



**Empirical** 



# Communal Narcissism and Sadism as Predictors of Everyday Vigilantism

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# Abstract

Vigilantes monitor their social environment for signs of wrongdoing and administer unauthorized punishment on those who they perceive to be violating laws, social norms, or moral standards. We investigated whether the willingness to become a vigilante can be predicted by grandiose self-perceptions about one's communality (communal narcissism) and enjoyment of cruelty (sadism). As hypothesized, findings demonstrated both variables to be positively related to becoming a vigilante as measured by reports of past and anticipated vigilante behavior (Study 1) and by dispositional tendencies toward vigilantism (Studies 1 and 2). We also found communal narcissism and sadism predicted the perceived effectiveness of vigilante actions exhibited by others (Study 2) and the intention to engage in vigilantism after witnessing a norm violation (Study 3). Finally, Study 3 also demonstrated that the tendency for communal narcissists and sadists to become a vigilante might vary based on the expected consequences of the observed norm violation.

# Keywords

punishment, vigilantism, communal narcissism, sadism, morality



#### Relevance Statement

A prosocial orientation and cruelty seem antithetical. However, our results showed that these traits may converge in predicting individuals' tendency to become a vigilante, marked by imposing unauthorized punishments on others.

## **Key Insights**

- We study factors that predict willingness to become a vigilante.
- We found that communal narcissism predicted vigilante tendencies.
- · Sadism was also a significant predictor of vigilantism.
- Effects hold even after controlling for demographic covariates.

The emergence of modern state, law enforcement, and criminal justice systems have reduced the necessity for people to take it upon themselves to defend their lives, families, and communities from threats. However, there are times when people still engage in what Black (1976) referred to as "autonomous self-help" by becoming vigilantes. Vigilantes typically emerge when people believe the institutions they rely on for protection, maintaining social order, and delivering justice are perceived as ineffective (DeCelles & Aquino, 2020). The term "vigilante" was first used in the 19th century to describe a member of a volunteer committee organized to suppress and punish crime. A common perception of vigilantes is that they break laws to punish wrongdoers; however, we maintain that people all over the world perform acts of "everyday vigilantism" that do not involve violating any laws. For example, during the Covid-19 pandemic, citizens blocked driveways to force residents who recently arrived from out-of-state into quarantine (Elassar, 2020) and students sought to humiliate classmates for violating their university's COVID-19 rules by publishing their names on social media (Holliday, 2021). In neighborhoods, residents organize watch groups to detect and sometimes confront troublemakers (Ivasiuc, 2015; Weisburd, 1988). Social media users dox or harass others in online communities for committing various transgressions (Huey et al., 2013) and employees monitor and punish fellow employees and even consumers (Chen, Graso, et al., 2022; Crawford & Dacin, 2021).

Vigilantes can act as third-party punishers even when they have not been personally harmed by a norm violator if they believe the violator has evaded justice (Robinson & Robinson, 2018; Zhu et al., 2012). Vigilantes can also emerge if people perceive deviance in their community is rampant and threatens social order (DeCelles & Aquino, 2020). Finally, some vigilantes might be motivated by the desire to seek revenge against someone who treated them badly (Tripp et al., 2007). While this latter motivation might be considered the least defensible reason for becoming a vigilante, the first two could arguably produce social benefits. Nevertheless, because vigilantes are generally unconstrained by procedural obligations that temper the behavior of those who are accorded the legitimate



right by society to punish wrongdoers, they can do more harm than good. For example, vigilantes may ignore the presumption of innocence, fail to gather sufficient evidence to establish an alleged transgressor's guilt, and administer excessive and irreversible punishment. Worse, they can sometimes punish innocent parties.

Vigilantes have been of interest to sociologists and criminologists (e.g., Burrows, 1976; Johnston, 1996). A handful of psychologists have begun to theorize about possible dispositions and social dynamics that could explain why certain people become vigilantes (Chen, Graso, et al., 2022; DeCelles & Aquino, 2020; Kreml, 1976; Saucier & Webster, 2010; Tripp et al., 2007), but empirical studies of what dispositional characteristics might predict who becomes a vigilante are scarce. Our research fills this gap by examining individual differences in communal narcissism and sadism as possible predictors. What is theoretically interesting about these personality variables is that they are associated with different social motivations: the former toward prosociality, the latter toward cruelty. However, we theorize that there are situations where both might operate similarly to override the natural inhibitions that discourage most humans from punishing others. One such situation is when someone violates a social norm for which they do not face any repercussions, thereby providing observers with the opportunity to become a vigilante.

# Why Communal Narcissism Motivates People to Become Vigilantes

Communal narcissism is a personality trait that describes an inflated perception of one's prosocial attributes (Gebauer et al., 2012). Although communal narcissists possess the same core self-motives of grandiosity, entitlement, and gaining power typical of agentic narcissists, they seek to validate these exaggerated self-perceptions in the communal domain (Gebauer et al., 2012; Nehrlich et al., 2019). We submit that communal narcissists' belief in a broadened scope of personal responsibility, coupled with their grandiose self-perceptions of morality in the communal domain, predisposes them to experience a heightened sense of psychological standing and perhaps even a moral duty to pursue justice. Supporting this possibility, research shows that communal narcissists report being morally outraged at unfairness to a greater extent than those who are lower on this trait (Yang et al., 2018). Additionally, because vigilantes sometimes gain reputational benefits for defending others from harm-doers, communal narcissists may find the vigilante role attractive because of the prospect of garnering affirmation and admiration from others (Barclay, 2006; Halmburger et al., 2017). For many people, a common response to observing social transgressions that do not directly affect them is inaction, also known as the bystander effect (Fischer et al., 2011; Petty et al., 1977). However, we hypothesize that individuals high in communal narcissism are less likely to be bystanders and more likely to become vigilantes because doing so can satisfy the communaly-oriented goals they value, as well as their desire for being recognized for their superior morality.



The latter explanation recognizes that while communal narcissists may appear to be driven by prosocial motives when they become vigilantes, they might also be motivated by a desire for admiration rather than a genuine concern for the welfare of others. Communal narcissism has been positively linked to self-perceived prosociality (Yang et al., 2018), declared levels of civic engagement (Nehrlich et al., 2019), pro-environmentalism (Naderi, 2018), and explicit communal self-views (Fatfouta et al., 2017), however, when more objective assessment methods were used, these associations were weakened (Fatfouta & Schröder-Abé, 2018; Naderi, 2018; Nehrlich et al., 2019). These findings raise the possibility that communal narcissism can be a superficial self-presentation style that can be manifested through seemingly prosocial actions (Barclay, 2006).

