

### Abstract

People punish others for various reasons, including deterring future crime, incapacitating the offender, and retribution, or payback. The current research focuses on retribution, testing whether support for retribution is motivated by the desire to maintain social hierarchies. If so, then the retributive tendencies of hierarchy enhancers or hierarchy attenuators should depend on whether offenders are relatively lower or higher in status, respectively. Three studies showed that hierarchy attenuators were more retributive against high-status offenders than for low-status offenders, that hierarchy enhancers showed a stronger orientation toward retributive justice, and that relationship was stronger for low-status, rather than high-status, criminal offenders. These findings clarify the purpose and function of retributive punishment. They also reveal how hierarchy-regulating motives underlie retribution, motives which, if allowed to influence judgments, may contribute to biased or ineffective justice systems.

*Keywords:* morality; hierarchy; status; social judgment; justice

Retribution as hierarchy regulation: Hierarchy preferences moderate the effect of offender socioeconomic status on support for retribution

In the United Kingdom, convicts can be sentenced to wear orange vests emblazoned with “COMMUNITY PAYBACK” to signal their status as targets of retribution. The vests are designed to remind offenders that the purpose of their punishment is payback, or retribution. On their debut, the vests inspired varied responses, spanning disapproval by human rights groups to support citing that convicts deserve to feel demeaned (Murray, 2009). A comedian suggested vests instead proclaim “something catchy, like Scum Slave” (Adam, 2009), highlighting the degradation and suffering the vests are intended to impose on their wearers. The range of reactions prompts a broader question: When does the desire for retributive payback seem to justify punishment?

In addressing this question, the current research considers people’s concerns about social hierarchies. It tests whether support for retribution is related to two factors: (1) the perceiver’s preference for hierarchical social structure, and (2) the criminal offender’s status, or position in that hierarchy. Evidence suggests that people may support retributive punishment when concerned about regulating power and status in hierarchies (e.g., Wenzel, Okimoto, & Cameron, 2012). This evidence informs our hypothesis that people who prefer hierarchies may more strongly support retribution; not uniformly, but in a way that varies depending on the offender’s status. Specifically, we expect hierarchy enhancers to be most retributive against low-status offenders.

### **Retributive punishment as hierarchy regulation**

People want to punish criminal offenders for various reasons. They punish to deter future offenses, incapacitate the offender, and/or to satisfy the victim of the transgression (e.g., Gromet

& Darley, 2009). They also punish for retribution, which exacts revenge, or payback, through punishments proportional with crimes (Oswald et al., 2002). In other words, retributive punishment is designed to get back at offenders by making them suffer. The current research focuses specifically on support for retribution as a purpose of punishment because of its unique relationship to hierarchy concerns.

Multiple reasons for punishing may simultaneously motivate any given act of punishment, but retribution may be uniquely related to desires to regulate social hierarchies. Retribution is uniquely related to power and status concerns (Wenzel et al., 2012), and is deployed to establish and maintain preferred distributions of social status (Gerber & Jackson, 2013; Redford & Ratliff, 2017). Retribution's appeal for regulating hierarchies may come from its ability to redistribute power and status. Offenders gain power and status by degrading victims (Bilz, 2014; van Kleef et al., 2011), and retribution can restore the social order by repaying that degradation to the offender (Oswald et al., 2002). And because of this potential to regulate hierarchies, support for retribution might hinge on people's preferences for how hierarchically society should be structured.

People high in Social Dominance Orientation (SDO) prefer society to be structured hierarchically—that power and status be distributed unequally (Sidanius & Pratto, 2011; Sidanius et al., 2015). And such hierarchy preferences are related to thoughts about justice. In general, people who prefer hierarchical societies are more punitive (compared to egalitarians; Sidanius et al., 2006) and more retributive (Okimoto, Wenzel, & Feather, 2012; Pratto et al., 1994). People higher in SDO more strongly support punishment designed to establish and maintain power over criminal offenders (Gerber, 2012). And people motivated to enforce status boundaries with criminal offenders more strongly endorse retribution (Gerber & Jackson, 2013;

Redford & Ratliff, 2017), especially when they think the offense violates power and status hierarchies (Wenzel et al., 2012). People who are higher in trait verticality (power and socioeconomic status) reject norm violators, perhaps in order to best maintain their privileged hierarchical position (Stamkou, van Kleef, Homan, & Galinsky, 2016).

Thus, previous findings suggest that hierarchy preferences predict punitive reactions because people use punishment to create and defend status boundaries, as well as to make society conform more closely to their preferences for its hierarchical arrangement. In doing so, they suggest that hierarchy preferences predict retribution uniformly across different types of targets. But if punishment has implications for hierarchies, the status of the offender should magnify those implications and, thereby, also magnify or attenuate the effects of hierarchy preferences. Thus, these previous findings neglect a potentially important moderator: offender status. If retribution regulates hierarches, it should be endorsed selectively, depending on the position of the offender in that hierarchy.

The hypothesized status-dependent relationship of Social Dominance Orientation (SDO) to punishment is unique in that it is simultaneously psychological, social, and political. Like other sociopolitical ideologies (e.g., Belief in a Just World, Right-Wing Authoritarianism), it is psychological in that it is a stable individual difference in beliefs and motives, correlated with other personality measures (e.g., Hodson, Hoff, & MacInnis, 2009; Sibley et al., 2010). And this individual difference necessarily refers to social groups. People's levels of SDO predict their perceptions and motives: SDO predicts seeing situations as failing to conform to one's desired level of (in)equality (Kteily, Sheehy-Skeffington, Ho, 2016). This motivates corrective action (e.g., we hypothesize, retribution), which can also manifest as political positions (e.g., Kteily, Ho, & Sidanius, 2012; Gutiérrez & Unzueta, 2013). At the interpersonal level, as investigated by

the current studies and others (e.g., Kteily, Sidanius, & Levin, 2011) SDO should be sensitive to an individual offender's membership in high- or low-status groups.

### **Offender status**

People may see criminal offenders' status, or hierarchical position, as having implications for their hierarchy preferences. Because offenders gain power and status by degrading victims (Bilz, 2014; van Kleef et al., 2011), low-status offenders may seem to threaten or attenuate hierarchies by redistributing power to lower ranks, and high-status offenders may seem to enhance hierarchies by distributing or maintaining power at higher ranks. If so, then retribution should be differentially supported depending on whether offenders threaten the perceiver's preferred societal structure: people who prefer relatively egalitarian societies may support greater retribution against high-status offenders, and people who prefer relatively hierarchical societies may support greater retribution against low-status offenders. This reasoning draws support from research showing that hierarchy preferences moderate attitudes toward people of different statuses (Pew Research Center, 2012a; Tablante & Fiske, 2015).

