Investigating Relationships Between Moral Foundations and Support for Revenge

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Abstract

Revenge is a complex phenomenon that has long attracted attention from scholars across disciplines. In two pre-registered studies, we applied insights from moral foundations theory to examine how moral values are associated with attitudes toward revenge. In Study 1 (N = 299), endorsement of the binding foundations (loyalty, authority, and purity) was positively associated with support for revenge, whereas endorsement of the individualizing foundations (harm and fairness) was negatively associated. Study 2 (N = 852), which focused on a specific case of sexual assault, revealed a more nuanced pattern: individualizing values were linked to justifying the victim's revenge and attributing responsibility to the perpetrator, while binding values were linked to blaming the victim for engaging in revenge. Together, these findings demonstrate a novel application of moral foundations theory to the study of retribution, offering new insight into the moral correlates of when, and for whom, revenge is viewed as legitimate.

Keywords: revenge, moral foundations, binding values, individualizing values, victim blaming

Transparency Statement

All materials, data, and analysis scripts are available on the Open Science Framework website: https://osf.io/j8fd5/?view_only=ac9b4918823246fd87314a4b2af97181. All aspects of both studies (sample size, design, analyses) were pre-registered: Study 1: https://aspredicted.org/5wpg-rw3j.pdf; Study 2: https://osf.io/6chtb. Supplementary analyses can be found in the Supplementary Online Materials (SOM), included in a separate attachment.

Investigating Relationships Between Moral Foundations and Support for Revenge

When is revenge justified? This question has captivated scholars across disciplines yet remains deeply contested (Schumann & Ross, 2010). Some view revenge as a way to restore balance and signal justice, while others see it as perpetuating cycles of harm (Dyduch-Hazar & Gollwitzer, 2024; Stillwell et al., 2008; Zaibert, 2006). What makes this disagreement particularly intriguing is that people considering identical transgressions often reach opposite conclusions about whether revenge is legitimate. The present research investigates whether these divergent judgments stem, in part, from differences in people's moral values people. Specifically, we ask whether individuals who prioritize different moral foundations systematically differ in their support for revenge, across different contexts.

The Structure and Function of Revenge

Understanding whether support for revenge varies on the basis of moral values requires first establishing what is meant by revenge and the function revenge is thought to serve for individuals and collectives. To start, revenge is fairly common and the vast majority of people report having engaged in either vengeful fantasies or vengeful acts themselves (see Schumann & Ross, 2010 for review). Scholars have tried to draw clear boundaries between revenge and other forms of punishment. Some philosophical accounts separate revenge from institutional or reformative punishment based on ultimate aims, with the latter aiming to correct or rehabilitate and revenge aiming to make a transgressor suffer (Zaibert, 2006). Most distinctions, though, hinge on who is acting and whether they are personally connected, either directly or indirectly, to the original harm. Evolutionary psychologists have described revenge as a form of second-party punishment, where a victim responds to being wronged by imposing costs in return (McCullough et al., 2013). Third-party punishment, by contrast, is carried out by people not personally impacted by the wrongdoing, as in many legal settings (e.g., by judges and jurors; McCullough

et al., 2013). Social psychologists (Martin et al., 2019) and economists (Zhou et al., 2016) make a similar distinction, treating revenge as punishment at the hands of the harmed party or those closely tied to them, rather than from a more detached observer. This difference also carries over to motivation. Second-party punishment is typically linked to personal or relationship-based stakes that follow from the harm, whereas third-party punishment is more often framed as enforcing social norms or formal rules and laws and, at times, reflective of broader prosocial or reputational concerns that are tied to maintaining cohesion within cooperative alliances (Martin et al., 2019; McCullough et al., 2013).

Despite these varied conceptualizations, scholars converge on certain core features. In this paper, we adopt a broad conception of revenge that captures what these perspectives share in common. Namely, we classify an act as revenge when two criteria are met: (1) the punisher is affected by the transgressor, either directly or indirectly, prior to the retaliatory act; and (2) the response toward the offender is primarily motivated by perceiving the offender's behavior as a wrongdoing. This definition accommodates cross-situational and disciplinary variability while maintaining the conceptual clarity necessary for empirical investigation. Defining revenge this way acknowledges that there is no single objective standard for identifying an act as revenge (Schumann & Ross, 2010) while establishing boundaries that distinguish it from related forms of punishment (e.g., third-party punishment by unaffected observers; see Martin et al., 2019; McCullough et al., 2013).

Scholars across disciplines have also conceptualized the *functions* of revenge differently. At the interpersonal and societal levels, earlier psychological conceptualizations framed revenge as serving a balancing function that equalizes suffering (Uniacke, 2000; Elster, 1990), with its primary motivation being the satisfaction derived from inflicting harm on a transgressor and witnessing that transgressor suffer (Schumann & Ross, 2010; Govier, 2011). This perspective is

supported by work on the affective consequences of retaliating. In a range of studies, enacting revenge against a transgressor can provide short-term relief from the negative emotional impact of the original harm, including improvements in mood and reductions in distress that appear to operate through both physiological and cognitive pathways (Chester & DeWall, 2016, 2017; Dyduch-Hazar et al., 2024; Gollwitzer et al., 2010; Gollwitzer & Denzler, 2009; Threadgill & Gable, 2020). Revenge has also been linked to feelings of empowerment and a renewed sense of agency in the wake of victimization (Strelan et al., 2017, 2020; Fischer et al., 2022). Still, these benefits are often fragile and short-lived. Emotional trajectories can sour as anger persists, remorse sets in, or anxiety about escalation and counter-revenge grows, leaving some people worse off after the initial mood boost fades (Gollwitzer & Bushman, 2011; Schumann & Ross, 2010; Yoshimura, 2007).

Other work in social psychology suggests that revenge serves a communicative function, with the key motivation being the desire for offenders to understand the moral meaning of punishment (i.e., why they are being punished; Gollwitzer et al., 2010; Molnar et al., 2023). In this view, revenge can be understood as a form of communicative inference, in which punishers structure their actions to be interpretable to offenders (Sarin et al., 2021). Relatedly, from an evolutionary perspective, revenge has been treated as serving a deterrent function — a psychological adaptation that functions as a costly signal in response to wrongdoing, deterring future offenses by imposing substantial costs on transgressors (Pinker, 2009; McCullough et al., 2013). From this view, by imposing costs on violators, revenge discourages potential transgressors from offending in the first place, thereby restoring individuals' interests and promoting cooperation (McCullough et al., 2013; Schumann & Ross, 2010).

Together, this body of work highlights revenge as a multidimensional phenomenon with personal, social, and moral implications. Yet despite this breadth of scholarship, we know

comparatively little about the moral underpinnings of when and for whom revenge is judged to be legitimate — and specifically, whether the moral values individuals prioritize shape their attitudes toward retaliatory harm.