# Why Sadism Motivates People to Become Vigilantes

Sadism is defined as deriving pleasure from inflicting cruelty on others, regardless of any justification or context (Paulhus & Dutton, 2016). The enjoyment of cruelty distinguishes sadism from other motives that could also inflict harm through punishment on others such as egotistical violence (i.e., revenge), as a means for achieving a socially acceptable goal (i.e., self-protection), or from moral idealism (i.e., delivering justice) (Baumeister, 1999). Individuals with a sadistic disposition derive hedonic satisfaction from seeing others suffer (Buckels et al., 2013). Supporting this view, studies show that non-clinical sadists are more likely to harm an innocent person, engage in verbal humiliation, bullying and trolling, and enjoy more violent forms of media and entertainment for their own sake (Buckels et al., 2014; van Geel et al., 2017).

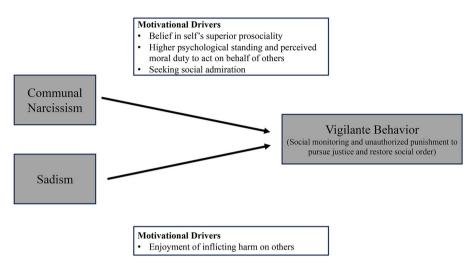
Natural propensities to feel badly when inflicting pain on others and societal forces that discourage aggression generally restrain people's use of punishment in everyday life. Even people who are legitimately authorized to punish (e.g., police, managers, judges) generally recoil from doing so (Berman & Kupor, 2020; Cushman et al., 2012; Greene et al., 2001). However, people punish one another all the time in a variety of ways and there are situations that can make punishment appear less undesirable or perhaps obligatory. To sadists, these external sources of disinhibition are less necessary for overriding the hesitation to punish. Indeed, Trémolière and Djeriouat (2016) demonstrate that sadism is often accompanied by anomalous moral judgments that can allow people to justify or ignore the anticipated negative affect derived from harming others. When cruelty is hedonically rewarding, people with sadistic tendencies may view vigilantism as an opportunity to satisfy the desire to inflict pain on someone without inciting social condemnation. It is even possible that they would be lauded for their actions by observers, which can further rationalize cruelty.

Our arguments suggest that while communal narcissist and sadists may have different motivations to help or harm others, both dispositions increase the likelihood of becoming a vigilante. In other words, they have an additive effect on the willingness to become a vigilante. For people who are high in one disposition but low in the other, the



potential for becoming a vigilante is not absent, but the motivations for doing so will be reduced. Figure 1 summarizes these arguments. <sup>1</sup>

Figure 1
Schematic Summary of Main Arguments



*Note.* Pursuing social admiration and symbolizing one's moral superiority should be the primary motivation for individuals higher on communal narcissism (CN), whereas enjoyment of cruelty and inflicting harm is the primary motivation for sadists (S).

### Overview of Studies

We tested the predictions of our model in three studies. In all studies, sample sizes and data analysis plans were preregistered and determined in advance. The preregistrations for all studies can be found in the Supplementary Materials, alongside full study materials and de-identified data. For all studies, sample recruitment and study procedures were approved by the institutional ethics review board of the University of British Columbia with the following protocol number: H20-00901.<sup>2</sup>

<sup>2)</sup> For full transparency, we would like to acknowledge that our pre-registered analysis plans for Studies 2 and 3 initially stipulated the use of a composite variable (i.e., by taking the average of participants' communal narcissism + sadism scores, termed communal sadism) to test our hypotheses. However, during the peer review process, several concerns were raised regarding the suitability of this approach. Consequently, we have revised our methodology and implemented alternative analyses based on the valuable feedback received during the review process, as presented in the current manuscript.



<sup>1)</sup> Our theoretical model suggests that the effects of these variables are additive, but in all studies we tested the possibility that their effects can be modeled as an interaction and found no evidence supporting this alternative model.

# Study 1: Past Vigilante Behavior and Future Intentions to Be a Vigilante

Study 1 uses retrospective and prospective reports of vigilante behavior to test our predictions. Participants first read a description of a vigilante (without mentioning the word 'vigilante') and were asked to report whether they have ever acted in ways that would fit with this description. If not, they were asked if they could see themselves acting like one in the future. We predicted that those who reported having acted like a vigilante in the past, as well as those who said they might act like one in the future, would have higher scores on measures of both communal narcissism and sadism compared to those who have not and could not see themselves acting like a vigilante in the future.

We included the Punishment Orientation Questionnaire (POQ, Yamamoto & Maeder, 2019) as an exploratory measure since part of our definition of being a vigilante is the punishment of perceived wrongdoers. Thus, we wanted to see whether communal narcissism and sadism might be related to different attitudes people have about punishment. The POQ assesses individual variation in the lay ethics principles individuals prioritize when they think about punishment. The POQ measures four lay ethics: (1) Prohibitive Utilitarianism, which emphasizes that punishment itself is not desirable but that society should focus on creating positive outcomes; (2) Prohibitive Retributivism, which prioritizes the importance of avoiding the punishment of innocent individuals, adhering to the belief that it is better to let multiple guilty criminals go free than to punish a single innocent person; (3) Permissive Utilitarianism, which views punishment as a means to ensure public safety and deter crime, emphasizing the practical consequences of punishment in society; and lastly, (4) Permissive Retributivism, which supports the idea that punishment should serve as a form of retribution against the offender, even if it may sometimes risk punishing an innocent person. Yamamoto and Maeder (2019) suggest that the prohibitive orientation items probe the hesitation to punish in general as well as the prioritization of avoiding punishing an innocent person, whereas the permissive ones probe the desire to punish for retribution and acceptance of disproportional or unwarranted punishment to protect society.

# Method

We aimed to recruit 600 participants from MTurk. Each subject was paid \$1.15 USD for successful completion of the study. An a priori power analysis conducted using G\*Power 3.1 for our primary outcome of comparing the two group means (past and future vigilantes vs. non-vigilantes), assuming a two-tailed test and an alpha of .05, showed that a sample size of 600 would provide 90% power to detect an effect of Cohen's d = .27. A total of 601 participants completed the survey. Following our preregistration plan, we removed 11 participants for failing an attention check question embedded into the Sadism scale, leaving 590 responses for the remaining analyses (52% Male;  $M_{\rm age}$  = 40.32,  $SD_{\rm age}$  = 12.63;



74.6% Caucasian, 9.4% Black, 8.0% Asian, 5.1% Hispanic / Latinx, 2.9% other).<sup>3</sup> This study is preregistered (see Ok et al., 2020).

#### Measures

**Communal Narcissism** — The Communal Narcissism Inventory (CNI; Gebauer et al., 2012) is a psychometrically sound measure that assesses one's grandiose self-thoughts in the communal domain (i.e., "I am the most caring person in my social surrounding") with 16 statements on a 7-point scale (1 = Strongly Disagree, 7 = Strongly Agree).

**Sadism** — The Comprehensive Assessment of Sadistic Tendencies (CAST; Buckels et al., 2014) scale is designed to assess the three facets of sadism (physical violence, verbal aggression, and vicarious sadism), and measures the pleasure derived from various everyday acts of cruelty. Participants answer 18 items anchored on a 5-point scale (1 = Strongly Disagree, 5 = Strongly Agree). Sample items are "I enjoy physically hurting people" (physical sadism), "I would never purposely humiliate someone" (verbal sadism, reverse-coded), "I enjoy playing the villain in games and torturing other characters" (vicarious sadism).