Hierarchy preferences may also interact with target social status to predict justice-specific judgments. For example, people assign more guilt and more jail time to low-status defendants, to the extent that they believe that existing social arrangements are fair (Freeman, 2006). In addition, other research shows Social Dominance Orientation (SDO) to interact with offender race in predicting reactions to crime, further revealing the importance of an offender's rank (Green et al., 2009; Kemmelmeier, 2005). However, socioeconomic status differs importantly from race. Indeed, one of these previous papers show SDO to interact with offender race, but *not* to interact with offender status in predicting judgments of offense seriousness (Green et al., 2009). This result is in line with, and supports, our expectations that offense seriousness, or even

punitive lenience *per se*, may not be uniquely based in status concerns in the way we expect of retribution. Punishment is a cost or hardship intentionally imposed on someone in response to a harmful act or omission (Walen, 2016), and can vary in two ways: based on the extremity of that cost or hardship, and based on the perceived reason it is justifiable to impose such intentional harm on someone (e.g., to deter future crime or exact retribution). Based on the current reasoning, it may be that hierarchy preferences do not interact with status as strongly in predicting general reactions to crime or criminals, or punishment extremity (i.e., leniency or severity), as they might when predicting reasons for punishment: namely, support for retribution, which is more uniquely related to hierarchy concerns. Thus, previous findings show that hierarchy preferences interact with target status to predict degrees of blame and punishment severity, but they fall short of testing whether that interaction predicts *reasons* for punishing.

The current research is designed to address that shortcoming. Because people's hierarchy preferences prompt evaluative and punitive reactions differentially across targets, we expect that pattern to emerge for retribution as well, especially given retribution's ties to power and status concerns. Thus, replicating previous findings (e.g., Okimoto et al., 2012; Pratto et al., 1994), we expect a main effect of hierarchy preferences such that people who more strongly prefer hierarchies more strongly endorse retribution as a reason for punishment. But, crucially, we also predict the strength of that relationship to depend on offender status, in that hierarchy-enhancers should become even more retributive against low-, rather than high-status, offenders and that hierarchy-attenuators should be more retributive against high-, rather than low-status, offenders. Like previous studies, the current research focuses on the effects of relative hierarchy preferences—people's tendencies to hierarchy attenuation or enhancement relative to each

other—rather than seeking or sorting people into absolute categories of hierarchy attenuators and enhancers.

In sum, by using both offender status and participant hierarchy preferences as predictors of endorsing retribution as a reason for punishment, the current research makes several advances. Offender status and hierarchy preferences both predict punishment-related judgments standing alone, but their interaction may predict more variance and qualify each other's main effects. In addition, while existing evidence assesses their impact on *how much* society should punish, their root in hierarchy concerns more strongly suggests their pairing for *why* society should punish—specifically, whether it should punish for retribution. Lastly, to clarify the purpose and function of retribution, it is crucial to document the interaction of both offender status and hierarchy preferences. If support for retribution is motivated by hierarchy concerns, then hierarchy enhancers' retributive tendencies may magnify when aimed at lower-status offenders, and hierarchy attenuators, while normally less retributive, may become more so when reacting to a high-status offender. Thus, the current research tests whether retributive justice orientation—that is, support for retribution as the purpose of punishment—is based on both hierarchy preferences and offender status. We expect that hierarchy preferences will interact with offender status to predict orientation toward retributive justice.

### **Overview of the present research**

Three studies were conducted. One study tested whether Social Dominance Orientation and measured offender status interact to predict retributive justice orientation. In a second study, to make a case for its causal effect, offender status is manipulated. This manipulation is crossed with Social Dominance Orientation to test whether their interaction predicts retributive justice orientation. A third study was a pre-registered replication of Study 2. Materials and data from all

studies and pre-registrations of Study 3 are available on the Open Science Framework at <https://osf.io/wtmbx>.

## Study 1

### Method

#### Participants

We used G\*Power to conduct a power analysis with  $\alpha = .05$ , power = .95, and a small effect, for a regression analysis of three predictors on a continuous outcome. Attaining a small effect ( $R^2 = .04$ ) with those parameters requires 417 participants, which we chose as our target sample size. Because Project Implicit data collection does not stop immediately upon researcher request, the final sample size was larger.

Participants were 476 adult U.S. citizen volunteers at the Project Implicit website (<http://implicit.harvard.edu>; Nosek et al., 2002) who completed all study materials ( $M_{age} = 39.5$  years,  $SD = 15.8$ , 63.2% women, 76.1% White). Project Implicit participants are not recruited, but visit the website from a variety of sources and for a variety of reasons (class assignments, search engines, media coverage, etc.) and volunteer to take studies (Nosek et al., 2002). On average, participants identified as slightly liberal ( $M = 1.01$ ,  $SD = 1.71$ ) on a 7-point scale from (-3) *Strongly Conservative* to (3) *Strongly Liberal*. 18.3% of participants identified as conservative, while 56.5% of participants identified as liberal. The average participant had a bachelor's degree ( $M$  education = 7.31,  $SD = 1.86$ ; 1 = *elementary school*, 2 = *junior high*, 3 = *some high school*, 4 = *high school graduate*, 5 = *some college*, 6 = *associate's degree*, 7 = *bachelor's degree*, 8 = *some graduate school*, 9 = *master's degree*, 10 = *J.D.*, 11 = *M.D.*, 12 = *Ph.D.*, 13 = *other advanced degree*, 14 = *M.B.A.* For analysis, responses of 11, 12 and 13 were recoded to 10, and 14 recoded to 9.



## Materials and Measures

### Independent Measures.

***Social Dominance Orientation.*** We measured Social Dominance Orientation using the six-item scale, including items such as *Inferior groups should stay in their place* ( $\alpha = .68$ ; Pratto et al., 1994). Participants responded on a 7-point scale ranging from 1 = *Strongly disagree*, to 7 = *Strongly agree* ( $M = 2.01$ ,  $SD = 0.96$ ).

***Offender Status.*** After responding to Retributive Justice Orientation items (see below), participants were shown an image of a ladder with ten steps and instructed to think of it as representing where people stand in the United States. Participants were told to imagine that “The people at the very top of the ladder are the people who are the best off--those who have the most money, the most education, and the most respected jobs”, and that “The people at the very bottom of the ladder are the people who are worst off - those who have the least money, least education, and the least respected jobs or no job.” They were then asked to think about the type of criminal offender they had in mind while answering the justice items, and asked where they would place the criminal on the ladder from step 1 (the worst off) to step 10 (the best off;  $M = 3.45$ ,  $SD = 2.01$ ).