Why Moral Values Might Matter for Attitudes Toward Revenge

Although research on the moral evaluation of revenge is still relatively nascent, the existing evidence suggests that its legitimacy is deeply contested and varies by perspective. People who enact revenge often view it as fair and expect others to see the act in a positive light (Stillwell et al., 2008; Dyduch-Hazar & Gollwitzer, 2024). Yet observers frequently perceive revenge as excessive or socially destabilizing (Stillwell et al., 2008; Martin et al., 2019). On balance, victims who retaliate tend to be evaluated as more immoral than those who do not, especially when victims who take revenge report feeling good as a result (Dyduch-Hazar & Gollwitzer, 2024).

Despite a dearth of inquiry into how moral evaluations of revenge vary as a function of judge-level moral values, substantive work in psychology has focused on building out knowledge of how people ascribe blame and responsibility to perpetrators on the basis of the moral values they uphold (e.g., Graham et al., 2011; Gray et al., 2012; Cushman et al., 2013). Blame and revenge are closely intertwined. Blame involves both cognitive judgments and social expressions of condemnation (Beardsley, 1970; Coates & Tognazzini, 2012; Malle, 2008, 2014) and plays a central role in maintaining social norms (Chudek & Henrich, 2011; Cushman, 2013). Like blame, revenge requires justification, since retaliatory actions can be socially costly (Malle et al., 2014; McKenna, 2012). This contestation makes revenge a powerful test case for whether individual differences in moral values, already shown to predict patterns of blame and responsibility, also predict support for retaliatory harm.

Two theoretical frameworks shed light on the manner in which moral values might matter when people judge the legitimacy of revenge. The Theory of Dyadic Morality (TDM) offers a compelling account of moral judgment by emphasizing the agent–patient template, in which a moral agent harms a moral patient (Gray et al., 2012; Gray & Wegner, 2012; Schein & Gray, 2017). Yet revenge scenarios are inherently more complex than simple agent–patient dyads. For instance, an agent (Person A) might first harm a patient (Person B), but when vengeance is delivered (either by Person B or a third party), Person A then occupies the patient role (Schumann & Ross, 2010). When TDM is applied to this context, both the original transgressor and the avenger occupy the agent role at different points in time, as both enact harm in separate acts (the initial transgression and the subsequent retaliation). From this perspective, acts of revenge are generally expected to be condemned, as they involve inflicting harm on a prior transgressor. While TDM helps explain why blame is assigned to perpetrators and sympathy to victims, it leaves open questions about how people evaluate these shifting roles and whether retaliatory harm can sometimes be justified (e.g., when it is seen as deterring future wrongdoing; Pinker, 2009; Martin et al., 2019). These complexities suggest the need to examine whether broader moral values beyond the condemnation of harm in the traditional sense might also play a role in shaping how revenge is judged.

Moral Foundations Theory (MFT) provides a framework that identifies five core domains of morality: harm/care, fairness, loyalty, authority, and purity (Haidt & Graham, 2007, 2009; Graham et al., 2009, 2011, 2013). These foundations cluster into two sets of overarching foundations. Individualizing foundations (harm/care, fairness) emphasize protecting individuals from harm and ensuring justice, whereas binding foundations (loyalty, authority, purity) emphasize maintaining social cohesion and respect for traditions. Endorsement of these values

varies across individuals and ideological groups: liberals tend to base moral judgments primarily on individualizing values, while conservatives also rely on binding values (Graham et al., 2011).

Importantly, substantial evidence shows that variation in moral foundations predicts systematic differences in the condemnation of moral violators and the elevation of exemplars who uphold particular values (Atari et al., 2023; Niemi et al., 2020, 2022). In one prominent example, whistleblowers tend to be condemned by those who value loyalty but praised by those who value fairness (Waytz, et al., 2013). Applying this logic to revenge, moral judgments may similarly diverge across foundations: revenge may be condemned by those who prioritize harm concerns (consistent with TDM), yet justified by those who place greater weight on fairness (e.g., "an eye for an eye") or authority (e.g., restoring order or status). Other evidence shows that people who endorse the binding values also tend to score highly on antisocial characteristics (e.g., Machiavellianism; Niemi & Young, 2013). Most closely related to the present investigation is that endorsing the binding values tends to relate positively to endorsing a legal framework centered on retributive justice (i.e., a system of criminal justice that focuses on punishing offenders rather than rehabilitation; Pereira, 2017; Silver, 2017). Though revenge in the interpersonal context explored in the present investigation differs from the system-level legal framework of retributive justice, both are united by a common underlying motivation: to deliver suffering upon wrongdoers in response to their wrongs (Osgood, 2017).

We propose that variation in the endorsement of the moral foundations will similarly predict variation in attitudes toward revenge. Specifically, because individualizing values prioritize harm-reduction and the moral rights of individuals, we hypothesize that stronger endorsement of these values will be associated with reduced support for retaliatory harm. By contrast, we hypothesize that endorsement of the binding values will be associated with greater

acceptance of revenge, insofar as retaliatory acts can be seen as enforcing group cohesion or restoring purity. We test these possibilities in Study 1.

Flipping the Script: The Moral Correlates of Attitudes Toward Revenge in the Context of Sexual Assault

The case of sexual assault highlights why patterns observed in general judgments of revenge may not always apply. Unlike straightforward harms, sexual assault judgments are influenced not only by assessments of injury but also by cultural notions of purity and gendered expectations, which together give rise to well-documented tendencies toward victim blaming (Ryan, 1971; Eigenberg et al., 2008; Niemi & Young, 2016). Decades of research show that victim blame varies systematically: interracial assaults elicit more blame of the victim than intraracial assaults (George & Martínez, 2002), men are more likely than women to shift responsibility away from perpetrators and to endorse rape myths (Burt, 1980; Lonsway & Fitzgerald, 1994; Grubb & Turner, 2012), and individuals who endorse traditional gender roles consistently judge victims more harshly (Acock & Ireland, 1983; Krulewitz & Payne, 1978; Williams, 1979; Ben-David & Schneider, 2005; Kopper, 1996; Simonson & Subich, 1999; Willis, 1992). Importantly, recent work shows that moral foundations map directly onto these tendencies: individuals high in binding values are more likely to attribute responsibility to victims and to perceive them as morally contaminated, whereas those high in individualizing values are more likely to condemn perpetrators and emphasize victims' suffering (Niemi & Young, 2016; Niemi et al., 2020, 2022; Strohminger et al., 2020). Notably, because stronger endorsement of binding values has also been linked to elevated antisocial traits (Niemi & Young, 2013), such individuals may depart from the typical agent–patient template by assigning less blame to perpetrators when judging harm.