**Punishment Orientation** — We used the 17-item Punishment Orientation Questionnaire (POQ) which assesses the individual variation in the principles people prioritize when thinking about punishment (Yamamoto & Maeder, 2019, p. 1288). Sample items include: "Punishment should be about looking forward to improve society, not backward to address the criminal's misdeeds" (prohibitive utilitarianism), "It is better to let 10 guilty criminals go free than to punish one innocent person" (prohibitive retribution), "Punishment is a necessary evil" (permissive retributive), and "Overly harsh punishment may be necessary to prevent crime" (permissive utilitarian). Participants answer all items on a 5-point scale (1 = Strongly Disagree, 5 = Strongly Agree).

Vigilante Status — Participants were asked the following question: "In the past, have you ever (1) closely monitored the behaviors of other people for signs of wrongdoing (i.e., not following the rules, laws, or norms), (2) and then when you observed a wrongdoing, made an effort to punish the person directly or indirectly, even though it was not part of your formal responsibility to do so?" This description captures the distinguishing characteristics of a vigilante as not only monitoring others' behavior but

<sup>3)</sup> In our initial submission, we reported a sample size of 537 due to the exclusion of 53 written responses that we believed did not fully align with our operational definition of vigilantism. However, during the review process, a thoughtful reviewer highlighted the potential subjectivity of vigilantism as an experience, prompting us to reconsider our exclusion criteria. Consequently, we decided to include all the data without any elimination, except for cases where participants failed instructional attention checks (n = 11). Importantly, our results remained consistent regardless of the elimination process, ensuring the robustness of our findings.



also administering punishment without formal authorization (Chen, Graso, et al., 2022). Participants could select one of three response options: (1) Yes, I have (*Past Vigilante*); (2) No, I have not, but I can see myself doing so in the future (*Future Vigilante*); (3) No, I have not, and I cannot see myself doing so in the future (*Non-vigilante*). Next, those who indicated having acted in a way that fits this description (*Past Vigilantes*) were asked to briefly describe the incident.

Finally, all participants completed some additional measures included for exploratory purposes (see our pre-registration and Supplementary Materials) and answered several demographic questions, including age, gender, ethnicity, political conservatism (1 = very liberal, 7 = very conservative), and religiosity (1 = not at all, 7 = very religious).

### Results

Table 1 presents the descriptive statistics and zero-order correlations among the study variables. One-hundred and seventy-two (29.2%) participants indicated that they have acted like a vigilante in the past; one-hundred and thirty-seven (23.2%) said they had not but could see themselves acting like one in the future. ANOVA results showed that past, future, and non-vigilantes differed significantly on Communal Narcissism, F(2, 587) = 18.60, p < .0001, and Sadism, F(2, 587) = 20.90, p < .0001. Consistent with our preregistered hypothesis, as presented in Table 2, post-hoc comparison results showed that past (M = 4.04, SD = 1.33) and future (M = 3.96, SD = 1.08) vigilantes were significantly in higher communal narcissism compared to non-vigilantes (M = 3.40, SD = 1.19). Similarly, past (M = 2.01, SD = 0.78) and future vigilantes (M = 1.81, SD = 0.61) were higher in sadism than non-vigilantes (M = 1.62, SD = 0.54).

To corroborate these results, we performed a logistic regression predicting the likelihood to act like a vigilante (in the past and in the future) from participants' communal narcissism and sadism scores, while controlling for age, gender, political orientation, education level, and religiosity. The overall model was significant, Cox & Snell  $R^2$  = .10, such that both communal narcissism, b = 0.36, SE = 0.08, Wald = 21.18, p < .0001, OR = 1.43, 95% CI [1.22, 1.69], and sadism, b = 0.68, SE = 0.17, Wald = 15.49, p < .0001, OR = 1.97, 95% CI [1.63, 2.31], were positive predictors. None of the demographic variables were significant in this model. We conducted a robustness test where we log-transformed the measure of Sadism, which was right-skewed, and repeated our analysis. The results were essentially unchanged.



 Table 1

 Zero-Order Correlations for the Variables in Study 1

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Communal Narcissism	(.94)											
2. Sadism	.20**	(.90)										
3. Vigilante Status (1 = Yes)	.24**	.23**	_									
4. Prohibitive Utilitarianism	.05	.13**	.01	(.75)								
5. Prohibitive Retributivism	.02	.17**	05	.45**	(.75)							
6. Permissive Utilitarianism	.30**	.26**	.23**	19**	18**	(.84)						
7. Permissive Retributivism	.23**	.14**	.13**	42**	28**	.70**	(.82)					
8. Age	13**	28**	16**	14**	07	06	.07	_				
9. Male	.05	.37**	.05	.21**	.12**	.06	02	09*	_			
10. Educational Level	.06	.05	.04	.12**	.17**	04	11**	0	08	_		
11. Political Conservatism	.14**	.16**	.08	25**	29**	.43**	.44**	.11**	06	10*	_	
12. Religiosity	.30**	.03	.06	15**	15**	.31**	.26**	.09*	.10*	03	.45**	_
M	3.71	1.78	.52	3.45	3.25	2.78	3.32	4.32	.48	4.55	3.26	3.25
SD	1.25	.65	.50	.82	.64	1.04	.95	12.63	.50	1.34	1.84	2.28

*Note.* N = 590. Values in parentheses indicate Cronbach's  $\alpha$  of the scales.

 Table 2

 Comparing Communal Narcissism and Sadism Scores Based on Vigilante Status

Communal Narcissism ( $\alpha = .94$ )	Sadism ( $\alpha = .90$ )
4.04 (1.33)	2.01 (1.78)
3.96 (1.08)	1.81 (1.61)
3.40 (1.19)	1.62 (1.54)
F(2, 587) = 18.60, p < .0001	F(2, 587) = 20.90, p < .0001
$M_{\rm diff} = 0.64,  p < .001,  d = 0.44$	$M_{\rm diff} = 0.39,  p < .001,  d = 0.61$
$M_{\rm diff} = 0.56,  p < .001,  d = 0.49$	$M_{\text{diff}} = 0.19, p = .004, d = 0.33$
$M_{\rm diff}$ = 0.08, $p$ = .582, $d$ = 0.05	$M_{\text{diff}} = 0.20, p = .005, d = 0.28$
	$4.04 (1.33)$ $3.96 (1.08)$ $3.40 (1.19)$ $F (2, 587) = 18.60, p < .0001$ $M_{\text{diff}} = 0.64, p < .001, d = 0.44$ $M_{\text{diff}} = 0.56, p < .001, d = 0.49$

# **Exploratory Analysis**

We examined whether communal narcissism and sadism predicted punishment orientation. To simplify our analysis, we followed Yamamoto and Maeder's (2019) procedure of reverse coding the prohibitive punishment items and then averaging all 17 items that comprise the scale to produce a single score that represents a favorable view of punishment. We then regressed communal narcissism and sadism on this composite measure of punishment orientation. Both communal narcissism, b = 0.12, SE = 0.03,



<sup>\*</sup>p < .05. \*\*p < .01.

t(534) = 4.91, p < .0001, and sadism, b = 0.10, SE = 0.05, t(534) = 1.98, p = .0482, were significant predictors of punishment orientation (model  $R^2 = .06$ ). When controlling for demographics, communal narcissism remained a significant predictor, b = 0.08, SE = 0.02, t(530) = 3.50, p = .0005, but sadism was not, b = 0.08, SE = 0.05, t(530) = 1.75, p = .0807.