### Dependent Measures.

***Retributive Justice Orientation.*** We measured Retributive Justice Orientation—support for retribution as the purpose of punishment—using fifteen items (see Appendix A;  $\alpha = .94$ ). Six of the items were adapted from a Retributive Justice Orientation subscale, which measures how much people believe transgressions should be handled via punishment (Okimoto et al., 2012). Items were adapted to be more specific and easier to read, referring to “criminal offenders”

rather than “offenders”, and to “crime” rather than “an incident”. This adapted subscale included items such as *The only way to restore justice is to punish the criminal offender*.

Six additional items were adapted from a Retribution as Revenge subscale, which measured how much participants endorse punishment designed to make a criminal suffer to “get even” (Gerber & Jackson, 2013). Like the retribution items, these items were adapted to a enhance readability. For example, *Infliction of suffering should be an explicit element in every sanction* was changed to *Infliction of suffering is an important part of punishment*.

Lastly, three items were adapted from retribution-related items from a Sentencing Goals Scale, which measures how much participants think the purpose of punishment is to respond to a criminal offense with harm proportionate to the severity of the crime (Strelan, Feather, & McKee, 2011). Items were simplified; for example, from *Justice requires that the punishment should be as severe as the offence* to *Justice requires a punishment as severe as the offense*.

Participants responded to all items on a 7-point scale, ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*;  $M = 3.52$ ,  $SD = 1.26$ ).

We examined the Retributive Justice Orientation Scale’s (RJOS) factor structure using an exploratory factor analysis (EFA), specifying an EFA using Principal Axis Factoring with (oblique) Direct Oblimin rotation. A scree plot of the Eigenvalues by factor number largely supported the RJOS’s unidimensionality according to two heuristic stopping rules for factor extraction, and according to a similar analysis subjecting subscale, rather than item, means to the same analysis. A full write-up of these results, and accompanying figures, are available as supplemental results on the Open Science Framework.

## Procedure

After random assignment to this study from the Project Implicit research pool, participants completed the justice measures counterbalanced with the measure of Social Dominance Orientation. Participants then responded to the measure of Offender Status.<sup>1,2</sup> As soon as participants initiated the study session, they were no longer eligible to be assigned to the study again, or to any of the other studies reported in this paper, on subsequent visits to the website.

## Results

### Predicting Retributive Justice Orientation

To test the hypothesis that Social Dominance Orientation interacts with Offender Status to predict Retributive Justice Orientation, we analyzed the data using a linear regression model where Social Dominance Orientation, Offender Status, and their interaction predicted Retributive Justice Orientation. Social Dominance Orientation was significantly correlated with Retributive Justice Orientation ( $r = .37, p < .01$ ) but not with Offender Status ( $r = .06, p > .05$ ). Social Dominance Orientation and Offender Status were mean-centered.

The overall model was significant,  $F(3, 464) = 26.68, p < .001, R^2 = .14$ . There was a main effect of Social Dominance Orientation (SDO) on Retributive Justice Orientation (RJO) such that greater SDO predicted greater RJO,  $b = 0.48$  (95% CI = 0.37, 0.59),  $\beta = .36, SE = .06, p < .001$ . There was no main effect of Offender Status on RJO,  $b = 0.03$  (95% CI = -0.02, 0.08),

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<sup>1</sup> All studies were part of a large data collection and not all measured variables are reported here. Data from these measures are included in the publicly available materials and dataset posted on the Open Science Framework (<https://osf.io/wtmxb>).

<sup>2</sup> Completing SDO before the justice measures moderated the effects of SDO on RJO,  $b = -.24, p = .04$ . For those who completed SDO first, the effect of SDO,  $b = .28, p < .001$ , was lower than for those who completed SDO after,  $b = .43, p < .001$ . However, the order of scales did not moderate the central finding of interest: the observed two-way interaction between SDO and offender status.

$\beta = .05$ ,  $SE = .05$ ,  $p = .27$ . These results were qualified, however, by a significant interaction between SDO and Offender Status,  $b = -0.07$  (95% CI = -0.12, -0.01),  $\beta = -.10$ ,  $SE = .03$ ,  $p = .02$ . To examine whether retribution is more sensitive to SDO for offenders of different status, we examined simple slopes at high and low Offender Status. Simple slopes analysis reveals that, at one standard deviation above the mean on Offender Status, greater SDO predicted greater RJO,  $b = 0.35$  (95% CI = 0.19, 0.51),  $\beta = .26$ ,  $SE = .08$ ,  $p < .001$  (see Figure 1). At one standard deviation below the mean on Offender Status, greater SDO also predicted greater RJO, but more strongly,  $b = 0.61$  (95% CI = 0.45, 0.77),  $\beta = .46$ ,  $SE = .08$ ,  $p < .001$ .

To examine whether Offender Status predicts retribution differently based on a perceiver's hierarchy preferences, we also examined simple effects at high and low Social Dominance Orientation (SDO), defined as at one standard deviation above and below the SDO mean. At one standard deviation above the mean on SDO, greater Offender Status was unrelated to RJO,  $b = -0.03$  (95% CI = -0.11, 0.05),  $\beta = -.05$ ,  $SE = .04$ ,  $p = .41$ . At one standard deviation below the mean on SDO, greater Offender Status predicted greater RJO,  $b = 0.09$  (95% CI = 0.02, 0.17),  $\beta = .15$ ,  $SE = .04$ ,  $p = .02$ .<sup>3</sup>

## Discussion

As expected, Social Dominance Orientation and Offender Status interacted to predict Retributive Justice Orientation. Firstly, greater Social Dominance Orientation (SDO) predicted greater Retributive Justice Orientation (RJO) most strongly when people considered relatively low-status criminal offenders. These findings were consistent with our hypotheses: that people

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<sup>3</sup> Because samples in all studies were relatively low in SDO (even in Study 3, where we oversampled conservative participants), one standard deviation above the mean represented people who were not actually scoring above the midpoint on the scale. To better test our hypotheses and represent truly low and truly high SDO, we examined simple effects of Offender Status at scores of 1 and 7 on the SDO scale. Although relatively few cases scored high on Social Dominance Orientation, none of them exerted undue impact on the model, based on examination of studentized deleted residuals. The results of these analyses are available as supplemental results on the Open Science Framework (<https://osf.io/wtmxb>).

would be most retributive toward targets who threaten their preferred level of hierarchy.