This dynamic raises a novel possibility for how revenge is evaluated in sexual assault contexts. While binding values might ordinarily predict greater support for retaliatory harm, where revenge can be seen as a mechanism for norm enforcement or the restoration of social order, the salience of purity concerns in sexual assault may reverse this pattern. For individuals who strongly endorse binding values, a victim's act of revenge may be seen not as justifiable retribution but as further evidence of moral taint, leading to increased blame and reduced support for retaliation. In contrast, those who endorse individualizing values may interpret revenge as a legitimate extension of justice, reinforcing perpetrator responsibility and lessening victim culpability. Thus, revenge for sexual assault provides a deeper test case than revenge in general: rather than amplifying support for revenge, binding values may predict opposition, while individualizing values may predict greater justification of revenge. We tested these possibilities in Study 2.

The Present Studies

The present research examines how moral foundations relate to attitudes toward revenge. In Study 1, we test whether endorsement of individualizing values predicts opposition to revenge, given their emphasis on minimizing harm and promoting fairness, and whether endorsement of binding values predicts support for revenge, given their focus on preserving social order and restoring purity. Importantly, Study 1 assesses general attitudes toward revenge as a stable individual difference, rather than reactions to specific revenge scenarios. In Study 2, we extend this inquiry to the specific context of sexual assault — a domain where prior work has shown systematic differences in attributions of responsibility and where binding values and purity concerns often underlie victim blaming (Niemi & Young, 2013; 2016). Here, we ask whether individuals high in individualizing values are more likely to justify victims' revenge and hold perpetrators responsible, while those high in binding values are more likely to blame

victims for retaliating. Study 2 also examines whether these moral values differentially predict responses to harm-based versus purity-based acts of revenge within the sexual assault context. Together, these studies offer a novel application of Moral Foundations Theory to the psychology of revenge, illuminating the moral correlates of when, and for whom, revenge is judged as legitimate. All materials, data, and analysis scripts are available on the Open Science Framework website: https://osf.io/j8fd5/?view_only=ac9b4918823246fd87314a4b2af97181. Table 1 reports demographic information for both studies.

Table 1

Demographic and sample information for each study

Parameter	Study 1	Study 2
N_{total}	299	852
N_{Male}	145	411
N_{Female}	150	422
N_{White}	202	598
N_{Black}	62	122
N_{Asian}	26	100
M_{age}	39.52	39.35
SD_{age}	13.59	13.17
Sample Type	Prolific	Prolific
Pre-registered	Yes	Yes

Study 1

Study 1 explored whether endorsement of moral foundations is associated with general attitudes toward revenge, measured as an individual difference rather than as responses to specific revenge scenarios. We hypothesized that reported engagement in and support for revenge would be positively predicted by endorsement of binding values, which emphasize loyalty, authority, and purity in the service of social cohesion, and negatively predicted by endorsement of individualizing values, which emphasize fairness and harm reduction in the

protection of individual rights (Graham et al., 2009, 2011). All aspects of the study (sample size, design, analyses) were pre-registered: https://aspredicted.org/5wpg-rw3j.pdf.

Methods

Participants

Participants were recruited through Prolific, an online research platform where individuals complete studies in exchange for monetary compensation. Each participant received $1.75 for completing the survey. Following recommendations on sample size for stable correlation estimates (Schönbrodt & Perugini, 2013), which suggest a minimum of 250 participants, we collected responses from 301 individuals. Two were excluded due to duplicate IP addresses, resulting in a final sample of 299 participants (see Table 1 for demographic information).

Measures

All measures shown below were presented to participants in a randomized order.

Moral foundations. Moral values were assessed using the Moral Foundations Questionnaire (MFQ; Graham et al., 2011), a 30-item measure with five subscales: Harm/Care (α = .69), Fairness/Reciprocity (α = .69), Ingroup/Loyalty (α = .78), Authority/Respect (α = .82), and Purity/Sanctity (α = .86). Each subscale contains six items: three assessing the perceived moral relevance of specific concerns (e.g., “Whether or not someone did something disgusting” from the Purity/Sanctity subscale) and three assessing agreement with corresponding moral judgments (e.g., “One of the worst things a person could do is hurt a defenseless animal” from the Harm/Care subscale). Items were rated on 6-point Likert scales, ranging from 1 = Not at all relevant to 6 = Extremely relevant for moral relevance items, and from 1 = Strongly disagree to 6 = Strongly agree for moral judgment items. Composite indices were also calculated for binding values (average of Ingroup, Authority, and Purity; α = .92) and individualizing values (average of Harm and Fairness; α = .81).

Revenge-related measures. Individual differences related to revenge were assessed using two validated scales that capture distinct aspects of revenge orientation. The Vengeance Scale (α = .92; Stuckless & Goranson, 1992) is a 20-item measure assessing dispositional tendencies to engage in revenge behavior. Items are rated on a 7-point Likert scale (1 = Strongly disagree to 7 = Strongly agree). An example item is "I don't just get mad, I get even." This scale was included to test whether endorsement of specific moral foundations predicts behavioral proclivities toward revenge. Establishing whether such dispositional tendencies are systematically associated with particular moral foundations helps clarify whether subsequent judgments of revenge in specific scenarios (Study 2) reflect context-dependent moral reasoning or merely stable trait-level preferences for revenge-seeking.

The Retribution as Revenge Scale (α = .90; Gerber & Jackson, 2013) measures evaluative attitudes toward revenge as a form of socially accepted retribution. This 6-item measure includes two subscales (suffer and get even), with items rated on a 7-point Likert scale (1 = *Strongly disagree*, 7 = *Strongly agree*). Unlike the Vengeance Scale, this measure captures attitudes about whether revenge is legitimate or justified as a concept of retributive justice. An example item is "We should punish to get even with the offender."

Demographics. Participants' gender, age, socioeconomic status, political orientation, and religiosity were captured and included in the linear regressions.

Results

Correlations

As shown in Table 2, the two measures of revenge attitudes were positively correlated. Consistent with predictions, endorsement of individualizing values was negatively associated with revenge attitudes as personal viewpoints (i.e., proclivities to personally engage in revenge behaviors), whereas endorsement of binding values was positively associated with revenge

attitudes as societal acceptance. At the level of specific moral foundations (Table 3), endorsement of the Harm foundation was negatively associated with personal revenge attitudes, while all three components of the binding values (Loyalty, Authority, and Purity) were positively associated with societal acceptance of revenge.