#### Discussion

Results from Study 1 supported our hypotheses based on self-reported and anticipated behavior. The results provide initial evidence that people who construe themselves as having acted like a vigilante or could imagine being one are higher in communal narcissism and sadism than those who have never acted like a vigilante and could not imagine being one. A limitation of our design is that we used a recall and projective task so it may be that people who were high on communal narcissism or sadism simply recalled more occasions where they acted like vigilantes or have interpreted behaviors they may display as being consistent with being a vigilante. We address this limitation in our next study by asking people to respond to specific, standardized situations rather than relying on their recall of past events and prospection of future ones.

# Study 2: Perceived Effectiveness of Vigilante Justice

Study 2 examines how people high in communal narcissism and sadism appraise others' vigilante behaviors using perceptions of effectiveness as an indicator of their approval or disapproval of vigilantism. We hypothesized that people higher in communal narcissism and sadism would judge others' vigilante behaviors as more effective at achieving the goals of retributive justice and maintaining social order by deterring future deviance, which the vigilante literature suggests are two of the main reasons why people might become vigilantes. We included a measure of psychopathy to test if the effects of communal narcissism and sadism remained significant after it was controlled (Paulhus & Jones, 2015). Psychopathy has been shown to predict bold behaviors (Patrick & Drislane, 2015) and is correlated with sadism (Meloy, 1997); hence, it is informative to test whether both communal narcissism and sadism predicts vigilante-related acts independently of psychopathy. This study was preregistered (see Ok & Aquino, 2021).

#### Method and Measures

This study was conducted with the undergraduate subject pool at the third author's institution; thus, the final sample size was based on the number of participants in the pool during the period of data collection. A total of 316 participants completed the study in exchange for course credit. In line with our preregistered exclusion criteria, we



excluded 21 people who failed an attention check question embedded into the sadism scale, leaving 295 participants in the final sample (42% Male,  $M_{\rm age}$  = 19.85,  $SD_{\rm age}$  = 1.32).

Participants first completed the communal narcissism and sadism scales used in Study 1. They also completed the psychopathy subscale of the Short Dark Triad (SD3), which includes 9 items (e.g., "People often say I'm out of control") asked on a 5-point scale (1 = Strongly Disagree, 5 = Strongly Agree) (Jones & Paulhus, 2014). Next, they read three vignettes, each involving a vigilante act that took place in a different context (e.g., in a neighborhood involving a driver speeding near kids, or at a workplace, involving a co-worker repeatedly taking credit for someone else's work) and a different form of punishment initiated by the focal actor (e.g., chasing and physically assaulting the driver, wrapping the coworkers' office supplies in saran wrap) <sup>4</sup>. The three vignettes were presented in random order.

For each vignette, participants responded to questions about the perceived effectiveness (5 items) and harmfulness (2 items) of the vigilante's behavior. All items were preceded by "What [the vigilante's name] did..." and asked on a 1–7 scale (1 = *Strongly Disagree*, 7 = *Strongly Agree*). The effectiveness items addressed the justice-restoring function of vigilante behavior (e.g., "...effectively corrected the offender's behavior") and the ability to deter future offenses (e.g., "...will prevent others from acting similarly in the future"). Across each vignette, the five items assessing perceived effectiveness had good inter-item consistencies ( $\alpha_1$  = .79,  $\alpha_2$  = .90,  $\alpha_3$  = .82). The harmfulness items were about the outcomes of the vigilante behavior (e.g., "...caused a lot of pain to the other party); both items in all vignettes were highly correlated with each other (all rs > .70).

Next, participants answered Chen, Graso, et al.'s (2022) measure of the vigilante identity (e.g., I am the kind of person who actively monitors others to see if they are following society's rules; I am the kind of person who ensures that people who do wrong get punished for it; 1 = Completely like me, 7 = Completely unlike me), which was included as an exploratory measure. If communal narcissism and sadism both predicted vigilante identity, this would raise the possibility that the effect of both predictors on the enactment of vigilante behavior may partly operate through the internalization of a vigilante identity.<sup>5</sup>

Finally, subjects completed the same set of demographic questions as in Study 1.

<sup>5)</sup> Participants also responded to seven items that we wrote to measure aesthetic judgments of the vigilante behaviors. We report an exploratory analysis of the vigilante identity scale above, but do not report any analysis of the measure of aesthetic judgments as they were included only to examine the conceptual and psychometric properties of the items for possible use in a future study.



<sup>4)</sup> A separate sample of participants (N = 322) rated whether the target's actions in each scenario fit the description of a vigilante defined as someone who administers unauthorized punishment. For all scenarios, the agreement rates (percentage of confirmatory responses) were at or above 90%. Full results are available in the Supplementary Materials.

## Results

The zero-order correlations between our key variables are presented in Table 4.

 Table 4

 Descriptive Statistics and Correlations in Study 2

Variable	1	2	3	4	5	6	7	8	9	10
1. Communal Narcissism	(.90)									
2. Sadism	06	(.86)								
3. Psychopathy	.04	.61**	(.68)							
4. Mean Effectiveness	.1	.34**	.27**	(.84)						
5. Mean Harm	.03	21**	20**	19**	_					
6. Vigilante Identity Scale	.44**	03	.12*	.11	.03	(.90)				
7. Age	.03	05	.07	04	02	.07	_			
8. Male	.08	.48**	.29**	.14*	11	05	.09	_		
9. Political Conservatism	0	.11	.14*	.25**	0	.01	.07	.19**	_	
10. Religiosity	.31**	.03	.03	.14*	03	.18**	01	.04	.22**	_
M	4.24	1.94	2.27	2.38	5.08	4.04	19.85	.42	3.42	2.89
SD	.90	.56	.59	1.07	.98	1.12	1.32	.49	1.44	1.91

*Note.* N = 295. Values in parentheses indicate Cronbach's  $\alpha$  of the scales. All correlations are at the between-subject level.

#### Main Analysis

We used hierarchical linear modeling (HLM) with random intercepts and standard errors clustered within subjects to account for nonindependence arising from collecting repeated measures across vignettes.

