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Rehumanizing the Self After Victimization: The Roles of Forgiveness Versus Revenge

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Everyday maltreatments can threaten people's basic sense of being human. Can victims restore their sense of humanness after it has been damaged by an offense and, if so, how? Four studies compared forgiving and taking revenge as responses to victimization. In Study 1, participants recalled a time they either forgave or took revenge against someone who had hurt them. In Studies 2 and 3, they imagined being victimized by a coworker and then either forgiving or taking revenge against him. In Study 4, they wrote either a forgiving or a vengeful letter to a transgressor who had committed an offense against them. Each methodology revealed that, compared with revenge, forgiveness was more effective at rehumanizing the self; indeed, forgiveness produced feelings of humanness that nearly exceeded levels experienced by nonvictimized participants (Study 3). Studies 3 and 4 also provided evidence that perceiving 1's forgiveness as moral contributes to a restored sense of humanness. Study 4 further revealed important downstream predictive consequences of a restored sense of self-humanity following forgiveness—less self-harm, a greater sense of belonging to the human community, and greater importance of one's moral identity. Extending past research on the benefits of forgiveness, this work highlights the agency that victims have to repair their humanness in the wake of a dehumanizing offense.

Keywords: dehumanization, forgiveness, interpersonal conflict, morality, revenge

Supplemental materials: <https://doi.org/10.1037/pspi0000367.supp>

“To forgive is not just to be altruistic. It is the best form of self-interest. . . . It gives people resilience, enabling them to survive and emerge still human despite all efforts to dehumanize them.”

—Desmond Tutu, 2000

Throughout history, people have denied the humanness of others as a means of excluding them from the scope of moral and fair treatment (Haslam & Loughnan, 2014; Kteily & Bruneau, 2017). Victims of genocide have been branded as vermin that need to be exterminated, immigrants and refugees have been depicted as invasive pests or diseases, enslaved people have been bought and sold as commodities, and members of minority groups have been likened to apes, dogs, pigs, and savages. These gross forms of dehumanization carry tremendous consequences for the dehumanized targets, such as severely threatening their identity and stoking hostility, apathy, and aggression toward them from the

dehumanizing parties (e.g., Andrighetto et al., 2014; Bandura et al., 1975; Branscombe et al., 1999; Cuddy et al., 2007; Kteily et al., 2015; Schroeder & Epley, 2020; Viki et al., 2013).

Yet common indignities—even mild or subtle ones, such as being criticized, ignored, humiliated, or physically harmed by others—can also communicate to victims that they are not worthy of kind and dignified treatment and thus cause a form of dehumanization (Bastian et al., 2014; Bastian & Haslam, 2010, 2011). Here we ask: Do victims have agency to restore their perception of their humanness after it has been damaged by an offense? How could they do so? In four studies, we compared forgiving to taking revenge against a transgressor and tested whether either response can help victims recover a sense of humanness after they have been harmed by another person. In addition to the importance of understanding people's experience of dehumanization following everyday indignities in its own right, these results may begin to inform how victims of more blatant, severe, and group-based dehumanization can protect the self.

The Malleability of Perceived Humanness

People's perceptions of humanness are surprisingly malleable. Not only do people readily deny the humanness of outgroup members to justify harmful treatment, they also imbue nonhuman agents with human-like characteristics such as emotions and intentions (Epley et al., 2007), perceive the same people as less human across different contexts (Belmi & Schroeder, 2021), and ascribe

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social qualities to objects that simply bear a “trace” of other people (Job et al., 2017). This tendency to deny or attach humanness to people and objects has consequences. When people perceive an entity as more human, they ascribe greater value to it, deem it worthier of receiving positive treatment, experience greater empathy toward it, and are less likely to discriminate or aggress against it (Bandura et al., 1975; Bruneau et al., 2018, 2020; Goff et al., 2008; Job et al., 2017).

Although fewer studies have examined people’s own sense of humanness, evidence suggests that people’s basic sense of being human is vulnerable to negative treatment. In one line of studies, people who were socially excluded during an everyday interaction or a game of cyberball rated themselves as less human than those who had been included (Bastian & Haslam, 2010). Cold and unempathic treatment can make people feel like objects lacking fundamentally human attributes such as emotionality and cognitive flexibility, whereas disrespectful and condescending treatment can make people feel like inferior animals lacking human attributes such as refinement and higher cognition (Bastian & Haslam, 2010, 2011). In our own pilot work ($n = 117$), participants described a variety of powerful dehumanized sentiments in response to being harmed. One participant reported feeling treated “as though I were a toy rather than a human being” when her boyfriend tried to pressure her into having sex. Another felt treated “as if [she] was a lower-class citizen” by a colleague who berated her. Other participants reported feeling “demonized,” “treated like [a] personal servant,” “looked down upon,” “like I was below her,” “like I was unworthy of his time,” and “like I was being walked on.” To feel less human is to experience a loss of standing as an equal member of the human community. It is a loss of a fundamental aspect of the self—that which distinguishes us from objects, machines, and other animals (Haslam et al., 2005).