Table 2

Bivariate correlations between individualizing/binding moral foundations and revenge attitudes

Variable	M	SD	1	2	3	4
1. Revenge Attitudes (personal viewpoints/behavioral proclivities)	3.22	0.92	--			
2. Revenge Attitudes (societal acceptance)	3.84	1.27	.36***	--		
3. MFQ-Individualizing Foundations	4.50	0.64	-.21***	.01	--	
4. MFQ-Binding Foundations	3.47	0.95	-.04	.37***	.08	--

Note. *$p < .05$, **$p < .01$, ***$p < .001$.

Table 3

Bivariate correlations between the five discrete moral foundations and revenge attitudes

Variable	M	SD	1	2	3	4	5	6
1. Personal Revenge Attitudes (behavioral proclivities)	3.22	0.92	--					
2. Societal Revenge Attitudes	3.84	1.27	.36***	--				
3. MFQ-Harm	4.57	0.71	-.29***	-.03	--			
4. MFQ-Fairness	4.44	0.72	-.09	.05	.62***	--		
5. MFQ-Loyalty	3.30	0.95	-.03	.30***	.11	.04	--	
6. MFQ-Authority	3.68	0.97	-.04	.38***	.16**	.02	.78***	--
7. MFQ-Purity	3.42	1.18	-.05	.34***	.12*	-0.03	.71***	.79***

Note. *$p < .05$, **$p < .01$, ***$p < .001$.

Linear Regressions

Four regression models (two per outcome) were estimated to examine the associations between moral foundations and revenge attitudes while controlling for demographic variables.

Models were run using both the binary moral foundations (individualizing and binding) and the more granular approach involving the five specific moral foundations.

For revenge attitudes assessed as personal viewpoints (Table 4), endorsement of individualizing foundations was associated with lower levels of support for revenge. At the level of specific foundations, the Harm foundation negatively predicted participants' personal revenge attitudes. Among demographic variables, men were more likely than women to endorse personal revenge attitudes in the individualizing-binding model, with the model specifying the five discrete moral foundations as predictors showing a marginal effect in the same positive direction. Religiosity also emerged as a predictor: participants who reported being more religious were less likely to endorse personal revenge attitudes across both models.

Table 4

Linear regressions for the two estimated models with revenge attitudes as personal viewpoints (i.e., behavioral proclivities) specified as the outcome variable

Outcome (Adj. $R^2 = 0.11$)	β	SE	t	p
Harm	-0.49***	0.1	-5.05	<.001
Fairness	0.18	0.09	1.93	.054
Ingroup	-0.03	0.09	-0.31	.752
Authority	0.05	0.1	0.47	.636
Purity	0.09	0.08	1.15	.251
Gender	0.11	0.06	1.90	.058
Age	0.00	0.00	0.69	.492
Socioeconomic Status	-0.01	0.03	-0.26	.799
Political ideology	-0.01	0.04	-0.29	.772
Religiosity	-0.17**	0.06	-2.93	.004
Outcome (Adj. $R^2 = 0.07$)	β	SE	t	p
Individualizing Values	-0.30**	0.09	-3.32	.001
Binding Values	0.08	0.07	1.11	.268
Gender	0.14*	0.05	2.57	.011
Age	0.00	0.00	0.46	.643
Socioeconomic Status	-0.01	0.03	-0.46	.646
Political ideology	-0.02	0.04	-0.55	.585

Religiosity	-0.14*	0.06	-2.49	.013

Note. *$p < .05$, **$p < .01$, ***$p < .001$.

For revenge attitudes assessed as societal acceptance (Table 5), endorsement of binding, but not individualizing, foundations predicted greater support for revenge. At the level of specific foundations, Authority and (surprisingly) Fairness positively predicted societal acceptance of revenge, whereas Harm negatively predicted it. Among demographic variables, political conservatism, a strong correlate of binding values (Graham et al., 2011), consistently predicted higher levels of societal support for revenge across both models.

Table 5

Linear regressions for the two estimated models with revenge attitudes as societal acceptance specified as the outcome variable

Outcome (Adj. $R^2 = 0.17$)	β	SE	t	p
Harm	-0.33*	0.13	-2.56	.011
Fairness	0.33**	0.12	2.70	.007
Ingroup	-0.02	0.12	-0.17	.869
Authority	0.41**	0.13	3.07	.002
Purity	0.12	0.11	1.13	.262
Gender	-0.02	0.07	-0.26	.794
Age	0.00	0.00	-0.52	.603
Socioeconomic Status	-0.06	0.04	-1.39	.165
Political ideology	0.11*	0.05	2.34	.020
Religiosity	-0.06	0.08	-0.77	.441
Outcome (Adj. $R^2 = 0.15$)	β	SE	t	p
Individualizing Values	0.03	0.12	0.26	.795
Binding Values	0.48***	0.10	4.85	<.001
Gender	0.01	0.07	0.11	.913
Age	-0.00	0.00	-0.68	.500
Socioeconomic Status	-0.06	0.04	-1.43	.154
Political ideology	0.11*	0.05	2.23	.026
Religiosity	-0.05	0.08	-0.67	.501

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Discussion

Results from Study 1 largely supported our predictions. Endorsement of individualizing values was associated with lower support for revenge, whereas endorsement of binding values was associated with greater support. At the level of specific foundations, Harm/Care negatively predicted revenge attitudes, and Authority/Respect positively predicted them — patterns consistent with our hypotheses. An unexpected result emerged for Fairness/Reciprocity, which positively predicted societal acceptance of revenge. One possibility is that our measure of fairness, drawn from the MFQ, collapsed across two dimensions that have since been identified. Recent work by Atari and colleagues (2023) distinguishes between fairness-as-equality, which emphasizes equal treatment for all persons, and fairness-as-proportionality, which emphasizes balancing inputs and outcomes. The latter is especially consistent with retributive intuitions, such as "an eye for an eye." Because the MFQ does not differentiate between these dimensions, the observed positive association with revenge attitudes may reflect proportionality concerns rather than fairness-as-equality.

Study 2

Study 1 demonstrated that endorsement of binding values predicted greater support for revenge in general, whereas endorsement of individualizing values predicted less engagement in and support for revenge. However, prior work suggests that these patterns may shift in the context of sexual assault, where judgments are shaped not only by assessments of harm but also by purity concerns and gendered expectations (e.g., Niemi & Young, 2016). Because binding values encompass purity, individuals who strongly endorse them may view victims who retaliate as further tainted and therefore oppose revenge. In contrast, those who strongly endorse individualizing values, with their emphasis on harm reduction and fairness, may be more likely to interpret revenge as a justified response and to reinforce perpetrator responsibility rather than victim culpability.