Regressing perceived effectiveness of vigilante behaviors on self-rated communal narcissism and sadism, we observed an overall significant model (Marginal  $R^2$  = .09), with significant effects of communal narcissism,  $\gamma$  = 0.15, SE = 0.06, 95% CI [0.02, 0.28], t(291.99) = 2.32, p = .0210, as well as sadism,  $\gamma$  = 0.65, SE = 0.10, 95% CI [0.45, 0.86], t(291.99) = 6.29, p < .0001. Although the data showed non-convergence (which may imply unreliable parameter estimates), adding random effect of vignettes into the model did not change the result, where both communal narcissism,  $\gamma$  = 0.16, SE = 0.06, 95% CI [0.03, 0.28], t(290.58) = 2.42, p = .0161, and sadism,  $\gamma$  = 0.66, SE = 0.10, 95% CI [0.46, 0.87], t(290.59) = 6.41, p < .0001 remained significant. Following our pre-registration, we subsequently included perceived harmfulness in the model as a covariate, and our results remained unchanged.

In a separate model, we included psychopathy, age, gender, political conservatism  $(1 = very \ liberal, 7 = very \ conservative)$ , and religiosity  $(1 = not \ at \ all, 7 = very \ religious)$ 



<sup>\*</sup>p < .05. \*\*p < .01.

into the model as covariates as a robustness check. In this model (Marginal  $R^2$  = 0.12), both communal narcissism,  $\gamma$  = 0.13, SE = 0.07, 95% CI [-0.001, 0.27], t(285.99) = 1.96, p = .0509, and sadism,  $\gamma$  = 0.59, SE = 0.14, 95% CI [0.31, 0.87], t(286.00) = 4.10, p < .0001, remained significant predictors (although the p value of communal narcissism was marginally above .05). Sadism was right-skewed so we log-transformed it and repeated our analysis. Our findings were essentially unchanged.

## **Exploratory Analyses**

We explored the relationships between communal narcissism, sadism, and scores on the vigilante identity scale, a measure that has been shown to predict who is likely to become a vigilante (Chen, Graso, et al., 2022). We used ordinary least square regression as all variables were individual-level variables. Result showed that when entered into the model simultaneously (Model  $R^2$  = 0.23), communal narcissism predicted the strength of the vigilante identity, b = 0.55, SE = 0.07, t(292) = 8.41, 95% CI [0.42, 0.68], p < .0001; whereas sadism did not, b = -0.01, SE = 0.11, t(292) = -0.08, 95% CI [-0.22, 0.20], p = .9350. Including psychopathy and the same set of demographic variables as controls did not change these results.

#### Discussion

Study 2 showed that communal narcissism and sadism independently predicted perceived effectiveness of vigilante behaviors. Their effects were robust after controlling for trait psychopathy and demographic variables. That we found these effects across three standardized vigilante behaviors provides evidence of the generalizability of our results. In our final study, we examine the effects of communal narcissism and sadism on willingness to inflict punishment on a perceived transgressor through public shaming if authorities were not expected to punish. We also examined whether the anticipated harm to a transgressor might either temper or amplify the willingness to punish as a function of either communal narcissism or sadism.

# Study 3: Severity of Anticipated Consequences

We argued that sadism motivates vigilante behavior through the anticipated pleasure of inflicting pain on someone without risking social condemnation. The mere pleasure of inflicting cruelty, however, should not motivate communal narcissists. Since communal narcissists view themselves as exceptionally prosocial, it is possible that making them aware of the possibility that becoming a vigilante could seriously harm a potential target may enervate their motivation punish. However, when the potential for harming a target is not emphasized, communal narcissists might be motivated to become a vigilante if they believe a norm violation will be unpunished by the authorities, to satisfy their desire



to view themselves as 'paragons of fairness' (Yang et al., 2018). For the sadists, the harm inflicting on a wrongdoer should be more enticing than the desire to rectify anticipated justice failure; hence, if the harm to a target is not made salient (i.e., the target will evade punishment altogether), their motivation to become a vigilante might be weakened. Based on this reasoning, we hypothesized that communal narcissism will be a stronger predictor of vigilantism than sadism when people anticipate that a wrongdoer will go unpunished, but not when they are made aware that vigilante punishment might inflict serious harm. Sadism, on the other hand, will be a stronger predictor than communal narcissism when people anticipate that punishing the wrongdoer as a vigilante will inflict serious harm, but not when they are only made aware that the wrongdoer will go unpunished.

## Method

We recruited 400 U.S.-based participants using Prolific. They were paid approximately \$1.10 USD for completing the 7-minute study. As outlined in our preregistration, we excluded participants who answered incorrectly to the attention and comprehension check questions. After the exclusions, the final sample size was 370 (50% Male,  $M_{\rm age} = 36.68$ ,  $SD_{\rm age} = 13.32$ ; 7.5% Caucasian, 9.8% Asian, 6.2% Black, 5.7% Hispanic / Latinx, 7.8% other). This study is preregistered (see Ok et al., 2021).

After completing the communal narcissism and sadism scales, participants watched a 3-minute video. In the video, a Caucasian, male university instructor made an announcement to students about modifying the class schedule to accommodate his upcoming gym appointment. He informed students that they would either have to attend a make-up class scheduled on a different day or complete what he described as a demanding make-up assignment. A female student wearing a hijab told the instructor that she had made travel arrangements to go out of town for a religious holiday and questioned the fairness of having to do a cumbersome assignment for missing a class that was not on the regular schedule. The instructor turned to class, asking if anyone else had an issue with the proposed change in schedule. Seeing no other students objected, the instructor dismissed the student's question with an offensive comment<sup>6</sup>:

"As you see, you're the only one with a problem. It seems every year there is some issue with *you people*. Why does this have to be so complicated? Unfortunately, the assignment is mandatory, and the issue is not up for discussion".

<sup>6)</sup> We used an anti-Muslim discrimination scenario to create a more consistent outgroup context for the majority of our predominantly non-Muslim sample. By selecting a religion-focused scenario, we aimed to establish a more uniform outgroup context compared to scenarios based on race, gender, or other more salient group memberships where outgroup delineations might be less clear-cut.



Following the video, participants were randomly assigned to one of the two conditions (0 = no consequences, 1 = severe consequences). Those in the no-consequences condition read that "when a complaint was filed against a different instructor for making a similar comment, the university administration did not acknowledge the incident, nor did it issue any public statements regarding the instructor's behavior. The instructor did not experience any repercussions for his comments and continues to teach at the same institution". In the severe consequences condition, they read that the university deemed the behavior of the instructor who behaved similar to the one depicted in the video to be unacceptable and that he was immediately terminated, along with a permanent record of the incident in his personnel file. Participants also read that once the video had become public, the instructor had received several hate emails and threats from the public and was not able to find a job anywhere else as an instructor. Because of public condemnation, as well as loss of job and esteem, he had become clinically depressed. Note that the manipulation was focused on describing what the consequences were for another instructor who had committed a similar transgression at the same institution. We reasoned that this would activate possible outcomes in participants' minds about what might happen to the instructor in the video that they watched if the video were to be released to the public, which was our operationalization of vigilante behavior.

