

## Fairness Decline Effect Direct Replication (#9244)

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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?

This is a pre-registration of a direct replication of: <http://aspredicted.org/blind.php?x=cz2fn9>

The method and results will not change.

Money and time are often thought of as being interchangeable. We test whether people take this into account and update their beliefs about the fairness of punishments that are expressed in time or money.

We use the following setup: Participants are told about Alan and Bob, who both receive a ticket for running a red light. They are told that Alan earns \$50/hour and that Bob earns \$25/hour.

In one condition, participants are told that Alan is fined \$150 and Bob is fined \$100. Participants are asked to rate the relative fairness of this punishment. After providing this rating, participants are then informed that because sometimes people think of money and time as interchangeable, the fines can be thought of as a 3 working hour fine for Alan and a 4 working hour fine for Bob. Participants are then asked to re-rate how fair they believe the punishment is.

In the other condition, participants are told that Alan is required to perform 3 hours of community service and Bob is required to perform 4 hours of community service. Participants are asked to rate the relative fairness of this punishment. After providing this rating, participants are then informed that because sometimes people think of money and time as interchangeable, the fines can be thought of as a \$150 fine for Alan and a \$100 fine for Bob. Participants are then asked to re-rate how fair they believe the punishment is.

We expect a main effect such that the first condition will initially be perceived more unfair to Alan than to Bob than the second condition is. We also expect an interaction with time (i.e., from the first rating to the second rating) that this difference will be reduced when the punishments are re-expressed in their alternate currency (i.e. money to time and time to money.)

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

Rating on a 101-point scale anchored from -50 (extremely unfair to Bob) to 50 (extremely unfair to Alan). The midpoint, 0, is defined as equally fair to both.

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

This is a 2 condition repeated measures design. In one condition, participants rate a fine expressed as money and then re-rate the fine re-expressed as time. In the other condition, participants rate a fine expressed as time and then re-rate the fine re-expressed as money.

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

We will use a hierarchical linear model predicting participants' fairness ratings from the condition they were assigned to, the time they rated each scenario (i.e., the first rating or the re-rating) and an interaction between the two. The responses will be nested within participants.

Alternatively, this type of design can be re-conceptualized as a 2-cell design for the purpose of analyzing data. For each participant we can calculate a difference score from their time 1 to time 2 rating by subtracting their time 2 rating from their time 1 rating. We can then use a t-test to determine whether or not the average difference scores are significantly different from one another on the different levels of the between subjects factor. We expect participants who read about money first to have a relatively high rating at time 1 and a lower rating at time 2, this difference should be negative; on the other hand, we expect participants who read about time first to have a relatively low rating at time 1 and a high rating at time 2, this difference should be positive. A t-test comparing these average difference scores should be significantly different.

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

We will exclude participants who fail to correctly answer our attention check item. This item requires participants to correctly identify the names of the two men in the scenario they read about.

Additionally, because this is a direct replication, we will instruct the survey company to exclude participants who completed the original study that

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we are replicating.

**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.**

We will collect data from a large nationally representative sample until at least 1500 participants have successfully passed an attention check.

Because data is collected very quickly and we are only able to check the attention check success rate periodically, we often collect data from more than 1500 participants by the time the study is completed.

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