Study 1 - Counterfactual mindsets and motivation (#17523)

Author(s)

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1) Have any data been collected for this study already?

No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?

Generally, we will examine the effect of a counterfactual mindset manipulation on response bias in decision making representing either vigilant or eager strategies. Hypothesis 1: A subtractive counterfactual mindset should lead to more vigilant decision making compared to an additive counterfactual mindset. Hypothesis 2: An additive counterfactual mindset should lead to more eager decision making compared to a subtractive counterfactual mindset.

3) Describe the key dependent variable(s) specifying how they will be measured.

The main dependent variable is decision making in a signal detection task. Participants have to indicate for a sequence of 40 non-words (20 old and 20 new each) whether they had already seen them in the previous encoding phase or not. A tendency towards saying "no" represents a "conservative" response bias (i.e., vigilant decision making), whereas saying "yes" corresponds with a "risky" response bias (i.e., eager decision making; see Crowe & Higgins, 1997). As an additional indicator of either eager or vigilant decision making the response time in the recognition task will be assessed with shorter response times representing more eagerness.

4) How many and which conditions will participants be assigned to?

Participants will be randomly assigned to one of three conditions in a between-subjects design with three conditions (counterfactual mindset: subtractive vs. additive vs. control). To manipulate a counterfactual mindset, participants will generate thoughts on how the outcome of a personal negative event could have been improved (Markman, Lindberg, Kray, & Galinsky, 2007). Thereby, participants are either instructed to generate subtractive (i.e., which actions should not have been performed) or additive (i.e., which actions should have been performed) thoughts. In a control condition, no counterfactual mindset is induced.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.

The main hypothesis will be tested with a one-way ANOVA and planned contrast analysis (focal contrast: 1 subtractive, -1 additive, 0 control; residual contrast: -1 subtractive, -1 additive, 2 control) with response bias as the criterion variable (for the exact calculation see Crowe & Higgins, 1997).

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

Data will be checked for outliers using studentized deleted residuals (SDR) from a regression of the main DV on the main IV. Participants with an absolute SDR > 2.69 will be regarded as statistical outliers.

Requirements for participation: only UK natives (because materials are language sensitive and the British society is treated as the ingroup of interest in some of the measures)

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.

An a priori power analysis for a single regression coefficient in a linear multiple regression with a small effect size based on similar previous studies (f^2 = 0.02), α = .05, and (1-β) = .80 using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007) indicated a desired sample size of N = 265.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

Several control variables will be included in the study: measures of affect for those who had to recall a negative event (5 items self-report; Roese, 1994), ease of generating counterfactuals (2 items), political orientation (1 item: left-right), Personal Need for Structure (PNS; 12 items; Neuberg & Newsom, 1993), opposition to equality and resistance to change as dimensions of conservatism (17 and 9 items respectively; Yilmaz & Saribay, 2018), demographic data (age, gender, subject of study).

For exploratory reasons, we will test whether the same pattern of results as assumed for response bias also occurs for locomotion and assessment strategies (measured with 2 items each) – where an additive mindset could enhance locomotion and a subtractive mindset foster assessment. Willingness to return to the previous task (i.e., generating counterfactuals; yes vs. no) will be included as an additional indicator of locomotion vs. assessment. Moreover, we will include measures of outgroup trust (adapted from Dhont & Van Hiel, 2011; Mayer et al., 1995; Noor et al., 2008) to check whether an interaction effect of counterfactual mindset (contrast: 2 subtractive, -1 additive, -1 control) and political orientation that we found in previous studies would be replicated. This effect should be the more pronounced the higher PNS is. However, we preregister this as exploratory, because the trust ratings take place after the decision making task and might thus be influenced by it.