After the manipulation, participants indicated their likelihood to post the video on social media on a scale from 1 (*not likely at all*) to 9 (*very likely*), answered the same demographic questions as in Studies 1 and 2, and were debriefed on the fictitious nature of the video<sup>7</sup>. This operationalization of vigilantism is consistent with behavior described as "digital vigilantism", which involves the online naming and shaming of people who are perceived to have committed an offence to subject them to embarrassment, harassment, and/or public condemnation (Dunsby & Howes, 2019; Trottier, 2020).

#### Results

The zero-order correlations between our key variables are presented in Table 5.

The likelihood to post the video was higher in the no-consequence condition (M = 5.42, SD = 2.88) than in the severe consequences condition, M = 4.75, SD = 3.07, F(1, 368) = 4.71, p = .0306, d = .23.8 To test our preregistered hypotheses, we compared the relative strength of communal narcissism and sadism on the likelihood to post in both conditions. To do so, we ran a set of regression analyses where we regressed likelihood to post on communal narcissism and sadism separately in the no-consequence condition

<sup>8)</sup> Study 3 also included a manipulation check that asked perceived fairness of the university's response to the previous incident. As expected, there was a significant difference between conditions and those in the no-consequences condition thought the university's response was less fair compared to the severe consequences condition,  $M_{\text{no-conseq}} = 1.85$ ,  $M_{\text{severe-conseq}} = 5.18$ , F(1, 368) = 47.06, p < .0001, d = 2.26.



<sup>7)</sup> At the time of deciding, participants were not aware of the fictitious nature of the video but were later debriefed.

(Model 1a) and the severe-consequence condition (Model 2a). Then, we progressively included covariates to test the robustness of our results (Model 1b and 2b). Full results are summarized in Table 6 below. <sup>9</sup> Specifically, results show that when wrongdoers are unpunished (no-consequence condition), only communal narcissism significantly and positively predicts the likelihood to post the video. In situations where the severity of punishment is considerable (i.e., severe consequence condition), however, sadism predicts the likelihood to punish while communal narcissism does not. These results held when controlling for demographic covariates. Figure 2a and 2b present the results visually.

 Table 5

 Descriptive Statistics and Correlations in Study 3

Variable	1	2	3	4	5	6	7	8
1. Condition (1 = Severe)	_							
2. Communal Narcissism	.01	(.94)						
3. Sadism	07	02	(.84)					
4. Likelihood to Post Video	11*	.04	.16**	_				
5. Age	.01	01	31**	29**	_			
6. Male	05	10	.32**	.08	14**	_		
7. Political Conservatism	03	.09	.05	26**	.17**	.04	_	
8. Religiosity	.04	.30**	12	15**	.12*	17**	.39**	_
M	.50	3.67	1.77	5.09	36.68	.50	2.98	2.76
SD	.50	1.21	.58	2.99	13.32	.50	1.62	2.06

*Note.* N = 370. Values in parentheses indicate Cronbach's  $\alpha$  of the scales.

<sup>9)</sup> We note that the analytical approach we used in our analysis deviated from our preregistration plans. In our preregistration, we stated our plan to use regression analysis to predict the likelihood of posting the video based on Condition, communal narcissism, sadism, and the interaction between condition and these two traits. However, following input from the review team, we recognized that our planned analysis wouldn't directly compare the predictive strengths of communal narcissism and sadism on the likelihood to post in varying conditions. Instead, interaction test only indicated if the impact of communal narcissism or sadism on the likelihood to post changed with different conditions. For the sake of transparency, we briefly share the results of interaction effect tests here. For the base model when no control variables are included, results showed that communal narcissism interacted significantly with condition in predicting the likelihood to post; the interaction between sadism and condition was not significant. However, when we included control variables, akin to those in Models 1b and 2b of Table 6 for robustness testing, condition interacted significantly with both communal narcissism, b = -0.62, t(359) = -2.72, p =.0069, and sadism, b = 1.19, t(359) = 2.41, p = .0166. Simple slope analysis showed that communal narcissism had a significant and positive effect only in the no-consequences condition, b = 0.43, t(177) = 2.51, p = .0129, and no effect in the severe-consequences condition, b = -0.08, t(179) = -0.42, p = .6740. For Sadism, no effect was found in the no-consequences condition, b = -0.24, t(177) = -0.64, p = .5210, but a positive and significant effect emerged in the severe-consequences condition, b = 1.05, t(179) = 2.63, p = .0093.



p < .05. p < .01.