Such feelings alone are of significant concern. They also relate to other negative outcomes. Much like the devaluation that occurs when people dehumanize others, the feeling of dehumanization can predict a devaluation of the self for victims. In our pilot data, the extent to which an offense made participants feel like “less of a person” strongly predicted feeling “ashamed” and “invisible.” In other work, participants who imagined or remembered suffering a dehumanizing offense reported negative self-evaluations, such as self-conscious thoughts, feelings of shame, loss of dignity, and reduced significance of one’s existence (Bastian & Haslam, 2011). Notably, although one’s sense of humanness is likely connected to a broad range of affective and psychological consequences, feeling less human is not synonymous with feeling badly about the self or negative affect more generally. Global self-esteem is often unresponsive to self-humanity (e.g., Bastian et al., 2013; Haslam et al., 2005), and controlling for self-esteem or mood does not reduce effects of experimental manipulations on self-humanity or downstream consequences predicted by self-humanity (Bastian et al., 2012, 2013). However, a reduced sense of humanness can become aversive and then contribute to negative affective experiences (Bastian & Haslam, 2011).

Given the consequences of reduced self-humanity, an important question is whether and how victims might feel a restored sense of humanity after it has been damaged by an offense. One can imagine various pathways to this rehumanization. For example, transgressors might attempt to restore the humanness they have taken from victims by engaging in reparative actions, such as offering a

heartfelt apology. Third-party observers might attempt to rehumanize the victim by offering support or praise or by characterizing the transgressors’ behavior toward the victim as undeserved.

Here we examine the agency that victims themselves have to restore their humanness after a transgression—a question not explored in past research. We consider two common yet contrary responses to an offense—forgiveness and revenge (Aquino et al., 2001; Fehr et al., 2010; McCullough, 2008; Schumann & Ross, 2010; Yoshimura, 2007). Although it is possible that victims might restore their sense of humanity in other ways (e.g., through intrapsychic processes such as mindfulness meditation), we focus on responses to the transgressor in the form of forgiveness or revenge, because these directly involve the transgressor and are common responses to victimization.

By focusing on victims’ self-humanity and their ability to restore it after suffering an offense, the current work complements past research on perpetrators of interpersonal harm, which shows that after committing a transgression, people rate themselves as less human and then engage in more prosocial behavior (e.g., helping an experimenter), perhaps as a means of reconnecting to a moral, human community (Bastian et al., 2013). Our research also complements work on group-based dehumanization, which shows that dehumanizing representations can lead African Americans to reassert their humanness by, for example, emphasizing their experience of human emotions or reporting a more expansive sense of self (Howe & Walton, 2020).

Forgiveness and Revenge as Responses to Victimization

After being harmed by another person, victims face an important decision regarding how to respond to the transgressor. Both forgiveness and revenge are considered universal responses, with forgiveness evolving because it repaired beneficial relationships, and revenge evolving because it deterred future harm from potential transgressors (McCullough, 2008). However, these responses typically take very different forms and show opposite associations with a variety of personality predictors (e.g., McCullough & Hoyt, 2002; Mullet et al., 2005).

Forgiveness is a transformative process that involves releasing negativity toward the transgressor and possibly increasing positivity and feelings of benevolence toward them (Enright & Fitzgibbons, 2000; Forster et al., 2020; McCullough et al., 1998; Tripp et al., 2007; Worthington, 2001). Forgiveness is often considered a desirable outcome following conflict, as it offers both victims and transgressors enhanced psychological (e.g., Orcutt, 2006; Rasmussen et al., 2019; Toussaint & Webb, 2005; Witvliet et al., 2002), physiological (Harris & Thoresen, 2005; Lawler et al., 2003; Witvliet et al., 2001), and relational (e.g., Bono et al., 2008; Karremans & Van Lange, 2004; Tsang et al., 2006) well-being. Thus, although not always beneficial—such as when it hinders behavioral change (McNulty, 2011)—forgiveness is, in general, considered a highly constructive response to victimization.

Revenge is “the action of inflicting hurt or harm on someone for an injury or wrong suffered at their hands” (Oxford Dictionary of English, 2010). It is an intentional act designed to hurt the transgressor as a way to achieve various psychological or justice-related goals, such as to deter future harm from the transgressor and other potential wrongdoers, equalize pain, restore the victim’s honor and power, or teach the transgressor a moral lesson (Frijda,

1994). Although sometimes effective in achieving these goals (Chester & DeWall, 2017; Crombag et al., 2003; Diamond, 1977; Gollwitzer & Denzler, 2009), studies using both recalled and in vivo experiences of revenge have revealed that revenge can also lead to worse psychological states (e.g., rumination) and escalate conflict by causing the original transgressor to feel victimized and seek counterrevenge (e.g., Carlsmith et al., 2008; Frijda, 1994; Stillwell et al., 2008).

We argue that victims who forgive their transgressors will feel more rehumanized than victims who seek revenge. Forgiveness is considered a moral response rooted in the virtues of mercy, unconditional love, and generosity (Enright & Fitzgibbons, 2000; Gas-sin, 1998). Because of its prosocial nature, forgiveness is treated as morally superior to a strict adherence to justice (Enright, 1991). Empirically, forgiveness is associated with prosocial intentions (Karremans et al., 2005) and a variety of prosocial dispositions, such as empathy, tolerance, and low narcissism (Rusbult et al., 2005). Thus, because forgiveness involves a prosocial response to a transgressor, one that is often portrayed as a “gift” or act of compassion (e.g., Enright & Fitzgibbons, 2000; McCullough, 2008; Worthington, 2001); victims who choose to forgive might feel they are acting in accordance with moral human values of acceptance and concern for others (Schwartz, 1994); indeed, morality as an attribute and way of behaving is inextricably linked to being human (Bastian et al., 2011, 2013; Brandt & Reyna, 2011; Haslam et al., 2012). Forgiveness may thus be experienced as “taking the high road,” a morally and cognitively elevated—and therefore distinctly human—response (Bastian et al., 2013).