Secondly, the results suggest that the interaction between SDO and offender status was driven by the relatively low retributivism of hierarchy attenuators towards low-status offenders, rather than by hierarchy-enhancer's relatively low retributivism against high-status offenders. However, Offender Status was measured, not manipulated, so its causal influence on the Social Dominance Orientation—Retributive Justice Orientation link was uncertain. Thus, the next study manipulated Offender Status.

To clarify the unique status-based motives behind retribution, the next study also included a measure of deterrent justice orientation. Deterrence is a reason for punishing that is commonly contrasted with retribution (e.g., Husak, 2016; Zhang, Chen, Greenberger, & Knowles, 2017). It is argued to be “forward-looking” (Sifferd, 2016) and as aiming at “controlling the individual” (e.g., Blumstein, Cohen, & Nagin, 1978; Ehrlich, 1981). As such, it is fundamentally different from retribution, which is “backward-looking” and whose purpose does not necessarily aim directly at behavioral control. If retribution is uniquely related to status motives, then the predictors should remain significant even controlling for deterrence, but should not significantly predict deterrence when controlling for retribution.

## **Study 2**

### **Method**

#### **Participants**

In this study we targeted a sample size of 800 participants (twice the sample in the previous study) to provide a better estimate of effect sizes, as well as to account for power losses due to changing from measured, continuous Offender Status to manipulated, dichotomous

Offender Status. Because Project Implicit data collection does not end immediately upon researcher request, the final sample size was slightly larger.

Participants were 816 adult U.S. citizen volunteers at the Project Implicit website who completed all study materials ( $M_{age} = 31.0$  years,  $SD = 13.6$ , 68.9% women, 69.0% White). On average, participants identified as slightly liberal ( $M = 0.98$ ,  $SD = 1.67$ ) on a 7-point scale from (-3) *Strongly Conservative* to (3) *Strongly Liberal*. 16.0% of participants identified as conservative, while 58.1% of participants identified as liberal. The average participant had an associate's degree ( $M_{education} = 6.34$  [6 = *associate's degree*],  $SD = 1.93$ ).

## **Materials and Measures**

### **Independent Measures**

**Social Dominance Orientation.** Social Dominance Orientation was measured exactly as in Study 1 ( $\alpha = .70$ ;  $M = 2.09$ ,  $SD = 1.01$ ).

**Offender Status.** Participants read a vignette adapted from Horwitz and Dovidio (2015) describing a criminal offender, Nick, who was either of high or low status, and who committed an assault. The vignettes were adapted to be shorter, to involve assault rather than an accidental collision, and to signal high and low socioeconomic status rather than high and middle socioeconomic status. Nick was described as being on his way home from work as a financial executive or as an on-call fast-food cashier, as driving a new Jaguar XK roadster or an old Toyota Corolla he leases, and as living in a lakefront estate in a gated community or an apartment in a subsidized housing block. On the way, Nick gets angry at the traffic. He starts shouting at another driver, smashes the other driver's window, and assaults him.

## Dependent Measures

**Retributive Justice Orientation.** Using the same 15-item scale as in Study 1, we measured support for payback-style punishment as a core component of justice ( $\alpha = .90$ ). However, items were converted from general (e.g., *The only way to restore justice is to punish an offender*) to statements specifically about the criminal offender in the vignette (e.g., *The only way to restore justice is to punish Nick*; see Appendix B;  $M = 4.02$ ,  $SD = 1.03$ ).

**Deterrent Justice Orientation.** Using 3 items (*Society should punish Nick to prevent him from future crime*; *For Nick, preventing future crime is an important part of punishment*; *The purpose of punishment should be to ensure Nick cannot or will not hurt anyone else*;  $\alpha = .71$ ), we measured support for deterrent punishment, designed to prevent future crime ( $M = 5.47$ ,  $SD = 1.11$ ).

## Procedure

After random assignment to this study from the Project Implicit research pool, participants read the vignette about the person who commits assault. On the vignette page, participants indicated what the person's job was (1 = *a financial executive*, 2 = *a fast food cashier*), and what the person did (1 = *help someone*, 2 = *assault someone*), and could only proceed upon indicating the correct response. Participants then responded to measures of Social Dominance Orientation and the justice measures in randomized order.<sup>4</sup>

## Results

### Retributive Justice Orientation

To test the hypothesis that Social Dominance Orientation interacts with Offender Status to predict Retributive Justice Orientation, we analyzed the data using a linear regression model

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<sup>4</sup> Completing SDO before the justice measures did not moderate the effects of SDO,  $b = -.10$ ,  $p = .15$ . The order of scales also did not moderate the central two-way interaction between SDO and offender status.

where Social Dominance Orientation, Offender Status, and their interaction predicted Retributive Justice Orientation. Retributive Justice Orientation was significantly correlated with Social Dominance Orientation ( $r = .17, p < .01$ ).

The overall model was significant,  $F(3, 807) = 24.89, p < .001, R^2 = .08$ . There was a main effect of Social Dominance Orientation (SDO; mean-centered) on Retributive Justice Orientation (RJO) such that greater SDO predicted greater RJO,  $b = 0.18$  (95% CI = 0.11, 0.25),  $\beta = .18, SE = .04, p < .001$ . There was a main effect of Offender Status on RJO such that greater Status (coded  $-.5$  [low status] and  $.5$  [high status]) predicted greater RJO,  $b = 0.43$  (95% CI = 0.29, 0.56),  $\beta = .21, SE = .07, p < .001$ . These results were qualified, however, by a significant two-way interaction between SDO and Offender Status,  $b = -0.24$  (95% CI = -0.37, -0.11),  $\beta = -.12, SE = .07, p < .001$ .

Simple slopes analysis reveals that, at high Offender Status, greater SDO did not significantly predict greater RJO,  $b = 0.06$  (95% CI = -0.03, 0.15),  $\beta = .06, SE = .07, p = .21$  (see Figure 2). However, at low Offender Status, greater SDO predicted greater RJO,  $b = 0.30$  (95% CI = 0.20, .40),  $\beta = .30, SE = .05, p < .001$ .

We also examined simple effects at high and low Social Dominance Orientation (SDO), defined as at one standard deviation above and below the SDO mean. At one standard deviation above the mean on SDO, greater Offender Status produced marginally greater RJO (see Figure 2),  $b = 0.18$  (95% CI = -0.01, 0.38),  $\beta = .09, SE = .10, p = .06$ . At one standard deviation below the mean on SDO, greater Offender Status also produced greater RJO, but more significantly and strongly,  $b = 0.67$  (95% CI = 0.48, 0.87),  $\beta = .33, SE = .10, p < .001$ .

