

Replication of Clarkson et al., 2015
“The self-control consequences of political ideology”
PNAS 112 (27) 8250-8253.

<https://www.pnas.org/content/112/27/8250>

The original paper includes three studies but only one on MTurk. In this between-subject experiment, participants are randomized to one of two treatments – they are either told that belief in freewill is associated with “progress and peace of mind (which enhances self-control)” or “frustration and anxiety (which impedes self-control)”. Participants then solve anagrams that have several solutions. Self-control is measured from the amount of time spent at the anagram. Participants thereafter report their political ideology. There is a statistically significant interaction between political ideology and the freewill treatment: conservatives show greater self-control when told that freewill beliefs enhance self-control, whereas liberals show greater self-control when told that freewill beliefs inhibit self-control.

Hypothesis to replicate and bet on: Conservatives show greater self-control when told that freewill beliefs enhance self-control, whereas liberals show greater self-control when told that freewill beliefs inhibit self-control. The authors test the above hypothesis in a hierarchical regression, with political ideology (continuous, mean-centered) and freewill theory (0, belief in freewill impedes self-control; 1, belief in freewill enhances self-control) and their interaction term as predictors (along with demographics) with a *t*-test of the interaction coefficient in the regression (Political Ideology × Freewill Theory interaction: $\beta = 0.68$, $t(126) = 3.25$, $p = 0.002$, $R^2 = 0.19$); p. 8251.

Criteria for replication: The criteria for replication are an effect in the same direction as the original study and a *p*-value < 0.05 in a two-sided *t*-test of the interaction coefficient in the regression.

Power analysis: The original study had 135 participants. The standardized effect size (Cohen’s *d*) was $d = 1.119$. To have 90% power to detect 67% of the original effect size, a sample size of $n = 303$ is required.

Sample: 13 participants were excluded for failing to follow the anagram instructions – we will do the same exclusion. No other restrictions are mentioned in the original study. We will make sure that participants can only participate once from the same account in this specific study, and we will only recruit participants with a HIT approval rate of 95% or above. We will also check all IP addresses via <https://www.ipqualityscore.com/>; and we will remove any participants where one or more of the following is true: fraud score ≥ 85 ; TOR = True; VPN = True; Bot = True; abuse velocity = high. The replication sample size is the sample size after any exclusions of participants.

Materials: We will use the same material as in the original study, kindly provided by the original authors.

Procedure: We will closely follow the procedure of the original experiment. The following summary of the experimental procedure is therefore largely based on the description of the experiment in the supplementary material (p. 1).

Participants will first be shown a Captcha, and will thereafter provide informed consent. After this we will include an attention check that participants will need to pass to continue to the

study. This attention check is in addition to any other potential attention check(s) used in the original study. Participants will then be shown an instructional manipulation check. Participants who pass the check will progress to the next stage. Those who fail the check will be given a show-up fee, and the experiment will end.

Participants will be randomly assigned to the manipulation of freewill theory. Participants will be asked to read the abstract of a manuscript ostensibly published in a prestigious academic journal. The abstract describes the benefits of either the presence or absence of freewill beliefs on self-control. All participants will be told the following: “Freewill is defined as the belief in one’s responsibility over his/her actions. Not surprisingly, researchers have long been interested in the effects of this belief (i.e., freewill) on self-control.” For participants in the freewill enhances self-control treatment, the abstract further states:

“Across a series of papers spanning 50 years, the belief in freewill was consistently shown to increase participants’ feelings of progress and peace of mind. These feelings, in turn, enhanced (i.e., improved) self-control. Thus, research consistently demonstrates that the belief in one’s responsibility over his or her actions is incredibly beneficial for self-control.”

For participants in the freewill impedes self-control treatment, the abstract further states:

“Across a series of papers spanning 50 years, the belief in freewill was consistently shown to increase participants’ feelings of frustration and anxiety. These feelings, in turn, undermined (i.e., weakened) self-control. Thus, research consistently demonstrates that the lack of belief in one’s responsibility over his or her actions is incredibly beneficial for self-control.”

After the prime manipulation, participants will receive a pair of multiple solution anagrams presented in random order to measure self-control. Participants will be told to take as much time as needed. Self-control is measured as the amount of time participants spend on the task. Participants who fail to follow the anagram instructions will be excluded.

Participants will also complete the Freewill Subscale of the FAD—Plus.

Lastly, participants will report their political ideology along with their sex, age, race, educational attainment, and personal income.

Analysis: The analysis will be performed as in the original paper, with a hierarchical regression with political ideology (continuous, mean-centered) and freewill theory (0, belief in freewill impedes self-control; 1, belief in freewill enhances self-control) and their interaction as predictors (along with demographics). The replication focuses on the two-sided *t*-test of the interaction coefficient in the hierarchical regression.

Subject payments: We are standardizing payments across all replications so that studies have a certain show-up fee depending on the expected length of the study, with an hourly wage from the show-up fee of \$8 and a minimum payment of \$1 (for studies with incentive payment we use the same incentive payment as in the original study; and this payment is paid in addition to the show-up fee). If we have problems recruiting, we will increase the show-up fee.