We anticipate that the relationship between revenge and rehumanization is more complex. On the one hand, by taking revenge, one is exerting dominance and control over the transgressor (Gerber & Jackson, 2013; McKee & Feather, 2008), which is in line with the self-enhancing human value of achieving power (Schwartz, 1994). In addition, because victims who take revenge often believe they are upholding justice (Tripp, 2001; Tripp & Bies, 1997); they might feel they are acting in line with this value (Frijda, 1994; Graham et al., 2012). Indeed, although not true for spiteful acts of revenge, more restorative forms of punishment can encourage forgiveness by promoting a sense of justice (Strelan & van Prooijen, 2013, 2016; Strelan et al., 2017; Wenzel & Okimoto, 2014); and some people punish because they believe there is a moral imperative to do so (Bies & Tripp, 1995; Strelan, 2018; Tripp & Bies, 1997). Victims might therefore feel rehumanized if they perceive their act of revenge as just.

On the other hand, there are also reasons why revenge might not feel rehumanizing. People may experience revenge as uncivilized, destructive, or antisocial behavior that violates moral values (Barreca, 1995; Elster, 1990; Jacoby, 1983; O’Leary-Kelly et al., 1996; Uniacke, 2000). If so, victims who take revenge might infer personal characteristics that are inconsistent with human morality. People also expect that retaliatory aggression will be a pleasant experience that will repair their affect (Carlsmith et al., 2008; Chester & DeWall, 2017) and status (Crombag et al., 2003; Strelan et al., 2014). Victims might therefore experience revenge as a hedonic pursuit rather than as a reflection of higher order values (Carlsmith et al., 2008; Chester & DeWall, 2017; Frijda, 1994). Consistent with this possibility, vengeful attitudes are positively associated with the values of hedonism and social dominance, and negatively associated with the values of universalism and

benevolence (McKee & Feather, 2008). Further, greater activity in the nucleus accumbens—a brain region reliably associated with reward—predicts retaliatory behavior, suggesting that people often seek revenge for its anticipated hedonic benefits (Chester & DeWall, 2016).

Given these competing processes for revenge, we hypothesized that even if revenge is somewhat rehumanizing, forgiveness would be more so. Whereas both revenge and forgiveness can yield other benefits, such as increased self-esteem (Al-Mabuk et al., 1995; Bies & Tripp, 1998; Flanagan et al., 2012), we predicted that forgiveness might be more uniquely suited to rehumanizing victims because they would perceive their behavior as moral.

The Present Research

In the current article, we examine the agency of victims to reduce their feelings of dehumanization following an offense by either forgiving the perpetrator or taking revenge against them. We predicted that victims who forgive will feel more rehumanized than those who take revenge, at least in part because they feel that their act of forgiveness is consistent with moral values—values that are fundamental to being human (Bastian et al., 2011; Brandt & Reyna, 2011; Haslam et al., 2012). Further, because people associate humanness with positivity and worth (e.g., Bruneau et al., 2018; Goff et al., 2008; Job et al., 2017), we predicted that experiencing a loss of humanness after being victimized would result in a variety of negative affective consequences (e.g., negative emotion; less positivity toward the self), and that forgiveness would help attenuate these by restoring a sense of humanness. Finally, we explored additional downstream consequences of experiencing a restored sense of humanness. We reasoned that if humanness is a core aspect of the self associated with value, morality, and less negative affect, feeling more human would predict benefits in how people treat themselves and others.

To test these predictions, we conducted five studies featuring complementary methods and strengths. Study 1 used a remembered-offense paradigm where participants recalled a real offense they had experienced in which they either forgave or took revenge against the transgressor. To isolate causal effects, Studies 2 and 3 used a hypothetical-offense paradigm where participants imagined an offense committed against them and then imagined either forgiving or taking revenge against the transgressor. In all three studies, participants reported their feelings of humanness both after the offense but before having responded with forgiveness or revenge and again after recalling/imagining having responded. These two measurements allowed us to assess the effectiveness of each response in restoring a sense of humanness, and to compare the effectiveness of the two responses. Study 3 also included a no-offense control condition to confirm that experiencing an offense is in fact dehumanizing (conceptually replicating Bastian & Haslam, 2010, 2011) and to test the extent to which forgiveness and revenge effectively repair that damaged sense of humanity. In addition, Studies 1 and 2 tested several affective outcomes of a restored sense of self-humanity, whereas Study 3 examined several processes that could mediate the effect of forgiveness versus revenge on rehumanization, particularly the extent to which people see their behavior as consistent with the value of morality.

Whereas in Studies 1–3 participants recalled or imagined forgiving or avenging an offense, in Supplementary Study 1 and

Study 4 (a preregistered replication), they enacted and experienced forgiveness or revenge in the moment. We tested the same process measures as Study 3 and added three potential downstream measures to illuminate the predictive consequences of restoring a sense of humanness for victims. Specifically, we examined whether an increased sense of humanness would reduce self-harm, promote a sense of belonging to a human community, and increase the centrality of morality to participants' self-concept.