**Controlling for Deterrent Orientation.** To test the hypothesis that Social Dominance Orientation continues to interact with Offender Status to predict when controlling for Deterrent



Orientation, we analyzed the data using a linear regression model where Social Dominance Orientation, Offender Status, and their interaction, as well as Deterrent Orientation, predicted Retributive Justice Orientation.

The overall model was significant,  $F(4, 809) = 66.13, p < .001, R^2 = .24$ , and the pattern of significance and direction of effects remained unchanged. There was a main effect of Social Dominance Orientation (SDO) on Retributive Justice Orientation (RJO) such that greater SDO predicted greater RJO,  $b = 0.20$  (95% CI = 0.13, 0.26),  $\beta = .19, SE = .03, p < .001$ . There was a main effect of Offender Status on RJO such that greater Status predicted greater RJO,  $b = 0.36$  (95% CI = 0.23, 0.48),  $\beta = .17, SE = .06, p < .001$ . These results were qualified, however, by a significant two-way interaction between SDO and Offender Status,  $b = -0.18$  (95% CI = -0.30, -0.06),  $\beta = -.09, SE = .06, p < .001$ .

We also examined simple effects at high and low Social Dominance Orientation (SDO), defined as at one standard deviation above and below the SDO mean. Results were the same as in the main model. At one standard deviation above the mean on SDO, greater Offender Status produced marginally greater RJO,  $b = 0.17$  (95% CI = -0.001, 0.35),  $\beta = .08, SE = .09, p = .05$ . At one standard deviation below the mean on SDO, greater Offender Status also produced greater RJO, but more significantly and strongly,  $b = 0.54$  (95% CI = 0.36, 0.72),  $\beta = .26, SE = .09, p < .001$ .

### **Deterrent Orientation**

To test the hypothesis that Social Dominance Orientation does not interact with Offender Status to predict Deterrent Orientation when controlling for Retributive Justice Orientation, we analyzed the data using a linear regression model where Social Dominance Orientation, Offender

Status, and their interaction, as well as Retributive Justice Orientation, predicted Deterrent Orientation.

The overall model was significant,  $F(4, 805) = 47.03, p < .001, R^2 = .19$ . There was a main effect of Social Dominance Orientation (SDO) on Deterrent Orientation (DO) such that greater SDO predicted lesser DO,  $b = -0.13$  (95% CI = -0.20, 0.06),  $\beta = -.11, SE = .04, p = .001$ . There was no main effect of Offender Status,  $b = -0.02, p = .83$ , nor an interaction between SDO and Offender Status,  $b = -0.05, p = .47$ .

### Discussion

As expected, Social Dominance Orientation and Offender Status interacted to predict Retributive Justice Orientation (RJO). In the previous study, Social Dominance Orientation predicted RJO for both high and low status criminal offenders, but more strongly when people thought about a relatively low-status criminal offender. In this study, defining high and low SDO as one standard deviation above and below the mean, people relatively low in SDO showed a stronger relationship between offender status and support for retribution than did those relatively high in SDO. Thus, like those of Study 1, the results of Study 2 suggest that the interaction between SDO and offender status is driven by the relatively low retributivism of hierarchy attenuators towards low-status offenders.

These findings support our expectation that people's hierarchy preferences will moderate their RJO targeted at offenders of differing status. In addition, these predictors remained significant even controlling for deterrence, but did not significantly predict deterrence when controlling for retribution, clarifying the status-based motives uniquely underlying retribution. However, a pre-registered replication was needed to provide a more transparently confirmatory test of the hypothesis, to establish the reproducibility of the effect, and to obtain a more stable

and precise effect size estimate (e.g., Bonett, 2012; Funder et al., 2014). Thus, the next study was a pre-registered replication of this study (for pre-registration document, see Open Science Framework page at <https://osf.io/wtmxb>).

### Study 3

#### Method

##### Participants

As in Study 2, we chose 800 as our target sample size. Because Project Implicit data collection does not stop immediately upon researcher request, the final sample size was larger. Participants were 992 adult US. citizen volunteers at the Project Implicit website who completed all study materials ( $M_{age} = 32.5$  years,  $SD = 14.8$ , 63.3% women, 72.1% White).

In the previous study, on average, participants identified as slightly liberal ( $M = 0.98$ ,  $-3 = Strongly Conservative$ ,  $3 = Strongly Liberal$ ). In this study, we obtained a more ideologically representative sample in order to improve the generalizability of the findings. Specifically, we gave politically conservative participants twice the chance of being assigned to this study as to other studies in the Project Implicit research pool. On average, participants identified as between neutral/moderate and slightly liberal ( $M = 0.45$ ,  $SD = 1.68$ ) on a 7-point scale from  $(-3) Strongly Conservative$  to  $(3) Strongly Liberal$ . 22.1% of participants identified as conservative, while 38.3% of participants identified as liberal. The average participant had an associate's degree ( $M$  education = 6.43 [ $6 = associate's degree$ ],  $SD = 1.86$ ).

##### Materials and Measures

##### Independent Measures

**Social Dominance Orientation.** Social Dominance Orientation was measured exactly as in Studies 1 and 2 ( $\alpha = .69$ ;  $M = 2.26$ ,  $SD = 1.05$ ).

**Offender Status.** As in Study 2, participants read a vignette describing a criminal offender, who is either of high or low status, and who commits an assault. Also as in Study 2, participants could only proceed upon indicating the correct response to questions about the person's job and actions.

### Dependent Measures

**Retributive Justice Orientation.** Using the same 15-item scale as in Studies 1 and 2, we measured support for payback-style punishment as a core component of justice, as specific to the criminal offender in the vignette ( $\alpha = .89$ ;  $M = 4.04$ ,  $SD = 1.04$ ).

### Procedure

After random assignment to this study from the Project Implicit research pool, participants read the vignette about the person who commits assault. Participants then completed the justice measures counterbalanced with the measure of Social Dominance Orientation.<sup>1,5</sup>

### Results

To test the hypothesis that Social Dominance Orientation interacts with Offender Status to predict Retributive Justice Orientation, we analyzed the data using a linear regression model where Social Dominance Orientation, Offender Status, and their interaction predicted Retributive Justice Orientation. Retributive Justice Orientation was significantly correlated with Social Dominance Orientation ( $r = .23$ ,  $p < .01$ ).