Accordingly, Study 2 tested whether the moral foundations differentially predict attitudes toward revenge in sexual-assault contexts, and whether these patterns vary across harm-based and purity-based acts of retaliation. The preregistered design focused on several outcomes, both before and after the victim engages in revenge. Before revenge is enacted, we predicted that stronger endorsement of individualizing values would be associated with perceiving greater victim injury, less victim contamination, reduced victim responsibility, and less victim blaming. By contrast, stronger endorsement of binding values was expected to predict the opposite pattern: perceiving less injury, greater contamination, more victim responsibility, and increased victim blame. After revenge is enacted, we predicted that individualizing values would positively predict justification of revenge, while binding values would negatively predict justification. Similarly, we expected that individualizing values would predict reduced responsibility and blame directed toward the victim for retaliating, whereas binding values would predict heightened responsibility and blame. This study was preregistered (https://osf.io/6chtb).

Methods

Participants

Participants were recruited through Prolific and received $1.35 for completing the survey. An a priori power analysis conducted in G*Power 3.1 (Faul et al., 2007) indicated that a sample of 850 participants would be sufficient to detect a small effect size (d = 0.20) for a between-subjects comparison of two groups. We therefore recruited 850 participants (see Table 1 for demographic details). An additional two participants completed the survey but did not submit it for remuneration; their data were nonetheless retained in the final sample.

Procedures

In the sexual assault paradigm, we replicated procedures from Niemi and Young (2016), who examined participants' perceptions of victims using minimal descriptions without

contextual detail. We employed a 2 × 2 factorial design. The first factor was the type of sexual assault: molestation versus rape. In the molestation condition, participants read: "Please consider the following hypothetical crime victim: A VICTIM OF molestation." In the rape condition, participants read: "Please consider the following hypothetical crime victim: A VICTIM OF rape." Participants were randomly assigned to one of these conditions and then rated the victim's injury, responsibility, and blame, as well as the perpetrator's responsibility.

The second factor was the type of revenge. We used minimal descriptions that explicitly specified retaliatory intent ("to get revenge"), and we operationalized revenge broadly to include retaliation enacted by close others on behalf of the victim. This approach aligns with our conceptual definition of revenge as punitive action taken by someone directly or indirectly affected by the wrongdoing and motivated by perceived wrongdoing, and it distinguishes revenge from third-party punishment enacted by unaffected observers in institutional or detached roles (e.g., judges or jurors; Martin et al., 2019; McCullough et al., 2013).

In the harm-revenge condition, participants read: "Now please consider the following hypothetical revenge scenario: 'After being {molested/raped}, the victim's friends physically attacked the perpetrator to get revenge for the molestation/rape.'" We specified that the act was carried out by the victim's friends in order to preserve the power asymmetry characteristic of sexual assault and to reduce the likelihood of additional victim blaming based on perceptions of the victim's ability to prevent or resist the assault (e.g., Malle et al., 2014; Niemi & Young, 2014). In the purity-revenge condition, participants read: "Now please consider the following hypothetical revenge scenario: 'After being {molested/raped}, the victim's friends exposed the perpetrator to everyone on the internet to get revenge.'" This scenario was framed as a purity violation because public disclosure could be construed as further "contaminating" the victim by increasing the visibility of the assault and reinforcing perceptions of moral taint.

Following each revenge scenario, participants evaluated the victim's responsibility, blame, and contamination, as well as the perpetrator's responsibility. They also rated how justified the act of revenge was. Measures of victim injury were not reassessed in this phase.

Measures

Participants completed the following measures in a randomized order.

Moral foundations. Moral foundations were assessed using the Moral Foundations Questionnaire (MFQ; Graham et al., 2011), which includes 30 items across five subscales: Harm/Care ($\alpha = 0.67$), Fairness/Reciprocity ($\alpha = 0.70$), Ingroup/Loyalty ($\alpha = 0.77$), Authority/Respect ($\alpha = 0.78$), and Purity/Sanctity ($\alpha = 0.85$). Binding moral foundations (the average of Ingroup, Authority, and Purity; $\alpha = 0.91$) and individualizing moral foundations (the average of Harm and Fairness; $\alpha = 0.81$) were also calculated, consistent with Study 1. To minimize order effects, the MFQ and the experimental paradigms were counterbalanced such that participants either completed the paradigms first and then the MFQ, or vice versa.

Victim injury. After the sexual assault paradigm, participants rated the extent of the victim's injury on a single item: "How much has the victim been injured/wounded? (1 = Not at all injured, 7 = Very much injured)."

Victim contamination. Perceptions of the victim's contamination were assessed in both the sexual assault and revenge paradigms. After reading the sexual assault description, participants responded to: "How much has this person been contaminated/tainted? (1 = Not at all contaminated, 7 = Very much contaminated)." After the revenge description, participants responded to a slightly revised version: "How much has the victim (the revenger) been contaminated or tainted after revenge? (1 = Not at all contaminated, 7 = Very much contaminated)."

Victim and perpetrator responsibility. In both paradigms, participants rated responsibility for the victim and the perpetrator. In the sexual assault paradigm, the items were: "How much do you think the {victim/perpetrator} is responsible for the incident? (1 = Not at all responsible, 7 = Very much responsible)." In the revenge paradigm, the victim's responsibility was measured by: "How much do you think the victim (the revenger) is responsible for the revenge? (1 = Not at all responsible, 7 = Very much responsible)." Perpetrator responsibility for the revenge enacted on them was measured by: "How much do you think the perpetrator of the original crime is responsible for the revenge enacted on them? (1 = Not at all responsible, 7 = Very much responsible)."

Victim blaming. Victim blame was assessed in both paradigms. In the sexual assault paradigm, participants were asked: "Please designate the extent of blame to the victim and the perpetrator" on a 7-point scale, with 1 = perpetrator deserves all the blame, 4 = blame is shared equally, and 7 = victim deserves all the blame. In the revenge paradigm, victim blame was measured with: "To what extent do you blame the victim for pursuing revenge against the perpetrator? (1 = Not at all, 7 = Very much)."

Revenge justification. After the revenge paradigm, participants rated: "How much do you justify the revenge conducted by the victim (the revenger)? (1 = Not at all justified, 7 = Very much justified)."

Demographics. At the end of the survey, participants reported gender, age, socioeconomic status, level of education, political ideology, and religiosity, which were included as covariates in regression analyses.

Results

Correlations

Bivariate correlations between binary-grouped moral foundations (i.e., the individualizing and binding values) and outcome measures are presented in Table 6. As predicted, in the sexual assault paradigm, individualizing values were positively associated with perceptions of the victim's injury. Associations between individualizing values and victim contamination, responsibility and blaming were in the predicted negative direction but did not reach statistical significance. Meanwhile, and as predicted, binding values were positively associated with perceptions of the victim's contamination, the victim's responsibility for the assault, and blame directed toward the victim, and negatively associated with perceptions of perpetrator responsibility (an exploratory outcome).

