

Specks of Dirt and Tons of Pain: Dosage Distinguishes Impurity from Harm

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Online Supplementary Materials

Before the primary studies reported in the paper were conducted, we ran an exploratory pilot study with a large range of dependent measures. The purpose of this study was twofold: (1) to ensure that the severity of the Harm and Purity violations was appropriately matched and (2) to explore a wide range of evaluations as candidates for future investigation. Here, we present the findings from this pilot study.

Methods

Participants

Participants were 92 United States residents (50 female; 69 White; $M_{age} = 35.52$; $SD_{age} = 12.94$) who were tested on Amazon Mechanical Turk. Eight additional participants completed the study but were excluded for providing responses from 0–49 (on a 100-point scale) when evaluating the moral wrongness of “A person destroys the entire planet” ($n = 5$) and/or for providing responses from 51–100 when evaluating the moral wrongness of “A person gives money to a charitable organization” ($n = 3$).

Materials and procedure

Upon providing consent, each participant was presented with 16 violations that varied by Domain (Harm vs. Purity), Dosage (High vs. Low), and Dosage Type (Magnitude vs. Frequency), such that they saw two violations from each of eight possible conditions, as in Study 1 (see Table 1 in the main text). These violations were designed with the intent to match them for overall severity. The two attention check questions (destroying the planet and giving to

charity) were also randomly presented within this sequence. For each transgression, participants were asked ten separate questions for which they were prompted to respond on a 0 (“not at all”) – 100 (“extremely”) slider scale (see Table S1 for the full list of questions). The presentation of these violations was counterbalanced as in Study 1. Participants were then asked to provide basic demographic information and were debriefed.

Results

The overall severity of the Harm and Purity violations was found to be comparable. In particular, the perceived wrongness of these transgressions (Harm: $M = 69.039$, $SD = 16.677$; Purity: $M = 70.891$, $SD = 23.457$) was not significantly different, $t(91) = -0.814$, $p = .418$, $d = 0.085$. Further investigation of these means indicated that the domains were particularly well matched at the high-dosage levels (Harm: $M = 75.160$, $SD = 17.146$; Purity: $M = 72.815$, $SD = 23.841$), $t(91) = 0.912$, $p = .364$, $d = 0.095$, indicating that any reductions in the relative effect of outcome extremity across domains would be unlikely to be caused by ceiling effects. At low-dosage levels, there was a greater divergence between domains (Harm: $M = 62.918$, $SD = 20.662$; Purity: $M = 68.967$, $SD = 26.505$), $t(91) = -2.092$, $p = .039$, $d = 0.218$.

The strength of emotional reactions was also similar across Harm and Purity violations. People felt angrier about Harm transgressions ($M = 61.168$, $SD = 21.193$) than Purity transgressions ($M = 49.001$, $SD = 26.941$), $t(91) = 4.794$, $p < .001$, $d = 0.500$, and more disgusted toward Purity transgressions ($M = 66.383$, $SD = 21.525$) than Harm transgressions ($M = 50.545$, $SD = 24.989$), $t(91) = 6.825$, $p < .001$, $d = .712$. However, the overall level of emotionality (collapsing across anger and disgust) was statistically equivalent across moral domains (Harm: $M = 55.857$, $SD = 21.218$; Purity: $M = 57.692$, $SD = 22.729$), $t(91) = -0.950$, $p = .345$, $d = 0.099$.

To investigate whether outcome extremity differentially impacted evaluations of harm transgressions and purity transgressions across variations in dosage, the data were analyzed with a series of 10 linear mixed models fit by restricted maximum likelihood. Each of these models was specified to predict ratings on one of the dependent variables from the fixed effects of Domain (Harm vs. Purity) and Dosage (Low vs. High), the two-way interaction between these variables, and the random intercepts of Subject and Item. Because the interaction effects were of primary interest, these are presented in Table S1 (and visualized in Figure S1). The main effects are available from the authors upon request (all data are also available at <https://osf.io/zxp9k/>).

Overall, these results indicate that many kinds of evaluations of purity transgressions are more insensitive to variation in outcome severity than evaluations of harm transgressions. This phenomenon extends to evaluations of wrongness, harmfulness, impurity, moral integrity, and desires to reject the person as a social partner. The effect is somewhat weaker for emotional reactions, as well as for judgments of the transgressor's character – specifically when making dispositional inferences about future behavior.

Table S1. Two-way interaction effects between Domain and Dosage, controlling for the random effects of Subject and Item, across each of the 10 dependent variables that was presented to participants in the pilot study.