The overall model was significant,  $F(3, 960) = 40.82$ ,  $p < .001$ ,  $R^2 = .11$ . There was a main effect of Social Dominance Orientation (SDO; mean-centered) on Retributive Justice Orientation (RJO) such that greater SDO predicted greater RJO,  $b = 0.23$  (95% CI = 0.17, 0.29),  $\beta = .23$ ,  $SE = .03$ ,  $p < .001$ . There was a main effect of Offender Status (coded -1 [low status]

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<sup>5</sup> Completing SDO before the justice measures did not moderate the effects of SDO,  $b = -.01$ ,  $p = .90$ . The order of scales also did not moderate the central two-way interaction between SDO and offender status.

and .5 [high status]) on RJO such that greater Status predicted greater RJO,  $b = 0.46$  (95% CI = 0.33, 0.58),  $\beta = .22$ ,  $SE = .06$ ,  $p < .001$ . These results were qualified, however, by a significant two-way interaction between SDO and Offender Status,  $b = -0.23$  (95% CI = -0.35, -0.11),  $\beta = -.12$ ,  $SE = .06$ ,  $p < .001$ . Simple slopes analysis reveals that, at high Offender Status, greater SDO predicted greater RJO,  $b = 0.11$  (95% CI = 0.03, 0.20),  $\beta = .22$ ,  $SE = .06$ ,  $p = .01$  (see Figure 3). At low Offender Status, greater SDO also predicted greater RJO, but more strongly,  $b = 0.34$  (95% CI = 0.26, .42),  $\beta = .35$ ,  $SE = .04$ ,  $p < .001$ .

We also examined simple effects at high and low Social Dominance Orientation (SDO), defined as at one standard deviation above and below the SDO mean. At one standard deviation above the mean on SDO, greater Offender Status produced greater RJO,  $b = 0.23$  (95% CI = 0.05, 0.40),  $\beta = .11$ ,  $SE = .09$ ,  $p = .01$  (see Figure 3). At one standard deviation below the mean on SDO, greater Offender Status also produced greater RJO, but more significantly and strongly,  $b = 0.69$  (95% CI = 0.52, 0.86),  $\beta = .33$ ,  $SE = .09$ ,  $p < .001$ .

### Discussion

This study was a pre-registered replication of the previous study. As expected, Social Dominance Orientation (SDO) and Offender Status interacted to predict Retributive Justice Orientation (RJO). In both previous studies, low-SDO participants reported greater RJO for high-status offenders, and high-SDO participants (scoring 7 on SDO) reported greater RJO for low-status offenders. That same pattern of results was replicated in the current study. Both previous studies also showed a stronger relationship between SDO and RJO for low-status offenders. That pattern of results also held in the current study. Together, the findings support our expectation that people's hierarchy preferences would moderate their RJO targeted at offenders of differing status.

### General Discussion

The current research showed that support for retribution as a purpose of punishment is related to two factors: (1) the perceiver's preference for hierarchical social structure, and (2) the criminal offender's status, or position in that hierarchy. These findings support hypotheses based on previous findings, which show that people may support retribution when concerned about regulating hierarchies (Wenzel et al., 2012; Gerber & Jackson, 2013; Redford & Ratliff, 2017; Sidanius et al., 2006; Okimoto et al., 2012; Pratto et al., 1994). We expected that people who prefer hierarchies would more strongly support retribution: not uniformly, but more strongly for low-status offenders. We also expected that hierarchy-attenuators' retribution would also be engaged when they read about high-status offenders. This reasoning was supported by three studies. In all three studies, respondents who preferred hierarchical societies showed a stronger orientation toward retributive justice, and that relationship was stronger for low-status, rather than high-status, criminal offenders. Moreover, all three studies suggested that the interaction between SDO and offender status was driven by the relatively low retributivism of hierarchy attenuators towards low-status offenders, rather than by hierarchy-enhancer's relatively low retributivism against high-status offenders.

The findings of Study 2 also revealed that offender status and hierarchy preferences continue to predict retributive justice orientation when controlling for other punishment motives. Specifically, these predictors remained significant even controlling for deterrence, but did not significantly predict deterrence when controlling for retribution. This finding demonstrated that hierarchy preferences were not simply associated with increases in all punishment motives, but were unique to retribution, clarifying the status-based motives underlying it.

Because all three studies were designed to address the same hypotheses, but produced slightly different effect size estimates, we conducted a meta-analysis to summarize the findings with regard to the focal interaction effect (between SDO and offender status) as well as the simple effects of high and low SDO (Cooper, 2010; Card, 2011). From all three studies, partial correlations of interaction effects were combined. This meta-analysis revealed, firstly, a significant interaction effect (pooled partial correlation  $r_p = -.12$ , 95% CI =  $-.16, -.08$ ) that was homogeneous across studies (Heterogeneity  $\chi^2 = .12$ ,  $p = .94$ ). A meta-analysis of the simple effects of offender status at high and low SDO combined partial correlations of the effects of offender status on retribution. At high Social Dominance Orientation (SDO), this meta-analysis showed a null relationship such that offender status did not predict Retributive Justice Orientation (RJO),  $r_p = .04$ , 95% CI =  $-.02, .11$ , an effect that was homogeneous across studies (Heterogeneity  $\chi^2 = 4.80$ ,  $p = .09$ ). Another meta-analysis, for low-SDO participants, showed that greater offender status predicted greater RJO,  $r_p = .20$ , 95% CI =  $.13, .28$ , an effect that was slightly heterogeneous across studies (Heterogeneity  $\chi^2 = 6.36$ ,  $p = .04$ ). We also conducted meta-analyses of the simple effects of SDO at high and low offender status. These meta-analytic findings echo those of all three individual studies, in which hierarchy preferences interact with offender status in predicting retributive justice orientation.

Thus, all three studies show that offender status moderates the relationship of hierarchy preferences to retribution. Moreover, the direction of this moderation is as expected: hierarchy enhancers were more retributive for both types of offenders, but hierarchy attenuators supported retribution more strongly for high-status offenders than for low-status offenders. These results support our overall reasoning: that support for retribution as a purpose of punishment is

motivated by hierarchy regulation, and so people selectively endorse retribution depending on whether the offender threatens their preferred level of hierarchy.

One complication exists regarding findings about those relatively high in Social Dominance Orientation (SDO). Because samples in all studies were relatively low in SDO (even in Study 3, where we oversampled conservative participants), one standard deviation above the mean represented people who were relatively, but not absolutely, high in SDO (i.e., not actually scoring above the midpoint on the scale). To better test our hypotheses and represent truly low and truly high SDO, we examined simple effects of Offender Status at scores of 1 and 7 on the SDO scale. Although relatively few cases scored high on SDO, none of them exerted undue impact on the model, based on examination of studentized deleted residuals. The results of these analyses are available as supplemental results on the Open Science Framework (<https://osf.io/wtmxb>). These analyses reveal that people absolutely (rather than relatively) high in SDO are more retributive toward low-status offenders. Thus, it could be that people scoring at the middle of the SDO scale (as in the current studies) are not sensitive to offender status, but that people absolutely high in SDO are sensitive to offender status. Future studies could focus on gathering participant samples relatively higher in SDO, to better clarify whether participants who with absolutely high scores on SDO are sensitive to offender status.