In both revenge paradigms (i.e., harm-based and purity-based), individualizing values were positively associated with justification of revenge, whereas binding values were positively associated with blaming the victim for engaging in revenge. In the purity-based revenge paradigm, binding values also positively associated with attributing responsibility to the victim for revenge being enacted on the perpetrator. These findings were consistent with the preregistered hypotheses. With respect to the exploratory outcomes, endorsement of binding values positively correlated with attributing responsibility to the perpetrator for the revenge enacted upon them in the harm-based revenge paradigm, but not in the purity-based paradigm. Conversely, endorsement of individualizing values correlated positively with attributing responsibility to the perpetrator for the revenge enacted upon them in both the harm- and purity-based revenge paradigms.[1]

[1]We also compared the relative strength of binding and individualizing values in predicting key outcomes across the two revenge scenarios. In the purity-based revenge vignette, binding values were more strongly associated with attributions of responsibility to the victim (revenger) than were individualizing values. By contrast, in the harm-based revenge vignette, binding values showed a stronger association with attributing responsibility to the perpetrator (the target of revenge). Full results of these comparisons are reported in the Supplemental Online Materials (SOM).

Table 6

Bivariate correlations between moral values and measured outcomes

	Correlation with		Hypothesis for	
Outcome	IMF	BMF	IMF	BMF
Victim Injury	**.12*** **	-0.03	**H1a: Positive ccorrelation**	H1b: Negative correlation
Victim Contamination	-0.01	**.46*** **	H2a: Negative correlation	**H2b: Positive correlation**
Victim Responsibility	-0.03	**.29*** **	H3a: Negative correlation	**H3b: Positive correlation**
Victim Blaming	-0.05	**.22*** **	H4a: Negative correlation	**H4b: Positive correlation**
Justification of Harm-based Revenge	**.18*** **	0.05	**H5a: Positive correlation**	H5b: Negative correlation
Justification of Purity-based Revenge	**.17*** **	-0.05	**H5a: Positive correlation**	H5b: Negative correlation
Victim Responsible for Harm-based Revenge	-0.05	0.02	H6a: Negative correlation	H6b: Positive correlation
Victim Responsible for Purity-based Revenge	0.01	**.17*** **	H6a: Negative correlation	**H6b: Positive correlation**
Victim Blaming for Harm-based Revenge	-0.07	**.13** **	H7a: Negative correlation	**H7b: Positive correlation**
Victim Blaming for Purity-based Revenge	-0.07	**.21*** **	H7a: Negative correlation	**H7b: Positive correlation**
Exploratory Outcomes				
Perpetrator Responsibility	0.03	**-.10** **	No pre-reg. hypothesis	No pre-reg. hypothesis
Perpetrator Responsible for Harm-based Revenge	**.14** **	**.12* **	No pre-reg. hypothesis	No pre-reg. hypothesis
Perpetrator Responsible for Purity-based Revenge	**.14** **	-0.06	No pre-reg. hypothesis	No pre-reg. hypothesis

Note. *$p < .05$, **$p < .01$, ***$p < .001$. IMF = Individualizing Moral Foundations. BMF = Binding Moral Foundations. Bolded values denote statistical significance and support for a pre-registered hypothesis.

Exploratory Analyses: Differences Based on Revenge Type

Independent-sample t-tests were conducted to compare responses across the two revenge scenarios (Table 7). Descriptively, participants in both conditions tended not to blame the victim for retaliating (scoring well below the midpoint on the scale), while they did attribute substantial responsibility to the perpetrator and judged the acts of revenge as at least somewhat justified (scoring well above the midpoint). However, important differences emerged between conditions.

When the revenge took the form of physical harm, participants assigned significantly more blame to the victim than when revenge involved a purity-based act. Conversely, participants in the purity condition were more likely to justify the victim's retaliation. Together, despite the observed differences between the binding and individualizing values derived from Moral Foundations Theory (e.g., Graham et al., 2009), these findings suggest a general pattern of harm aversion: harm-based revenge was judged less acceptable than purity-based revenge, consistent with predictions from Dyadic Morality Theory (Gray et al., 2012).

Table 7

T-tests comparing harm-based revenge and purity-based revenge

Outcome	Harm Revenge		Purity Revenge		t-test	Cohen's d
	M	SD	M	SD		
Victim Blaming for Revenge	2.53	1.82	2.12	1.68	t (844.56) = 3.40***	0.23
Victim Contamination	3.24	1.98	3.41	2.12	t (845.72) = -1.15	-0.08
Victim Responsibility for Revenge	4.20	2.21	4.12	2.21	t (850.00) = 0.56	0.04
Perpetrator Responsibility for Revenge	5.90	1.50	6.05	1.45	t (849.19) = -1.44	-0.10
Revenge Justification	5.23	1.72	5.69	1.62	t (847.05) = -3.97***	-0.27

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Discussion

In contrast to the general patterns observed in Study 1, attitudes toward revenge in the sexual assault context of Study 2 diverged. Individuals who endorsed individualizing values tended to justify the victim's revenge and attributed responsibility to the perpetrator, whereas those high in binding values were less supportive of revenge and more inclined to blame the victim for retaliating. These findings suggest that people with different moral orientations may interpret sensitive social issues such as sexual assault through distinct moral lenses, leading to opposing patterns of support for revenge. Endorsement of individualizing values may lead

individuals to construe sexual assault primarily as a harm violation committed by the perpetrator, thereby justifying revenge as a form of justice (e.g., Martin et al., 2019; Pinker, 2009; Schumann & Ross, 2010). By contrast, endorsement of binding values may orient individuals toward construing sexual assault as a purity violation that implicates the victim (e.g., Niemi & Young, 2016), reducing support for revenge and increasing victim blame.

An unexpected finding was the absence of a significant association between individualizing values and perceptions of victim responsibility in the revenge paradigm. This may reflect the complexity of how responsibility is judged in such contexts. Some participants may have viewed the victim as not responsible, reasoning that the perpetrator's initial transgression ultimately caused the revenge. Others, however, may have judged the victim as responsible on the basis of intentionality (because the act of retaliation was deliberate) even if they simultaneously viewed it as justified. These competing perspectives, one grounded in causal attribution and the other in intentionality (see Cushman, 2008 for a disambiguation of the impacts of causality and intentionality on ascriptions of blame), may have offset one another, producing a nonsignificant overall effect.

