

## Supplemental Material

### “Heart Strings and Purse Strings” Revisited: A Preregistered Replication and Extension

#### Pilot Study

Table 1. Correlation Matrix of Emotion Measures and Motivational Goals

Variables	1	2	3	4
1. Disgust score	--			
2. Sadness score	.25**	--		
3. Change circumstances	.66**	.45**	--	
4. Expel and avoid	.75**	.37**	.74**	--

Note. \* $p < .05$ . \*\* $p < .001$ . *Disgust score* is the average of 'disgust' and 'repulsed' scores, and *Sadness score* is the average of 'blue,' 'downhearted,' and 'sad'

#### Replication Study

Table 2. Correlation Matrix of Emotion Measures and Motivational Goals

Variables	1	2	3	4
1. Disgust score	--			
2. Sadness score	-.05 ( <i>ns</i> )	--		
3. Change circumstances	.51**	.48**	--	
4. Expel and avoid	.79**	.08 ( <i>ns</i> )	.62**	--

Note. \* $p < .05$ . \*\* $p < .001$ . *Disgust score* is the average of 'disgust' and 'repulsed' scores, and *Sadness score* is the average of 'blue,' 'downhearted,' and 'sad'

### Ancillary analysis

To further probe the null effects for disgust on prices in the replication study, we conducted additional analyses to assess if the effect sizes for disgust vs. neutral in the original study and the effect sizes for disgust vs. neutral in the replication study are in the same 95% confidence interval. The thought was to examine if the original effect sizes were in the 95% confidence interval of the replication effect sizes.

We assessed whether the interval included the effect size (Cohen's  $d$ ) values for each pairwise comparison (disgust vs. neutral on choice prices as well as selling prices) rather than by calculating on the broad  $F$ -statistic which does not provide a nuanced understanding of effects with respect to each of choice and selling prices<sup>1</sup>.

First, we calculated the effect size for disgust (vs. neutral) on choice and sell prices from the  $F$ -statistic in the original study.

Following Jacob Cohen's (1965) formulation (Lakens, 2013),

$$\eta^2_p = (F \times df_{\text{effect}}) / \{ (F \times df_{\text{effect}}) + df_{\text{error}} \} \quad \dots \text{equation (1)}$$

Computing for the  $F$ -stat for disgust on choice/selling prices, i.e., ( $F(1, 131) = 13.29$ ) in equation (1),

$$\eta^2_p = (13.29 \times 1) / ((13.29 \times 1) + 131) = .092$$

Given that the confidence intervals around effect size estimates are large (Meyvis et al., 2018; Simonsohn, 2014), we calculated the 95% CI of the effect size (partial eta-squared) of the  $F$ -statistic to be [.0187, .1240] using RStudio, for subsequent analyses. Thereafter, we converted each of the upper and lower limit values of the partial eta-squared values to find the comparable range in terms of Cohen's  $d$  values to compare with the Cohen's  $d$  value in the current replication (since a pairwise comparison rightfully merits an independent sample  $t$ -test analysis).

*Conversion of  $\eta^2_p$  to Cohen's  $d$  to conduct an equitable comparison of effect sizes:*

$$f^2 = \eta^2_p / (1 - \eta^2_p)$$

$$f = \sqrt{\eta^2_p / (1 - \eta^2_p)} \quad \dots \text{equation (2)}$$

Computing the LL & UL values of 95%CI  $\eta^2_p$  value in equation (2),

*Lower limit of 95%CI:*  $f = \sqrt{(.0187 / (1 - .0187))} = .135 \Rightarrow \text{Cohen's } d = 2 \times f = 2 \times .135 = .27$

*Upper limit of 95%CI:*  $f = \sqrt{(.124 / (1 - .124))} = .329 \Rightarrow \text{Cohen's } d = 2 \times f = 2 \times .329 = .658 \sim .66$

As can be assessed from the calculations, the results of the conversion yielded a 95% CI range of effect size in terms of Cohen's  $d$  as [.27, .66]. Thus, overall the 95% confidence interval of the comparison in the original study does not include the effect sizes of the comparison for disgust vs. neutral for both choice and selling prices in the replication study.

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<sup>1</sup> The effect size of the partial eta squared of the original study was .092. This did not fall within the 95% CI of the partial eta squared value of the  $F$ -statistic of disgust vs. neutral on choice and sell prices in the replication study [0, .05].

Comparison	Original study's effect size	Conversion of LL & UL of 95% CI of $\eta^2_p$ value to Cohen's $d$ values	Replication study's effect size (of $t$ -statistic)
Disgust (vs. neutral)  $F(1, 131) = 13.29, p \leq .01$	$\eta^2_p = .092$  95% CI [.0187, .124]  [Calculated with the help of the F-statistic in R (using MBESS package)]	[.27, .66]	Cohen's $d$ of choice prices = .12  95% CI [-.36, .72]  Cohen's $d$ of selling prices = .02  95% CI [-.61, .70]

Note, because of insufficient information relating to the individual cell sample sizes as well as a lack of means (and standard deviation) values for each pairwise comparison in the original study, effect sizes and corresponding 95% CIs could not be calculated for other conditions.

### References

Lakens, D. (2013). Calculating and reporting effect sizes to facilitate cumulative science: A practical primer for t-tests and ANOVAs. *Frontiers in Psychology*, 4, 863.

Meyvis, T., & Van Osselaer, S. M. (2018). Increasing the power of your study by increasing the effect size. *Journal of Consumer Research*, 44(5), 1157-1173.

Simonsohn, Uri (2014), "We Cannot Afford to Study Effect Size in the Lab," Data Colada, <http://datacolada.org/2014/05/01/20-we-cannot-afford-to-study-effect-size-in-the-lab/>.