



Harm concerns predict moral judgments of suicide: Comment on Rottman, Kelemen and Young (2014)



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ABSTRACT

Two prominent theories offer different perspectives on the role of harm in moral cognition. Dyadic morality suggests that harm-related concerns are pervasive, whereas moral pluralism suggests that these concerns apply only to canonically harmful violations (e.g., murder), and not impure violations (e.g., suicide). Rottman et al. (2014) contrast these two theories by examining moral judgments of suicide. They conclude that suicide wrongness is independent of harm, therefore arguing against dyadic morality and for moral pluralism. However, these conclusions may be overstated; across all these studies, a meta-analysis reveals that harm is a significant predictor of suicide judgments. Moreover, the association between harm and suicide wrongness may be suppressed in individual studies by insufficient power, restrictive exclusion criteria, a single bivariate outlier, and reliance upon the conventional significance threshold of $p < .05$. In revised analyses harm is robustly associated with suicide wrongness, consistent with dyadic morality.

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What is the nature of moral cognition? Dyadic morality suggests that all moral cognition is understood through a harm-based template of two perceived minds—an intentional moral agent and a suffering patient (Gray & Schein, 2012; Gray, Waytz, & Young, 2012). In contrast, moral pluralism suggest that moral judgments derive from functionally distinct modules (Haidt & Joseph, 2004), each of which corresponds to a specific moral concern, such as harm, loyalty or purity (Graham et al., 2012).

These two theories conflict regarding role of harm in moral cognition. Dyadic morality suggests that immorality persistently activates perceived harm—what is wrong is harmful. Moral pluralism suggests instead that impure acts can be judged as both immoral and harmless. Rottman, Kelemen and Young (2014) find that moral judgments of suicide are linked to purity concerns, and also report

that these judgments are *not* linked to harm concerns: “We found that suicide is considered wrong to the extent that it taints the soul—not the degree to which it is perceived as harmful...This suggests that harm-based or dyadic theories of morality cannot fully account for all moral judgments (p. 223).” Given the force of these claim, it bears investigating whether suicide judgments are truly harm-independent.

Research on dyadic completion argues against the harm-independence of purity violations, as even scenarios carefully written to be objectively harmless robustly activate harm (Gray, Schein, & Ward, *in press*). Aberrant masturbation and Bible desecration both evoke perceived harm, victims and suffering—especially when assessed implicitly or under cognitive load (Gray et al., *in press*). Perceiving harm in these purity violations appears to stem not from post hoc rationalization, but instead from automatic top-down effects of a dyadic moral template (Schein & Gray, 2014).

An association between harm and immorality is also revealed in Rottman et al. (2014). In three of six studies

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Table S1

Results of the regression analyses conducted in three replication studies, with moral wrongness as the outcome variable. Linear regressions were conducted for Suicide obituaries; logistic regressions were conducted for Homicide obituaries. Betas are unstandardized. Replicated patterns of significance are in bold font.

#	Variable	Replication #1 ^a		Replication #2 ^b		Replication #3 ^c		Replication #4 ^d	
		Suicide	Homicide	Suicide	Homicide	Suicide	Homicide	Suicide	Homicide
1	Harm	B = .376*	B = 1.087**	B = .333	B = .370	B = .685***	B = 3.967***	B = .276*	B = .912**

Fig. 1. Table S1 details four replication studies. Effect sizes of harm predicting suicide wrongness have been circled. Three of four are statistically significant.

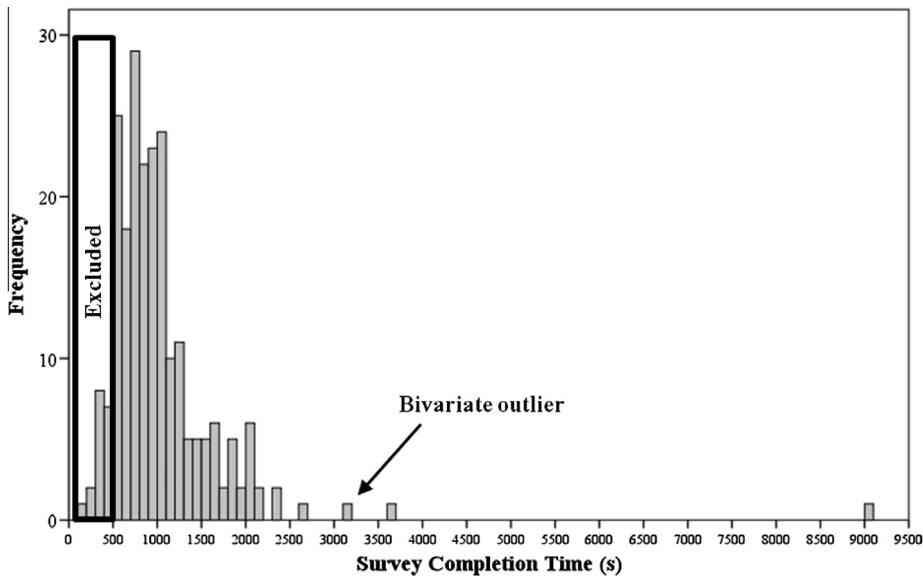


Fig. 2. Study 1 participant exclusions.

reported (Study 1 & 2, plus the four replications in supplementary material), harm is a significant predictor of suicide judgments. See Fig. 1. More formally, a meta-analysis of all six studies reveals an extremely robust effect of harm on suicide wrongness, $B(\text{average}) = .36$, $t(478) = 6.80$, $p < .001$.