 Table 6

 Regression Results of Study 3

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				No-Consequence Condition	nce Con	dition			Š	Severe-Consequence Condition	nence Co	nditior	_
b         SE         95% CI         b         SE         P         SE         C         P         SE         SE         C         P         SE         SE         C			Mode	el 1a		Mode	el 1b		Mode	d 2a		Mode	Model 2b
Inarcissism $3.35^{**}$ $1.01$ $[1.36, 5.35]$ $7.67^{**}$ $1.28$ $[5.14, 10.19]$ $3.21^{**}$ $0.91$ $[1.41, 5.01]$ $6.49^{**}$ Inarcissism $0.38^{**}$ $0.18$ $[0.03, 0.73]$ $0.43^{**}$ $0.17$ $[0.08, 0.77]$ $-0.22$ $0.18$ $[-0.57, 0.13]$ $-0.16$ $0.38$ $0.36$ $[-0.34, 1.09]$ $-0.14$ $0.37$ $[-0.87, 0.60]$ $1.36^{**}$ $0.38$ $[0.61, 2.11]$ $1.10^{**}$ $0.38$ $0.36$ $[-0.34, 1.09]$ $-0.14$ $0.02$ $[-0.08, -0.01]$ $-0.03^{**}$ $-0.03^{**}$ $0.23$ $0.41$ $[-0.59, 1.05]$ $-0.59$ $[-0.44, -0.23]$ $-0.59$ $-0.74$ <	Variable	q p	SE	95% CI	p	SE	95% CI	p q	SE	95% CI	p	SE	95% CI
Inarcissism $0.38^*$ $0.18$ $[0.03, 0.73]$ $0.43^*$ $0.17$ $[0.08, 0.77]$ $-0.22$ $0.18$ $[-0.57, 0.13]$ $-0.16$ $0.38$ $0.36$ $[-0.34, 1.09]$ $-0.14$ $0.37$ $[-0.87, 0.60]$ $1.36^{**}$ $0.38$ $[0.61, 2.11]$ $1.10^{**}$ $  -$	Intercept	3.35**	1.01	[1.36, 5.35]	7.67**	1.28	[5.14, 10.19]	3.21**		[1.41, 5.01]	6.49**	1.20	[4.13, 8.86]
0.38 0.36 $[-0.34, 1.09]$ -0.14 0.37 $[-0.87, 0.60]$ 1.36** 0.38 $[0.61, 2.11]$ 1.10**  - 0.04* 0.02 $[-0.08, -0.01]$ 0.03*  - 0.23 0.41 $[-0.59, 1.05]$ 0.03*  - 0.29 0.41 $[-0.59, 1.05]$ 0.03*  - 0.91 0.48 $[-1.86, 0.03]$ 0.049  - 0.92 0.41 $[-0.74, -0.23]$ 0.05  - 0.049** 0.13 $[-0.74, -0.23]$ 0.05  - 0.05  - 0.05  - 0.07  - 0.07	Communal narcissism	0.38*	0.18	[0.03, 0.73]	0.43*	0.17	[0.08, 0.77]	-0.22	0.18	[-0.57, 0.13]	-0.16	0.18	[-0.52, 0.21]
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Sadism	0.38	0.36	[-0.34, 1.09]	-0.14	0.37	[-0.87, 0.60]	1.36**	0.38	$\left[0.61, 2.11\right]$	1.10**	0.40	[0.30, 1.90]
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Age		I		-0.04*	0.02	[-0.08, -0.01]		I		-0.03*	0.03	[-0.07, 0.01]
nservatism $ -0.91$ $0.48$ $[-1.86, 0.03]$ $ -0.63$ $ -0.63$ $ -0.49** 0.13$ $[-0.74, -0.23]$ $ -0.36*$ $ -0.36$ $ -0.02$ $0.11$ $[-0.21, 0.24]$ $ -0.14$ $  -0.14$ $ -0.14$ $ -0.14$ $ -0.14$ $ -0.14$ $  -0.14$ $  -0.14$ $ -0.14$ $ -0.14$ $ -0.14$ $ -0.14$ $  -0.14$ $ -0.14$ $ -0.14$ $ -0.14$ $ -0.14$ $  -0.14$ $  -0.14$ $  -0.14$ $  -0.14$ $  -0.14$ $  -0.14$ $  -0.14$ $  -0.14$ $   -0.14$ $         -$	Male		I		0.23	0.41	[-0.59, 1.05]		ı		0.11	0.45	[-0.78, 1.01]
nnservatism $ -0.49**$ $0.13$ $[-0.74, -0.23]$ $ -0.36*$ $ -0.36*$ $ -0.49**$ $ -0.02$ $0.11$ $[-0.21, 0.24]$ $ -0.14$ $ -0.14$ $ -0.14$ $ -0.14$ $  -0.14$ $         -$	Ethnicity		I		-0.91	0.48	[-1.86, 0.03]		ı		-0.63	0.48	[-1.58, 0.32]
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Political conservatism		I		-0.49**	0.13	[-0.74, -0.23]		ı		-0.36*	0.15	[-0.65, -0.06]
0.03 $0.20$ $0.20$ $0.17$	Religiosity				0.02	0.11	[-0.21, 0.24]				-0.14	0.11	[-0.36, 0.09]
0.00	$Model R^2$		0.0	13		7.0	50		0.0	7		0.17	17
11:0	Model Adjusted R <sup>2</sup>		0.0	2,		0.	17		0.0	9		0.14	14

Note. N = 370. \*p < .05. \*\*p < .01.



Figure 2a

Effects of Communal Narcissism and Sadism on Likelihood to Post in the No-Consequence Condition

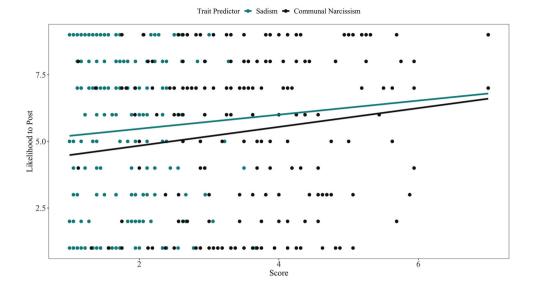
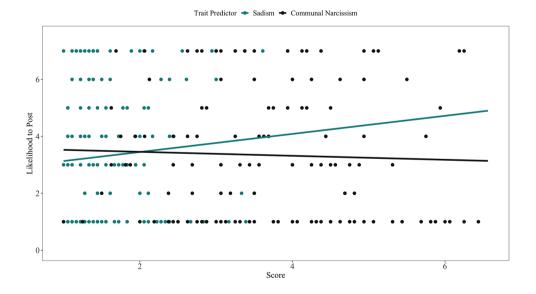


Figure 2b

Effects of Communal Narcissism and Sadism on Likelihood to Post in the Severe-Consequences Condition





Again, we log-transformed the measure of sadism and repeated our analysis. The transformation did not change our findings.<sup>10</sup>

#### Discussion

Study 3 showed that the effect of communal narcissism and sadism on participants' intention to become a digital vigilante was moderated by the anticipated consequences to transgressor. Communal narcissists were inclined to post the video if they anticipated that authorities would not punish the transgressor but were restrained if they anticipated that the consequences for the transgressor might be severe. However, the latter possibility appeared to motivate sadists more than the fact that the transgressor would go unpunished.

### General Discussion

This research tested whether two individual difference variables that have been associated with either prosocial (communal narcissism) or antisocial (sadism) tendencies might show the same directional relationship to behaviors that can potentially harm others when someone decides to act as a vigilante. We proposed a model identifying several motives that might lead communal narcissists or sadists to become vigilantes. Three studies provided converging evidence supporting our general predictions, with one qualification reported in Study 3.

We theorize that the motives that might lead communal narcissists to become vigilantes are more varied and complex than those of sadists. They can include a genuine desire to protect society and the vulnerable from harm or a felt moral obligation to respond to behavior that offends community norms. If communal narcissists become vigilantes for these reasons, they might expect to feel a heightened sense of self-satisfaction that can be the impetus for overcoming whatever resistance they might have to administering punishment to norm violators. It is also possible that communal narcissists' desire for admiration most strongly motivates them to become vigilantes. From this perspective, vigilante behavior by a communal narcissist could be a superficial self-presentation strategy that allows them to achieve agentic goals, such as status elevation. Our data do not permit us to determine which of these motives dominated the thinking of communal narcissists in our studies. A reasonable hypothesis that can be tested in future research is

<sup>10)</sup> As stated in the preregistration, we also included a binary version of the dependent variable regarding the decision to post the video vs. not. When we test the same hypothesis using logistic regression, results only provided partial support for our hypotheses, such that communal narcissism did not predict decision to post (binary) in both conditions. However, supporting our hypothesis, sadism predicted decision to post only in the severe-consequence condition (B = -.15, Wald = 2.30, p = .0226).



that both motives operate to some degree when communal narcissists are faced with an opportunity to become a vigilante.

Turning to sadists, our theory suggests that their dominant motive for becoming a vigilante is less ambiguous: it is primarily the anticipated pleasure from inflicting cruelty. Under the right circumstances, sadists might also believe that infliction of cruelty will be perceived by observers as socially acceptable, although we argue that this potential benefit of becoming a vigilante will not have much importance for sadists. Thus, the more critical contingency for a sadist who considers whether to become a vigilante is whether they believe that doing so will inflict pain upon their intended target(s). The results of Study 3 support this argument.