The current results join others in suggesting that support for retribution is related to hierarchy concerns (Wenzel, et al., 2012; Gerber & Jackson, 2013; Redford & Ratliff, 2017; Sidanius et al., 2006; Okimoto et al., 2012; Pratto et al., 1994), but they also sharpen our view of that relationship by showing that it is moderated by offender status. While these previous findings suggest a uniform magnitude with which hierarchy preferences motivate punishment, the current research showed that hierarchy preferences motivate retributive punishment



selectively, depending on the position of the offender in that hierarchy. In doing so, they reveal a novel idea: that the relationship between SDO and retribution is not a simple positive one, but that people low in SDO can be as retributive as those high in SDO, as long as the target of that retribution threatens their egalitarian ideals. This implies that support for certain policies, such as forcing offenders to wear “Community Payback” vests, may have bases in perceiver’s hierarchy preferences and their perceptions of the social status of the offender.

The current findings suggest future directions regarding the types of crimes and criminals likely to incite retributive punishment. If retribution is motivated by hierarchy concerns, then crimes that activate those concerns should also activate retributive motives for punishment. Crimes that redistribute power and status, or that target high- or low-status victims, or that represent stereotypically high- or low-status transgressions (such as high-status embezzlement or low-status graffiti), could all magnify the current effects. Perceptions of implications for hierarchies, and the threat aroused by them, should be what guides retributive responses.

Another open question concerns participant status, or whether participants see the offender as an ingroup or an outgroup member. Because the same offense can seem more threatening to hierarchies in an intergroup context (rather than an intragroup one; Okimoto & Wenzel, 2010), it seems plausible that participants who are not only high in SDO, but also see a low-status offender as an outgroup member, would have even greater retributive tendencies. Future research could measure or manipulate the extent to which participants identify with offenders to better answer how inter- versus intra-group processes contribute to support for retribution.

Only Study 1 showed a main effect of offender status. There are several possible reasons for this. In Study 1, offender status was asked only after participants reported general support for

retribution, so it is possible that some participants did not have any particular offender in mind, or had thought about offenders as a group. Studies 2 and 3, in controlling all aspects of the offender besides status, also implied or stated other features of the offender. For example, he was always male and employed, an adolescent or adult, and likely perceived to be White. It is unclear whether these features deviate from the type of offender participants may have had in mind in Study 1. For example, if participants had a Black offender in mind in Study 1 (due to Black-criminality associations; e.g., Eberhardt, Goff, Purdie, & Davies, 2004), but not in Studies 2 or 3, it could be that offender status has its strongest main effects when offenders are Black rather than White. Future research could examine whether the current findings hold across a more varied offender demographic profile (e.g., Black, female, unemployed, or child offenders).

Besides being guided by hierarchy-regulatory *motives*, retribution may also result in hierarchy-regulatory *effects*: those motives could manifest in behaviors and policies that actually regulate hierarchies. For example, it may be that retributive punishment in hierarchical or competitive contexts actually reduces the transgressor's perceived social status, or prevents the transgressor from reaping status benefits from their actions (e.g., Stamkou, van Kleef, Homan, & Galinsky, 2016). It may also be that retribution enhances the status of the victim or the punisher. If so, then retribution may actually be an effective, rational strategy for regulating hierarchies. In this case, if people relative levels of Social Dominance Orientation have asymmetric effects on retributive tendencies, then those asymmetries may result in punitive policies that differ for low- and high-status offenders—policies that could either strengthen or weaken hierarchies. In showing that people low in SDO are more retributive toward high-status offenders, the current research suggests the novel and intriguing possibility that retribution could not only strengthen hierarchies, but attenuate them. For example, if a person low in SDO is less retributive against a

low-status offender, allowing them to keep the status gained by violating norms, then hierarchies could be said to be attenuated.

Hierarchy regulation occurs at multiple levels: the individual level, through variables like Social Dominance Orientation (SDO), and also group and institutional levels (Sidanius et al., 2015). Because modern punishment is usually enacted by institutions, rather than individuals, the current findings have implications for cross-level effects. Through support for retribution, individual-level hierarchy preferences may contribute to institution-level hierarchy regulation. People who prefer hierarchies and support retribution may choose groups and institutions that match those ideologies, and those groups may in turn socialize their members to adopt such ideologies (Haley & Sidanius, 2005; Lepièce et al., 2015). Such person-institution matching is important, because it allows personal hierarchy-based punitive motivations to alter institutional policy.

Ideas about the purpose of punishment guide criminal-justice policies (Sidanius et al., 2006)—in that such policies are designed to retributively even the score, to rehabilitate the offender, and/or to deter future crime—and some ideas are more beneficial than others. Rehabilitation, for example, can sometimes produce lower recidivism than retribution (Rodriguez, 2007; Andrews & Bonta, 2010). Retribution is also a relatively poor facilitator of forgiveness (Wenzel & Okimoto, 2014). In terms of the current findings, it might be that people who prefer hierarchies seek out groups and institutions which implement retributive policies, and/or that they cause those groups and institutions to do so. Thus, understanding and changing the justice orientations of real legal decision-makers (e.g., jurors, judges, legislators, and voters) is an important question for future research, including whether different types of decision-makers differ in hierarchy preferences and how they use them.

These decisions could, in turn, reinforce existing status discrepancies. When disparately directed at low-status social groups (e.g., Black people, people low in socioeconomic status; Pettit & Western, 2004), punitive policies can further those groups' disadvantage. For example, incarceration is a barrier to employment (Pager, 2003) and wage mobility (Western, 2002). Such status-based punitive disparities can even bolster support among high-status groups: White participants who read about highly disproportionate Black inmate representation are more supportive of such policies (Hetey & Eberhardt, 2014). As the current research showed that SDO only predicts punitive reactions to low-status, and not high-status offenders (except when measured in Study 1), and the prototypical offender is low-status (as corroborated by low offender status means from Study 1), it could be that the policies implemented by relatively high-status people (e.g., legislators) are especially sensitive to how they feel about low-status offenders. Future research on retribution and hierarchies could expand beyond the current paradigm of punitive judgments about a single individual to punitive judgments in the form of policy preferences that refer to social groups.