Even as Studies 1 and 2 examined whether a restored sense of humanness following forgiveness was associated with affective outcomes, the present studies also tested whether the effects of forgiveness versus revenge condition on self-humanity were distinct from effects on more general affective responses (Studies 1–4) and self-views (Studies 1 and 2).

For all studies, we report all measures, manipulations, and exclusions, and no data collection took place after any stage of data analysis. All data and materials are available in the data repository on the Open Science Framework (OSF) at https://osf.io/nbdrt/?view_only=700d2dc0cf84429693a8cb93f1f94db5.

Study 1: A Recalled Offense

In Study 1, participants were randomly assigned to recall a time they had been hurt by another person and responded with either forgiveness or revenge. We examined whether either response would be associated with rehumanization in participants and, if so, whether one was more effective than the other. We also examined whether forgiveness and revenge were differentially effective at repairing other aspects of victims' emotional and psychological states, and whether they did so through increased self-humanity.

Method

Participants

We recruited 88 adults (44 female, 43 male, one unspecified; $M_{\text{age}} = 32.14$, $SD = 10.37$; 61 White, eight Asian, eight Hispanic, seven Black, four mixed ethnicity) from the online panel Amazon Mechanical Turk to take part in a study investigating "interpersonal events." A sensitivity analysis conducted in G*Power (Faul et al., 2007) showed that based on the sample size, an alpha probability of .05, and power of 95%, this study was powered to detect a medium-sized repeated-measures interaction effect (Cohen's $f = .24$).

Materials and Procedure

Offense Recall and Self-Humanity at Time of Offense (Preforgiveness/Revenge). After providing consent, participants were randomly assigned to recall a time when someone had done something that harmed them and they either forgave or took revenge against this person. All participants described what this person had done to harm them and rated how "severe," "intentional," and "personal (specifically directed toward you)" the offense was on 7-point scales (1 = *not at all*, 7 = *extremely*). These responses allowed us to compare the kinds of offenses people recalled in each condition.

Participants then completed a measure of self-humanity to assess their feelings of humanness at the time of the offense. Self-humanity involves perceiving oneself as possessing qualities that

make you human and a member of an interconnected human community (Bastian & Crimston, 2014). Using a measure developed by Bastian and colleagues (2013), participants rated themselves on four items assessing qualities that are often seen as fundamental to being human and that distinguish people from machines and objects: "I felt like I was open minded, like I could think clearly about things"; "I felt that I was emotional, like I was responsive and warm"; "I felt superficial, like I had no depth" (reversed); "I felt like I was mechanical and cold, like a robot" (reversed). They also responded to 4 items assessing qualities that are seen as features that distinguish humans from animals: "I felt like I was refined and cultured"; "I felt like I was rational and logical, like I was intelligent"; "I felt like I lacked self-restraint, like an animal" (reversed); "I felt like I was unsophisticated" (reversed). Participants indicated their responses on 7-point scales (1 = *not at all*, 7 = *very much so*). Following Bastian and colleagues (2013), we combined these eight items into one measure of self-humanity at the time of the offense (i.e., postoffense but preforgiveness/revenge response; $\alpha = .75$).

Response Recall and Self-Humanity After Response (Postforgiveness/Revenge). Participants randomly assigned to recall an offense they had forgiven described what they had done to forgive the transgressor. Those randomly assigned to recall an offense they had avenged described what they had done to take revenge against the transgressor. All participants then completed the same measure of self-humanity in terms of their experience after having forgiven or taken revenge against the transgressor (i.e., postforgiveness/revenge response; $\alpha = .83$).

Broader Affective Outcomes. To assess whether forgiveness and revenge conferred broader emotional and psychological benefits, we assessed the extent to which participants experienced negative emotions (20 items, e.g., *despairing*; *ashamed*; *small*; preforgiveness/revenge $\alpha = .92$; postforgiveness/revenge $\alpha = .93$) and positive emotions (9 items, e.g., *happy*; *strong*; *in control*; preforgiveness/revenge $\alpha = .92$; postforgiveness/revenge $\alpha = .88$) both at the time of the offense and after the forgiveness or revenge response.¹ Participants also indicated how forgiving [taking revenge against] the transgressor made them feel about the offense (1 = *a lot worse*, 4 = *about the same*, 7 = *a lot better*), the transgressor (1 = *felt much more negatively toward him/her*, 4 = *felt about the same toward him/her*, 7 = *felt much more positively toward him/her*), and themselves (1 = *felt much more negatively about myself*, 4 = *felt about the same about myself*, 7 = *felt much more positively about myself*), with higher scores representing more positive affect toward the offense, transgressor, and self, respectively.

Additional Measures. Next, to reduce the possibility that recalling a past event caused any relationship distress or negative affect, participants were asked to recall a time when the transgressor or another person treated them kindly and describe how those kind actions made them feel. Participants then completed additional measures included for descriptive (e.g., type of relationship with the transgressor; demographics) or exploratory (e.g., self-

¹ We also included a graphical measure where participants saw seven circles that gradually increased in size and selected the circle that best represented how they felt and how they believed the transgressor felt. Please see the online supplemental materials for findings related to this more abstract outcome.

esteem; 10 items; e.g., “On the whole, I am satisfied with myself; $\alpha = .96$; Rosenberg, 1965) purposes. Finally, participants were debriefed and thanked for their participation.