A notable difference between communal narcissism and sadism was found in Study 2. In this study, the effect of communal narcissism on the perceived effectiveness of vigilante behaviors was weaker than sadism. This difference has implications for more complex theorizing because the design of Study 2 asked participants to take the perspective of third parties evaluating someone else's vigilante punishment. In contrast, participants reported their actual or likely vigilante behavior in Studies 1 and 3. If communal narcissists are convinced about their moral superiority, then they might perceive the vigilante actions of others as less effective than they would if they had administered the punishment themselves. In other words, it is possible that communal narcissists will be less approving of vigilante behaviors that do not directly allow them to demonstrate their uniquely elevated concern for others and commitment to upholding moral norms. In contrast, sadists can derive vicarious pleasure from others' cruelty (Buckels et al., 2013), so they might evaluate any punishment that causes pain as being effective regardless of whether they or someone else is doing the punishing. Future research could examine how one's involvement in vigilantism, whether as direct participant or a mere observer, might affect communal narcissists' approval of vigilantism.

There are other individual differences besides those we studied that likely predict who becomes a vigilante. A question for future research is how they may relate to communal narcissism or sadism. One candidate for investigation in this regard is belief in pure good (Webster & Saucier, 2017), which represents an individual's faith in the existence of genuinely altruistic actions and motivations. Webster and Saucier (2017) found that people who endorse this belief were more likely to venerate an altruistic hero, who in their study was a private citizen who apprehended a murderer which fits our definition of a vigilante. One prediction that can be derived by integrating their results with ours is that a belief in pure good combined with high communal narcissism might lead people to view themselves as altruistic rather than egoistically motivated vigilantes.

An intriguing extension of our discussion on communal narcissism and belief in pure good is the consistent correlation we found between communal narcissism and religiosity across our studies. This relationship may reflect shared values like a strong emphasis on moral duty and desire for recognition common in both communal narcissists



and certain religious adherents. Furthermore, considering the profound endorsement of altruism in major religions like Christianity and Buddhism, a connection between religiosity and the belief in pure good may well exist. If this is true, this implies that communal narcissism's interaction with belief in pure good could be further nuanced by an individual's level of religiosity. This potential moderating effect of religiosity is an exciting prospect that warrants additional exploration, reinforcing our understanding of what drives certain individuals to adopt the role of altruistically motivated vigilantes.

An individual difference that might amplify the effect of sadism is the tendency for interpersonal victimhood (Gabay et al., 2020) defined as the belief that one has been victimized in past relationships. Chen and colleagues (Chen, Ok, & Aquino, 2022) showed that people who tend to view themselves as victims are also more likely become vigilantes. A prediction based on their finding is that a belief in past victimhood could provide sadists with a further rationalization for satisfying their desire for cruelty by becoming a vigilante. Thus, it may be that a sadist who also believes they have been frequently victimized is particularly likely to seek out opportunities to punish norm violators across many domains. Moreover, if a sadist is sufficiently self-aware and strategic, they might be able to disguise their sadistic tendencies by punishing people who they believe others would consider deserving of punishment. This possibility is the premise of the popular show Dexter, which chronicles the activities of the eponymous main character who recognizes he is a psychopathic sadist, but deliberately tries to direct his murderous inclinations toward administering capital punishment to people who he believes have evaded justice after committing heinous crimes. It is unclear from how he is portrayed in the series whether Dexter is also a communal narcissist.

Dexter is an extreme example of where vigilantism might go if left unchecked. We suspect that most people are not inclined to act as unauthorized punishers even when they observe someone violating a social norm. What our research suggests is that there may be a particular combination of dispositional traits that could makes it easier for some people to overcome this general tendency. From a practical standpoint, our findings also contribute to our understanding of why some individuals may be more likely to engage in online moral policing and public shaming that involves punishing a presumed norm violator, which can inform discussions about the conditions that underlie the emergence of "cancel culture".

Our studies have some limitations that should be acknowledged. First, while the use of an autobiographical approach in Study 1 is consistent with past research on moral behaviors (e.g., Baumeister et al., 1990; Stillweli & Baumeister, 1997), the accuracy of autobiographical memories can be influenced by factors such as memory biases and social desirability. Also, the autobiographical approach inherently results in subjective interpretations of what constitutes vigilante behavior. This problem would likely plague any attempt to study vigilantes, since what constitutes an act of vigilantism is highly dependent on the context and perceivers' judgment. We tried to reduce some of the



subjectivity by providing our participants with a definition of a vigilante, but we acknowledge that the examples that participants generated are not strictly comparable. Second, we did not assess one of our defining characteristics of a vigilante as being motivated to scan the environment for signs of wrongdoing nor did we observe actual vigilante behavior. Finally, although we found evidence that communal narcissism and sadism interact with the severity of consequences to predict the intentions to become a vigilante, there are undoubtedly many other situational factors that can either amplify or extinguish the effects of communal narcissism and sadism found in our studies.

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Author Contributions: Fan Xuan Chen—Design planning | Resource provision (materials, participants, etc.) |
Research implementation (software, hardware, etc.) | Data management (storage, curation, processing, etc.) |
Visualization (data presentation, figures, etc.) | Data analysis | Validation, reproduction, checking | Writing | Feedback, revisions | Project coordination, administration. Ekin Ok—Idea, conceptualization | Design planning | Resource provision (materials, participants, etc.) | Research implementation (software, hardware, etc.) | Data collection | Data management (storage, curation, processing, etc.) | Visualization (data presentation, figures, etc.) | Data analysis |
Writing | Feedback, revisions | Supervision, mentoring | Project coordination, administration | Funding to conduct the work. Karl Aquino—Idea, conceptualization | Design planning | Resource provision (materials, participants, etc.) |
Research implementation (software, hardware, etc.) | Data collection | Data analysis | Writing | Feedback, revisions |
Supervision, mentoring | Project coordination, administration | Funding to conduct the work.

**Ethics Statement:** For all studies, sample recruitment and study procedures were approved by the institutional ethics review board of the University of British Columbia with the following protocol number: H20-00901.

Data Availability: For this article, data is freely available (see Chen et al., 2023).

# Supplementary Materials

For this article, the following supplementary materials are available:

- Pre-registration for Study 1 (see Ok et al., 2020)
- Pre-registration for Study 2 (see Ok & Aquino, 2021)
- Pre-registration for Study 3 (see Ok et al., 2021)
- Anonymized data, codebook, study materials, and analytical codes for Studies 1, 2, and 3, as well
  as additional analyses not reported in the main manuscript (see Chen et al., 2023)



#### **Index of Supplementary Materials**

- Chen, F. X., Ok, E., & Aquino, K. (2023). *Communal narcissism and sadism* [Data, codebook, materials, code, analyses]. OSF. https://osf.io/gu86y
- Ok, E., & Aquino, K. (2021). *Communal sadism 1021 (#77021)* [Pre-registration Study 2]. AsPredicted. https://aspredicted.org/6df8c.pdf
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