General Discussion

In line with the conceptualization of revenge as a complex and contested response to wrongdoing (Schumann & Ross, 2010), we find that individuals' perceptions of its legitimacy vary alongside the moral values they uphold. Across two studies, we examined how endorsement of different moral foundations relates to support for revenge and to judgments of victims and perpetrators. When general attitudes toward revenge were measured as stable individual differences (Study 1), higher endorsement of individualizing values was associated with reduced support for revenge, whereas higher endorsement of binding values was associated with greater support, consistent with the idea that harm- and fairness-based values discourage retaliation,

while loyalty, authority, and purity-based values can support it. In contrast, when revenge was situated in the context of sexual assault (Study 2), these patterns shifted. Those high in individualizing values were more supportive of victims' revenge and more likely to hold perpetrators responsible, whereas those high in binding values tended to support revenge less and were more inclined to blame victims for retaliating. These findings extend prior work linking binding values to victim-blaming, including in the case of sexual assault (Niemi & Young, 2016). The current work reveals that the same moral orientations that encourage revenge in some contexts can dampen support for it in others.

The present studies make theoretical contributions to understanding revenge through the lens of moral values. Results from Study 1 showed that endorsement of the moral foundations predicted attitudes toward revenge, providing a novel application of Moral Foundations Theory (Graham et al., 2009, 2013). These associations were not accounted for by demographic characteristics previously linked with differences in moral foundations, such as religiosity or political ideology (Graham et al., 2009). Across four regression models, moral foundations explained an average of 8% of the variance in revenge attitudes. These findings indicate that people's sense of justice is shaped not only by deliberative reasoning but also by moral intuitions, offering scholars of retributive justice a framework that foregrounds moral values and intuitions in shaping perceptions of punishment and justice.

Building on theories of moral cognition, results from Study 2 provided evidence relevant to both Moral Foundations Theory (Graham et al., 2009, 2013) and the Theory of Dyadic Morality (Gray et al., 2012). Although some forms of revenge involve new harm, individuals who strongly endorsed harm-based values often justified such acts as a form of justice to compensate for the harm previously inflicted on the victim. Resonating with prior research on "virtuous violence" (Fiske et al., 2014) and "instrumental harm" (Kahane et al., 2018), this

indicates that harm is not always viewed as inherently immoral but can be considered acceptable or even necessary depending on the context. At the same time, revenge that involved direct harm was judged less acceptable overall than revenge that did not, consistent with the general "harm aversion" pattern proposed by the Theory of Dyadic Morality. Endorsement of binding values, however, was associated with a markedly different pattern, whereby individuals high in binding values were less supportive of victims' revenge and more likely to attribute responsibility or blame to victims. These findings suggest that variation in moral value endorsement contributes to divergent judgments of revenge, consistent with the broader view of moral pluralism.

Our findings also have practical implications for social workers, victim-support organizations, and policymakers concerned with justice and public attitudes toward retribution. At the policy level, Study 1 showed that support for harsh retribution was linked to endorsement of binding values. This suggests that legal communication strategies emphasizing harm prevention, rather than reinforcing loyalty, authority, or purity concerns, may help reduce public demand for excessive punishment and limit adherence to harsh retributive doctrines. Within therapeutic contexts, the patterns observed in Study 1 highlight the potential value of exploring clients' moral values, as prior work has underscored the role of personal values in psychotherapy (Parrott, 1999). Such an approach may better support individuals in processing guilt, blame, or revenge-related desires following trauma.

Study 2 adds further applied insight by linking binding values to victim-blaming in sexual assault contexts. Victim-support organizations could draw on this knowledge to refine interventions that address moral intuitions, such as purity concerns, in order to reduce victim self-blame and re-traumatization. Moreover, because identity, beliefs, and emotions play a role in motivating prosocial engagement (Thomas et al., 2017), organizations may also benefit from

tailoring recruitment strategies to appeal to individualizing values, thereby fostering volunteer participation and strengthening survivor-centered support.

Limitations and Future Directions

One important limitation of the present studies concerns our reliance on Moral Foundations Theory (MFT) and its associated questionnaire, both of which have faced notable critiques. At the level of measurement, some scholars argue that the MFQ's fairness subscale ignores systematic inequalities by emphasizing interpersonal reciprocity rather than structural redistribution and group-level justice (Janoff-Bulman & Carnes, 2013). More broadly, critics contend that MFT as a theory lacks conceptual clarity, relies excessively on vague notions of innateness and modularity, and overstates universality while minimizing cultural variation (Suhler & Churchland, 2011; Iurino & Saucier, 2020). Future studies may benefit from employing more diverse measurements of moral values (e.g., the Values in Action Classification; Peterson & Seligman, 2004) to further examine the relationship between morality and revenge attitudes.

Related to these measurement concerns, future work should examine the role of fairness more closely. Recent research suggests that the Fairness/Reciprocity foundation can be divided into two distinct moral foundations — equality and proportionality — resulting in the development of the MFQ-2 (Atari et al., 2023). Equality emphasizes equal treatment for all individuals, whereas proportionality emphasizes that people should receive outcomes in proportion to their actions, such as rewards for effort and punishments for transgressions. Importantly, individuals who score higher on the original binding foundations of the MFQ also tend to score higher on proportionality in the MFQ-2 (Atari et al., 2023). Because proportionality closely aligns with the logic of "getting even," future research should investigate whether the

association observed here between Fairness and support for revenge reflects proportionality rather than fairness-as-equality.

An overarching limitation of the present studies is their reliance on U.S.-based online samples recruited through Prolific. Although both studies were preregistered and adequately powered, the findings may not generalize to other cultural or national contexts. Psychological patterns, including moral reasoning, vary substantially between WEIRD (Western, Educated, Industrialized, Rich, and Democratic) and non-WEIRD populations (Henrich et al., 2010). Attitudes toward revenge, sexual assault, victims, and perpetrators may therefore be shaped by additional cultural factors not captured here. And, because moral values themselves also differ cross-culturally (Atari et al., 2023), future research ought to examine whether the associations observed here replicate or diverge across diverse cultural contexts.

Another limitation, particularly salient in Study 2, concerns our use of minimal hypothetical descriptions. Although this approach was necessary to maintain consistency in the type of transgression (sexual assault) across participants, it introduces several constraints. First, we imposed no time restrictions on how long participants spent reading and imagining the scenarios. It is difficult to anticipate a standardized amount of time that participants would need to imagine scenarios of assault or revenge, so no participants were excluded on this basis. Second, while minimal descriptions may enhance ecological validity by allowing participants to draw on relatable events or cultural knowledge, they also introduce variability in how thoroughly and consistently participants engage with the material. Third, as noted by prior research (Bostyn et al., 2018), there may be gaps between hypothetical moral judgments and real-world moral actions.