Results

Preliminary Analyses

All participants in both the forgiveness and revenge conditions were able to recall an offense, suggesting that both forgiveness and revenge are common responses to harm.

We first examined whether participants reported similar offenses in the two conditions and found that they did. More than two thirds of the offenses in both the forgiveness (75%) and the revenge (71%) condition were relational in nature (e.g., being insulted, ostracized, betrayed, cheated on). Of the subcategories within these relational offenses, more participants in the revenge condition ($n = 5$) reported being cheated on than in the forgiveness condition ($n = 1$). However, removing these six participants from the analyses does not change any of the findings reported below. The remaining offenses involved material losses (e.g., having money stolen; forgiveness = 20%; revenge = 21%) and physical slights (e.g., having an item thrown at them; forgiveness = 5%; revenge = 8%).

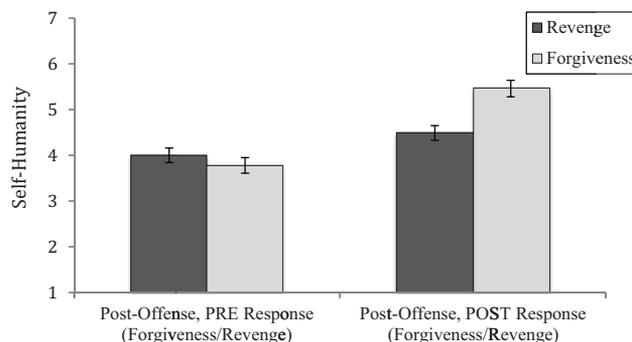
Ratings of offense severity did not differ between the forgiveness ($M = 4.40$, $SD = 1.82$) and revenge conditions ($M = 4.56$, $SD = 1.77$), $t(86) < 1$, 95% confidence interval (CI) $[-.602, .927]$. Ratings of how personal the offense was also did not differ between conditions ($M_{\text{forgiveness}} = 5.60$, $SD_{\text{forgiveness}} = 1.52$; $M_{\text{revenge}} = 6.02$, $SD_{\text{revenge}} = 1.92$), $t(86) = 1.15$, $p = .255$, 95% CI $[-.309, 1.150]$. However, those in the forgiveness condition rated the offenses committed against them as somewhat less intentional ($M = 5.40$, $SD = 1.82$) than those in the revenge condition ($M = 6.23$, $SD = 1.17$), $t(86) = 2.58$, $p = .012$, $d = .56$, 95% CI $[.190, 1.469]$. We therefore controlled for ratings of intentionality in the analyses reported below.

Primary Analyses

To examine the relative effectiveness of forgiveness versus revenge in restoring participants' self-humanity, we conducted a 2 (time: pre vs. post forgiveness/revenge response) \times 2 (response condition: forgiveness vs. revenge) repeated measures ANCOVA with intentionality controlled. This analysis revealed a main effect of time, $F(1, 85) = 60.78$, $p < .001$, $\eta_p^2 = .42$, as well as the predicted interaction between time and response condition, $F(1, 85) = 16.99$, $p < .001$, $\eta_p^2 = .17$ (see Figure 1).² Self-humanity significantly improved after participants either forgave, $F(1, 85) = 64.17$, $p < .001$, or took revenge, $F(1, 85) = 6.59$, $p = .012$ (see Table 1 for observed and adjusted means, standard deviations, and mean change by response condition). The rehumanizing benefit of forgiveness was substantial ($d = 1.63$), moving participants from just below the midpoint of the scale ($M = 3.84$; one-sample t from midpoint < 1) to halfway between the midpoint and the ceiling of the scale ($M = 5.45$; one-sample t from midpoint = 10.54, $p < .001$). The rehumanizing benefit of revenge was smaller ($d = .42$) but also moved them from the midpoint of the scale ($M = 3.96$; one-sample t from midpoint < 1) to significantly above the midpoint ($M = 4.50$; one-sample t from midpoint = 2.82, $p = .007$). Thus, both responses were associated with rehumanization but the association with forgiveness was markedly stronger. As a consequence, participants reported feeling more

Figure 1

Ratings of Self-Humanity as a Function of Response Condition (Forgiveness vs. Revenge) and Time (Pre- vs. Postforgiveness vs. Revenge Response), Study 1



Note. Error bars represent the standard error of the mean.

human after having forgiven compared with after having taken revenge, $F(1, 85) = 16.00$, $p < .001$, $d = .91$.

Broader Affective Outcomes

In general, forgiveness yielded significantly greater emotional and psychological benefits along broader measures than did revenge, including fewer negative emotions, more positive emotions, more positive affect toward the transgressor, and more positive affect toward the self (see Figure 2). Moreover, consistent with the importance of self-humanity for emotional functioning, there were indirect effects of condition through self-humanity for negative emotions, positive emotions, more positive affect toward the offense, and more positive affect toward the self. For complete results, see the online supplemental materials.

Self-Humanity as Distinct From General Affect or Self-Views

We also explored whether the effects of forgiveness versus revenge on self-humanity were distinct from more general affective processes. That is, we tested whether the condition effects on self-humanity persisted when controlling for negative affect and positive affect.³ Consistent with previous work demonstrating that self-humanity and affect are unique psychological responses (Bastian et al., 2013; Bastian et al., 2012); the effect of response condition on postresponse self-humanity remained significant when

² A 2 (response condition: forgiveness vs. revenge) \times 2 (time: pre vs. post forgiveness/revenge response) ANOVA without controlling for intentionality revealed similar results, including a main effect of time, $F(1, 86) = 59.17$, $p < .001$, $\eta_p^2 = .408$, Cohen's $f = .83$, and an interaction between time and response condition, $F(1, 86) = 14.45$, $p < .001$, $\eta_p^2 = .144$, Cohen's $f = .41$.