Question	B	SE_B	t	p
How morally wrong is this action?	7.795	2.525	3.087	.002
How harmful is this action?	7.562	2.530	2.989	.003
How impure is this action?	5.858	2.507	2.336	.020
When you read about this action, does it make you feel angry?	6.127	2.893	2.118	.034
When you read about this action, does it make you feel disgusted?	4.682	2.789	1.679	.093
Would you reject this person from your community?	8.454	2.653	3.187	.001
Would you reject this person as a partner on a cooperative activity?	8.059	2.736	2.946	.003
Is this individual just the kind of person who would do something like this?	3.562	2.115	1.684	.092
Would this person act similarly in a different situation?	1.183	2.329	0.508	.612
Does this person have moral integrity (i.e., is this person virtuous and upright)?	-5.173	1.950	-2.653	.008

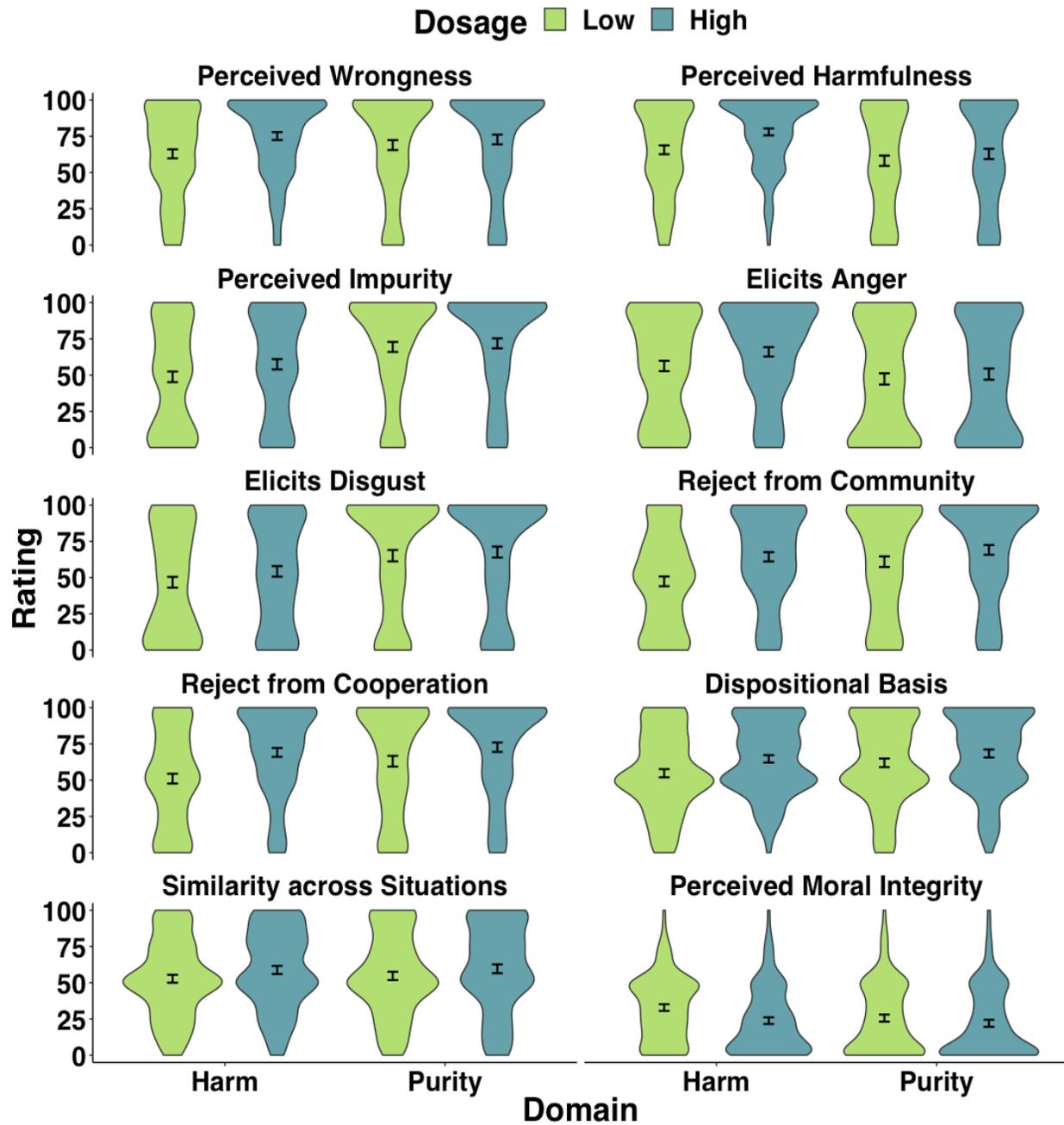


Fig. S1. Violin plots representing probability densities for ratings of each dependent variable, split by Domain and Dosage. Error bars indicate 95% confidence intervals.