We chose minimal descriptions over asking participants to recall personal experiences of sexual assault for both ethical and methodological reasons. Prompting participants to recall real

experiences of sexual assault could cause distress, and because sexual assault is not a universal experience, this approach would severely limit our sample and potentially introduce systematic biases based on victimization status. The minimal description approach allowed us to examine how moral values shape responses to revenge in sexual assault contexts while keeping the type of initial transgression consistent across all participants. Nevertheless, an important limitation of this approach is that minimal descriptions may not evoke the same intensity, emotional complexity, or phenomenological realism as recalled or lived experiences. As a result, participants' judgments may reflect abstract moral evaluations of revenge more than the kinds of reactions that emerge in the aftermath of personally experienced wrongdoing.

Future work could address these limitations through complementary approaches. One direction would be to employ more detailed vignettes with time constraints to increase standardization. Another would be to ask participants to reflect on revenge scenarios they have witnessed or heard about (rather than personally experienced), which could bridge hypothetical and real-world contexts while avoiding the ethical concerns of prompting trauma disclosure. That said, similar moral-value tradeoffs (i.e., between individualizing and binding values) could be examined using recall-based or simulation-based paradigms in domains where such methods are ethically feasible, including interpersonal betrayal, workplace conflict, social exclusion, reputational humiliation, or other non-traumatic violations that are especially relevant to harm, loyalty, authority, or purity concerns. Such designs would make it possible to test whether the patterns observed here generalize beyond minimal descriptions and beyond sexual assault, while using methods that are more immersive and better anchored in lived social experience.

Finally, the current research focused on sexual assault as the test case for revenge. Although highly relevant to the theoretical questions at hand, sexual assault may not capture the full range of transgressions to which revenge responses apply, and there are theoretical reasons

beyond the methodological constraints of this context to examine other kinds of violations. In particular, our findings suggest that general support for revenge (Study 1) can diverge from support for revenge in specific contexts (Study 2), raising a theoretically and practically important question: do people's moral values predict attitudes toward revenge as a generality, or do they primarily predict support for revenge in cases where the nature of the violation being avenged is yoked to their own moral values? Future research could examine this by systematically varying which moral foundation is violated by the initial transgression, using not only vignette-based designs but also recall-based or simulation-based approaches in less traumatic domains. For example, researchers could test whether individuals high in loyalty values are especially likely to justify revenge for betrayal, whether those high in authority values are especially likely to justify revenge following insubordination or disrespect, or whether those high in purity values respond differently to non-traumatic acts framed as contamination, degradation, or moral taint. This approach would help clarify whether support for revenge depends less on revenge in the abstract than on the fit between the violated moral value and the individual's own moral commitments.

More broadly, these findings contribute to longstanding debates about the relationship between law and morality. Some scholars argue that law and morality are necessarily connected (e.g., Alexy, 1989), yet the present results illustrate that moral values shape attitudes toward actions that are uniformly illegal, such as rape, molestation, physical assault, and public humiliation. While all of these acts violate the law to varying degrees, individuals with different moral values may hold distinct perceptions of their severity, responsibility, and justification. Future research could explore whether moral foundations influence public support for particular laws or reforms, as well as judgments about the severity of legal violations. Ultimately, the

question of whether moral values *ought to* weigh into legal discussions may be better addressed by ethicists than psychologists.

Conclusion

The present studies examined how endorsement of different moral foundations relates to attitudes toward revenge. When attitudes toward revenge were measured as an individual difference, Study 1 showed that binding values predicted greater support for revenge, whereas individualizing values were not significant predictors. In contrast, Study 2, which focused on specific sexual assault scenarios, revealed a different pattern: individualizing values were associated with greater justification of revenge, while binding values were linked to increased blame directed at victims for retaliating. Together, these findings underscore the complexity of the moral underpinnings of revenge and suggest that moral foundations help account for variability in how people evaluate retaliatory acts. The results also speak to the usefulness of both Dyadic Morality Theory and Moral Foundations Theory: Dyadic Morality highlights broad patterns of harm aversion that help explain why harm-based revenge was judged less acceptable overall, while Moral Foundations Theory provides a finer-grained account of how individual differences in values, particularly those tied to purity and binding concerns, shape variation in victim blaming and support for revenge.

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Supplementary Online Materials

Table S1

Correlation z-tests between moral values and measurements in two revenge conditions. Positive values denote stronger associations in the Harm condition for Study 2.

Moral Foundation	Measurement	Z-test
Individualizing	Victim Blaming	-0.01
Binding	Victim Blaming	-1.21
Individualizing	Victim Contamination	0.26
Binding	Victim Contamination	0.33
Individualizing	Victim Responsibility	-0.97
Binding	Victim Responsibility	-2.16*
Individualizing	Perpetrator Responsibility	0.03
Binding	Perpetrator Responsibility	2.60**
Individualizing	Revenge Justification	0.21
Binding	Revenge Justification	1.50

Note. *p < .05, **p < .01, ***p < .001.

Table S2.

Linear regressions between moral values and measuring outcomes controlling for pre-registered covariates for Study 2

	Regression with		Hypothesis for	
Outcome	IMF	BMF	IMF	BMF
Victim Injury	**0.20****	**-0.11***	H1a: Positive Correlation	H1b: Negative correlation
Victim Contamination	-0.06	**1.01*****	H2a: Negative correlation	H2b: Positive correlation
Victim Responsibility	-0.08	**0.30*****	H3a: Negative correlation	H3b: Positive correlation
Victim Blaming	-0.10	**0.22*****	H4a: Negative correlation	H4b: Positive correlation
Justification of Harm-based Revenge	**0.39****	0.18	H5a: Positive correlation	H5b: Negative correlation
Justification of Purity-based Revenge	**0.37****	0.04	H5a: Positive correlation	H5b: Negative correlation
Victim Responsible for Harm-based Revenge	-0.13	0.11	H6a: Negative correlation	H6b: Positive correlation
Victim Responsible for Purity-based Revenge	0.14	0.22	H6a: Negative correlation	H6b: Positive correlation
Victim Blaming for Harm-Based Revenge	-0.13	**0.26***	H7a: Negative correlation	H7b: Positive correlation
Victim Blaming for Purity-Based Revenge	-0.19	**0.34****	H7a: Negative correlation	H7b: Positive correlation
Exploratory Outcomes				
Perpetrator Responsibility	0.06	**-0.14****	No pre-reg. hypothesis	No pre-reg. hypothesis
Perpetrator Responsible for Harm-based Revenge	**0.26***	**0.25***	No pre-reg. hypothesis	No pre-reg. hypothesis
Perpetrator Responsible for Purity-based Revenge	**0.28***	-0.02	No pre-reg. hypothesis	No pre-reg. hypothesis

Note. *$p < .05$, **$p < .01$, ***$p < .001$. IMF = Individualizing Moral Foundations. BMF = Binding Moral Foundations.