³ This negative affect measure can also be broken down into reliable measures of general negative affect (e.g., “angry”; “sad”), feeling diminished (e.g., “small”; “weak”), and feeling self-conscious (e.g., “ashamed”; “self-conscious”). Controlling for each of measures individually did not reduce the effect of response condition on self-humanity, all $ps < .001$. Moreover, controlling for anger alone (an emotion that might make people feel impulsive or animalistic) did not reduce the effect of response condition on self-humanity, $p < .001$.

Table 1
Descriptive Statistics and M Change for Self-Humanity by Response Condition, Studies 1 and 2

Study	Pre		Post		Change	
	Revenge	Forgive	Revenge	Forgive	Revenge	Forgive
Study 1						
Observed <i>M</i>	3.96 _a	3.84 _a	4.50 _b	5.45 _c	0.54	1.61
Adjusted <i>M</i>	4.00 _a	3.78 _a	4.49 _b	5.46 _c	0.49	1.68
<i>SD</i>	1.05	1.17	1.24	0.87		
Study 2						
Observed <i>M</i>	4.14 _a	3.93 _a	3.49 _b	5.62 _c	-0.65	1.69
<i>SD</i>	1.18	1.14	1.41	1.00		

Note. Means within rows that do not share a subscript differ significantly at $p < .05$. Change scores reflect change over time (post – pre) in scale-points, with positive values indicating increases following the response. Adjusted values are adjusted for perceived intentionality of the offense, because this varied somewhat by condition in Study 1.

controlling for both negative and positive affect, $B = .66$ ($SE = .19$), $t = 3.53$, $p = .001$, $d = .89$.

We also assessed whether the effects of forgiveness versus revenge on self-humanity were distinct from effects on self-views. There was no effect of response condition on self-esteem, $t(86) < 1$, and self-humanity was not significantly associated with postresponse self-humanity ($r = .13$, $p = .214$). The effect of response condition on postresponse self-humanity remained significant when controlling for self-esteem, $B = .86$ ($SE = .23$), $t = 4.35$, $p < .001$, $d = .88$. Finally, the effect also persisted when controlling for the measure of more positive affect toward the self following their response, $B = .73$ ($SE = .22$), $t = 3.38$, $p = .001$, $d = .90$.

Restoration of Self-Humanity Through Transgressor Behavior

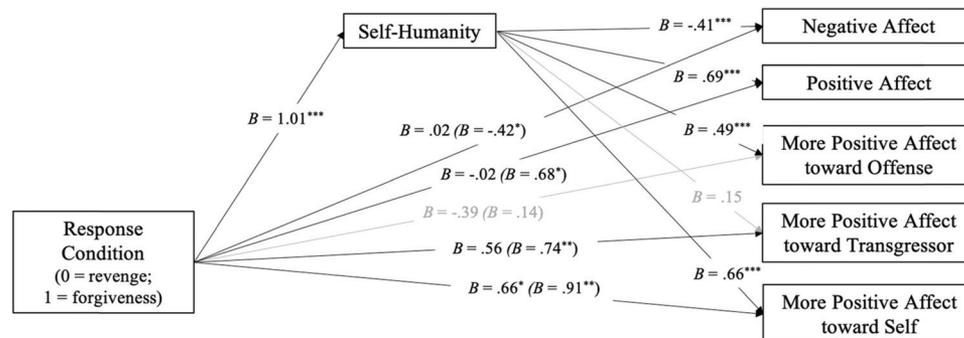
A third group of participants in this study was randomly assigned to describe a time someone had offended and apologized to them ($N = 38$). Because this condition does not assess the agency of victims to restore their own humanness, it was of secondary interest and is thus not included in the primary analyses. In this condition, victims reported

similar levels of self-humanity following the offense as did victims in the forgiveness and revenge conditions, $ps > .18$. However, like those who had taken forgiveness and revenge, they reported greater self-humanity following the apology, $p < .001$. The mean self-humanity reported by participants after having received the apology ($M = 5.07$, $SD = 1.06$) fell between the forgiveness and revenge conditions, with participants reporting marginally higher levels of humanness after having received the apology compared with the levels participants reported after their act of revenge, $F(1, 122) = 3.47$, $p = .065$, and nonsignificantly lower levels of self-humanity compared with the levels participants reported after their act of forgiveness, $F(1, 122) = 2.02$, $p = .16$. Although we did not follow up on the apology findings in the remaining studies, they suggest that transgressors too have agency to rehumanize victims through reparative actions. The interactive effects of forgiveness and apologies on self-humanity and related outcomes may also be explored in future research, as we discuss in the General Discussion.

