect of the Expectation manipulation on the HBE. There was no difference between Predictive and Retrospective Judgments in the Expected outcome condition. However, the Unexpected outcome group showed the standard HBE with Retrospective Judgments favoring the given outcome more than the Predictive Judgments. Although Expectation moderated the HBE, the memory results showed that it did not change the effect of outcome knowledge on free recall. Both of the groups recalled more information that was consistent with the outcome they were given. Only a Sense-Making Model of the HBE is consistent with this pattern of surprise, hindsight bias, and memory results.

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