Suicide judgments in Studies 1 and 2 may also involve harm more than interpretations suggest. Study 1 reports a non-significant association between harm and wrongness, $t(172) = 1.72$, $p < .089$, but this may reflect insufficient power due to restrictive exclusion criteria. Of the initial sample of 224 participants, 50 were excluded, and power analyses suggest that significance is reached when $N = 213$ (given a stable effect size). Online samples invariably need pruning but participants were excluded here if they completed the survey in “less than 1 SD below the mean response time. (p. 218)” Although it makes sense to exclude those who randomly clicked through, exclusion criteria typically exclude those outside at least 2 standard deviations from the mean (Miller, 1991). There is no apparent precedent for this highly restrictive criteria, especially as it focuses only on one end of the distribution: participants were excluded for completing the short survey too

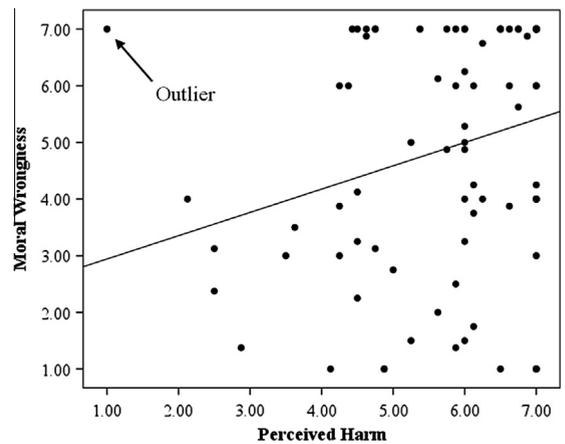


Fig. 3. Scatterplot of wrongness and harm judgments of suicide from Study 1.

quickly (under 8.5 min), but not too slowly—one included participant took over 2.5 h. See Fig. 2. This is problematic because those who answer quickly and intuitively may

be especially likely to link immorality to harm (Gray et al., in press). Indeed, reanalyses of Study 1 without these exclusions yields a significant association between harm and suicide wrongness, $B = .25$, $t(111) = 2.16$, $p = .033$.

A single bivariate-outlier may also suppress the association between suicide wrongness and harm association in Study 1. See top-left of Fig. 3. This one participant took 52 min complete the survey (see Fig. 2), providing ratings of maximum wrongness and minimum harm, despite the general association between these two concepts, $r(85) = .26$, $p = .017$. As such, the Mahalanobis distance of this data-point—a standard measure of bivariate leverage—is extremely high, $\chi^2(1) = 12.84$, $p < .005$. Importantly, the results hinge substantially on this one data-point; without it, the effect size of harm predicting suicide wrongness jumps from $B = .23$, $t(83) = 1.72$, $p = .089$, up to $B = .40$, $\beta = .23$, $t(83) = 2.89$, $p = .005$.

Study 2 also points to an association between suicide wrongness and harm. Perceived harm to others predicts suicide wrongness at $B = .24$, $t(87) = 1.93$, $p < .057$, just missing the conventional $p < .05$ significance threshold. Some have cautioned against relying on $p < .05$ as the arbiter of reality (Cumming, 2013), but even accepting this conventional threshold, power analyses suggest only four more participants are needed to pass it. This number is fewer than the 12 participants eliminated from the initial sample ($N = 101$), using the same restrictive exclusion criteria as Study 1. Simply rounding the beta and standard error to two digits—as is done in Table 8 (Rottman et al., 2014, p. 224)—yields a t -value which does meet the threshold for significance, $t(87) = .24/.12 = 2.00$, $p < .05$, further emphasizing the association between suicide wrongness and harm.

Rottman et al. (2014) demonstrate that purity concerns predict moral judgments of suicide, however, harm concerns also appear to predict these judgments. Meta-analyses of all reported studies suggests a robust association between suicide wrongness and harm. Other analyses suggest that this association may be suppressed by insufficient power, restrictive exclusion criteria, a single bivariate outlier, and reliance on conventional significance thresholds.

Although these data highlight the utility of moral pluralism, they do not dismantle dyadic morality; even in purity violations, harm concerns persist and remain important. Harm may also underlie these purity concerns: the majority of Americans believe in Hell (Pew Forum on Religion, 2007), which promises eternal torment to souls tainted by suicide (Alighieri, 1265). Even souls may not be immune to suffering.

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