Discussion

In Study 1, participants reported feeling more human after having responded to an offense than before having responded but

Figure 2
Effect of Response Condition on Affective Outcomes via Self-Humanity (Controlling for Preresponse Measures)



Note. Path coefficients are unstandardized. Coefficients in parentheses represent total effect of response condition on each of the broader affective outcomes; adjacent coefficients outside of parentheses represent direct effects on these outcomes when controlling for self-humanity. Gray coefficients indicate nonsignificant paths. * $p < .05$. ** $p < .01$. *** $p < .001$.

especially after they had forgiven the offense as compared with having taken revenge. The results provide initial evidence that victims may have agency to restore their humanity following an offense and that this goal may be best served through forgiveness. Further, Study 1 demonstrated that these effects on self-humanity were unique from general negative affect or negative self-views. Instead, they provided evidence that restoring one's self-humanity through forgiveness can yield broader affective benefits.

A strength of Study 1 is that it examined real offenses participants experienced and either forgave or took revenge for. However, participants could have considered systematically different offenses in the two conditions. Although there were few differences between conditions in participants' reports of the type of offenses, their severity, or their personal nature, there could be differences on unmeasured variables. Moreover, participants' memories of how they felt at the time of the offense or after having responded might have been influenced by their current feelings and attitudes. Thus, to provide convergent evidence for the causal effect of forgiving versus taking revenge on rehumanization, Study 2 tested whether imagining responding with either forgiveness or revenge to a realistic but hypothetical offense would similarly affect people's anticipated experience of humanness.

Study 2: An Imagined Offense

In Study 2, we held constant the offense and participants' response by asking participants to imagine an offense. In pilot work where we asked participants to report a time when someone treated them with a lack of respect or dignity, the highest proportion of offenses were committed by coworkers. These typically involved disparaging behaviors such as being criticized, yelled at, or having one's suggestions ignored. Participants indicated that this treatment made them feel "insignificant" and "like I didn't mean a damn." Drawing on these reports, we asked participants to imagine having been ostracized and criticized by a coworker and then responding with either forgiveness or revenge. We predicted that participants who imagined having forgiven their coworker would feel more rehumanized than participants who imagined having taken revenge.

As in Study 1, we also assessed negative emotions, positive emotions—as well as authentic and hubristic pride—both before and after responding to the offense with either forgiveness or revenge.

Method

Participants

Although the effect sizes observed in Study 1 were large, we conducted an a priori power analysis in G*Power (Faul et al., 2007) to detect a medium-sized effect ($\alpha = .05$, $1 - \beta = .95$) owing to the change in methods from Study 1 to Study 2. This analysis suggested a sample size of 80 to detect a repeated measures interaction effect. To exceed this, we recruited 201 participants from the online panel Amazon Mechanical Turk. One participant who failed an attention check embedded in the questionnaire ("for this question, click 'not at all'") was dropped, leaving a final sample of 200 participants (87 female, 110 male, 3 unspecified; $M_{\text{age}} = 33.11$, $SD = 9.54$; 152 White, 14 Asian, 13 Black, 10 Hispanic, seven mixed ethnicity, two Native American, two unspecified). Participants received a small monetary compensation for participating.

Materials and Procedure

Offense Scenario and Self-Humanity at Time of Offense (Preforgiveness/Revenge). Participants were informed that they would read a description of a situation occurring between themselves and a coworker. They were asked to "really envision yourself in this situation" and "imagine how this situation would make you feel." They then read a description of a conflict in which a coworker ostracized and insulted them (e.g., "...that presentation was brutal. Hard to watch actually"; see the online supplemental materials for full text). To give participants an opportunity to experience an emotional response to this situation, we asked them to take a moment to think about how they would feel after being treated this way and then to write about their feelings. Participants then completed the same eight items assessing self-humanity used in Study 1, $\alpha = .78$ (Bastian et al., 2013).⁴

Response Manipulation and Self-Humanity After Response (Postforgiveness/Revenge). Next, participants were randomly assigned to imagine either forgiving or taking revenge against their coworker. They imagined that they had been selected by their company to be one of three peer-reviewers for the transgressing coworker, and that their company treated these peer reviews seriously so their review would carry weight in personnel decisions. Those in the forgiveness condition then read: "In the end, you use the review as an opportunity to forgive your coworker. . . You are appropriately honest about your coworker's strengths and weaknesses, and this results in a generally favorable review." Those in the revenge condition read: "In the end, you use the review as an opportunity to get back at your coworker. . . You focus on your coworker's weaknesses rather than their strengths, and this results in a generally unfavorable review" (see the online supplemental materials for full text). To immerse participants in the emotions they might feel after having responded, they were then asked to take a moment to think about and describe how they would feel after having forgiven [gotten back at] their coworker. They then completed the same 8-item measure of self-humanity ($\alpha = .92$), this time regarding how they would feel after having forgiven or taken revenge against their coworker (i.e., postforgiveness/revenge response).