### **Conclusion**

The current research addressed whether retributive justice orientation—that is, support for retribution as the purpose of punishment—is based on both hierarchy preferences and offender status. By showing that offender status and hierarchy preferences interact to predict retributive justice orientation, the current research qualifies previously-documented main effects, and extends previous findings from *how much* society should punish to *why* society should punish—specifically, whether it should punish to achieve retributive payback. These findings clarify the purpose and potential functions of retributive punishment, and suggest how personal judgments and institutional policy may interact to produce varying levels of hierarchy. They also

critically reveal how hierarchy-regulating motives underlie retribution, motives which, if allowed to bias judgments, may result in biased or inefficient justice systems. If one of the motives for retribution is to regulate status and hierarchies, communities and ethicists should consider whether that motive biases punishment's distribution and style, and whether it rightly judges which people endure and which others evade "community payback".

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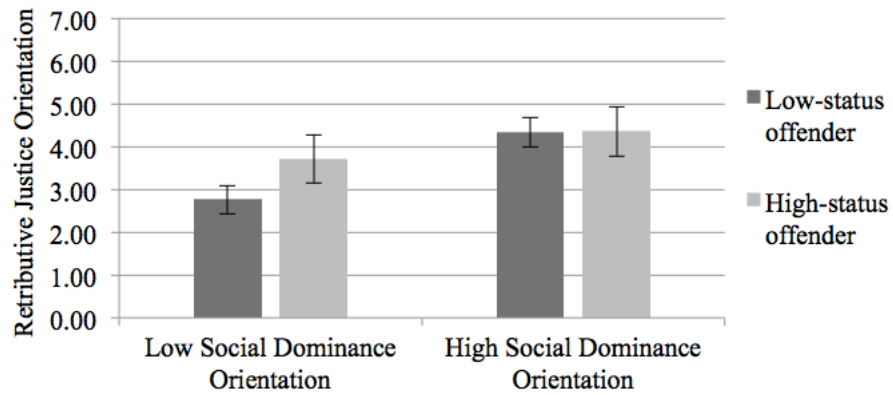
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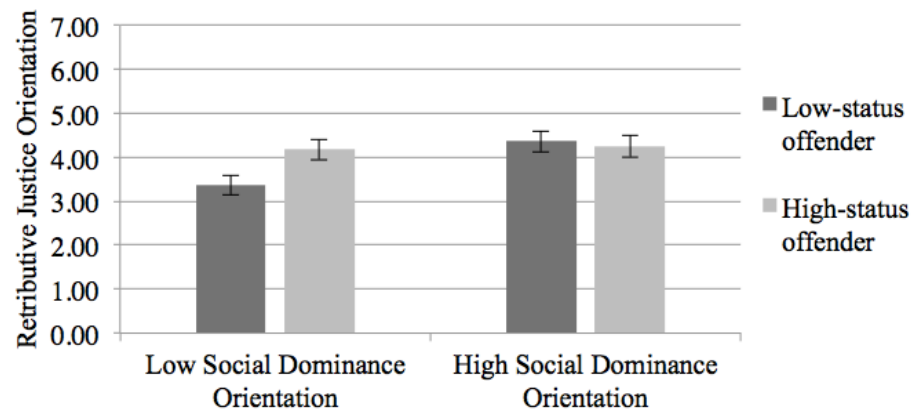
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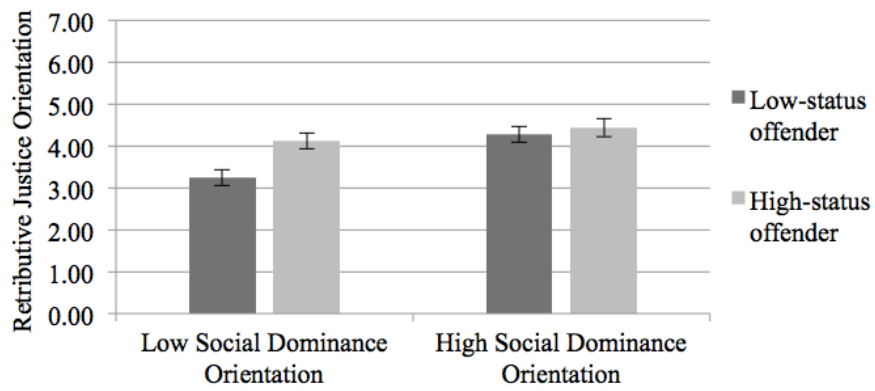
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*Figure 1.* Results from Study 1: Retributive Justice Orientation at low and high Social Dominance Orientation and in regard to a low- or high-status target offender.



*Figure 2.* Results from Study 2: Retributive Justice Orientation at low and high Social Dominance Orientation and in regard to a low- or high-status target offender.



*Figure 3.* Results from Study 3: Retributive Justice Orientation at low and high Social Dominance Orientation and in regard to a low- or high-status target offender.

Appendix A  
Retributive Justice Orientation items used in Study 1

As a matter of fairness, criminal offenders should be penalized.  
The only way to restore justice is to punish the criminal offender.  
Justice is served when an offender is penalized.  
Only a punishment restores the justice disrupted by a crime.  
For the sake of justice, some degree of suffering has to be inflicted on a criminal offender.  
Criminal offenders deserve to be penalized.  
Infliction of suffering is an important part of punishment.  
Punishment without suffering is no punishment.  
Punishment is deserved suffering.  
We should punish to get even with the offender.  
Society should punish to get back at criminal offenders.  
Society has the right to take revenge on criminal offenders.  
Justice requires a punishment as severe as the offense.  
The purpose of punishment should be to make offenders pay for their crimes.  
Criminals should be punished to make them repay their debt to society.



Appendix B  
Retributive Justice Orientation items used in Studies 2 and 3

As a matter of fairness, Nick should be penalized.  
The only way to restore justice is to punish Nick.  
Justice will be served when Nick is penalized.  
Only punishment will restore the justice disrupted by Nick's crime.  
For the sake of justice, some degree of suffering has to be inflicted on Nick.  
Nick deserves to be penalized.  
For Nick, infliction of suffering is an important part of punishment.  
For Nick, punishment without suffering is no punishment.  
For Nick, punishment is deserved suffering.  
We should punish to get even with Nick.  
Society should punish Nick to get back at him.  
Society has the right to take revenge on Nick.  
Justice requires a punishment as severe as Nick's offense.  
The purpose of punishment should be to make Nick pay for his crime.  
Nick should be punished to make him repay his debt to society.