Testing the preparatory function of counterfactual thinking

Counterfactuals are mental simulations of how past events could have been different that, according to the dominant view, are generated mainly to prepare for the future. However, an increasing number of findings is in contrast with this preparatory function hypothesis. The present studies investigate three of its critical predictions: 1) after negative performances, people should produce more controllable counterfactuals (i.e., about elements they could have acted upon) than uncontrollable ones; 2) generating counterfactuals should foster performance improvement; 3) behaviors imagined in controllable counterfactuals should be implemented in future similar events.

In three online experiments, participants played a target-shooting video game and then generated a counterfactual about how their performance could have been better. To investigate the first prediction, participants were made to experience negative performances by manipulating game difficulty and including/excluding negative feedback on their performance (experiments 1 and 2, respectively). To investigate predictions 2 and 3, participants played the video game twice, manipulating whether or not they had to produce a counterfactual in between (experiment 3).

Contrary to prediction 1, controllable counterfactuals were less frequent than uncontrollable ones after poor performances. Additionally, contrary to prediction 2, performance improvement in the second game was not different between participants who did and did not produce a counterfactual. Finally, in line with prediction 3, participants generating counterfactuals about actions they could have taken to possibly improve their performance (e.g., not rushing their shots) actually implemented them during the second game. Overall, these results warrant a revision of the preparatory function hypothesis.

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