Broader Affective Outcomes. Participants completed similar measures of negative emotions (preforgiveness/revenge $\alpha = .96$; postforgiveness/revenge $\alpha = .95$), positive emotions (preforgiveness/revenge $\alpha = .92$; postforgiveness/revenge $\alpha = .94$), and positive feelings toward the offense, the transgressor, and the self, as in Study 1. New to this study, participants also completed a shortened version of the Authentic and Hubristic Pride Scales (Tracy & Robins, 2007) by indicating how much they would feel four feelings assessing authentic pride (e.g., *confident*; *fulfilled*; *preforgiveness/revenge* $\alpha = .92$; *postforgiveness/revenge* $\alpha = .96$)

⁴ We also included four new items assessing self-humanity in the form of personal significance ("I would feel like I was insignificant, like I didn't matter" [reversed]; "I would feel reduced, like I was inferior" [reversed]; "I would feel powerless, like I had no control" [reversed]; "I would feel respected, like a person of dignity"). These items correlated well with the eight self-humanity items and created a reliable 12-item index of self-humanity at the time of the offense ($\alpha = .87$), as well as at the time of the response ($\alpha = .87$). We use the 8-item measure for consistency across studies. However, the 12-item measure produces the same pattern of results (e.g., interaction effect: $F(1, 198) = 84.59$, $p < .001$, $\eta_p^2 = .299$).

and four feelings assessing hubristic pride (e.g., *arrogant*; *smug*; preforgiveness/revenge $\alpha = .94$; postforgiveness/revenge $\alpha = .94$).

Additional Measures. To ensure that participants viewed the situation as both offensive and realistic, they indicated on 7-point scales (1 = *not at all*, 7 = *extremely*) how offensive and intentionally hurtful their coworker's behavior was, as well as how easy to imagine and realistic they found the situation with their coworker. They also indicated whether they had ever experienced a similar situation with a coworker ("Yes, very similar"; "Yes, somewhat similar"; "No, but I've had other types of conflicts with coworkers"; "No, never"). Finally, participants completed several other measures included for descriptive (e.g., demographics) or exploratory purposes, before being debriefed and thanked for their participation.

Results

Preliminary Analyses

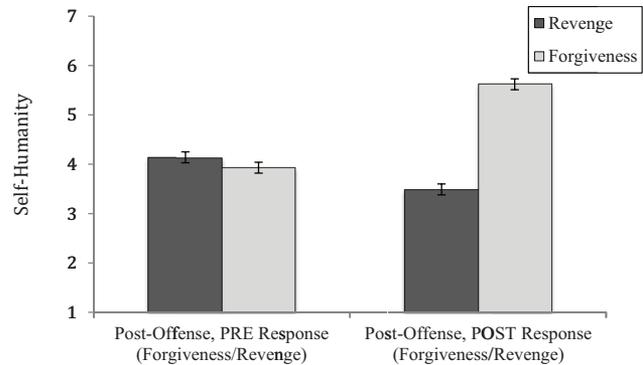
On average, participants rated their coworker's behavior as offensive ($M = 5.40$, $SD = 1.36$) and intentional ($M = 6.12$, $SD = 1.17$) at levels well above the scale midpoints, one-sample t test $ps < .001$. They also indicated that they were able to imagine themselves in the situation very well ($M = 6.21$, $SD = 1.36$) and rated the situation as realistic ($M = 5.95$, $SD = 1.16$), again at levels well above the scale midpoints, one-sample t -test $ps < .001$. Twenty-nine percent of the sample reported that they had experienced a similar situation with a coworker, and an additional 40% reported that they had other types of conflicts with coworkers. These results suggest that workplace conflict is common and it was easy for participants to immerse themselves in this conflict situation. In addition, confirming the success of random assignment, there was no effect of condition on ratings of self-humanity following the offense but before a response, $F(1, 198) = 1.72$, $p = .191$.

Primary Analyses

Conceptually replicating Study 1, a 2 (time: pre vs. post forgiveness/revenge response) \times 2 (response condition: forgiveness vs. revenge) repeated-measures ANOVA revealed a significant main effect of time, $F(1, 198) = 21.19$, $p < .001$, $\eta_p^2 = .10$, qualified by a significant interaction with condition, $F(1, 198) = 107.56$, $p < .001$, $\eta_p^2 = .35$ (see Figure 3). Participants in the forgiveness condition showed a significant increase in self-humanity following their response, $F(1, 198) = 116.78$, $p < .001$. As in Study 1, the rehumanizing benefit of forgiveness was large ($d = 1.07$), moving participants from approximately the midpoint of the scale ($M = 3.93$; one-sample t from midpoint < 1) to more than halfway between the midpoint and the ceiling of the scale ($M = 5.62$; one-sample t from midpoint = 16.44, $p < .001$). By contrast, and unlike Study 1, those in the revenge condition showed a significant decrease in self-humanity, $F(1, 198) = 16.00$, $p < .001$, $d = .41$, moving them from the midpoint of the scale ($M = 4.14$; one-sample t from midpoint = 1.20, $p = .233$) to significantly below the midpoint ($M = 3.49$; one-sample t from midpoint = -3.52 , $p = .001$). As a consequence, after having acted, those who imagined having forgiven reported feeling significantly more human than those who imagined having taken revenge, $F(1, 198) = 152.36$, $p < .001$, $d = 1.75$.

Figure 3

Ratings of Self-Humanity as a Function of Response Condition (Forgiveness vs. Revenge) and Time (Pre- vs. Postforgiveness vs. Revenge Response), Study 2



Note. Error bars represent the standard error of the mean.

Broader Affective Outcomes

As in Study 1, forgiveness yielded significantly greater emotional and psychological benefits along broader measures than did revenge, including fewer negative emotions, more positive emotions, more authentic pride, less hubristic pride, more positive feelings toward the transgressor, and more positive feelings toward the self (see Figure 4). Moreover, again, there were indirect effects of condition through self-humanity for negative emotions, positive emotions, authentic pride, hubristic pride, positive feelings toward the offense, and positive feelings toward the self. For complete results, see the online supplemental materials.

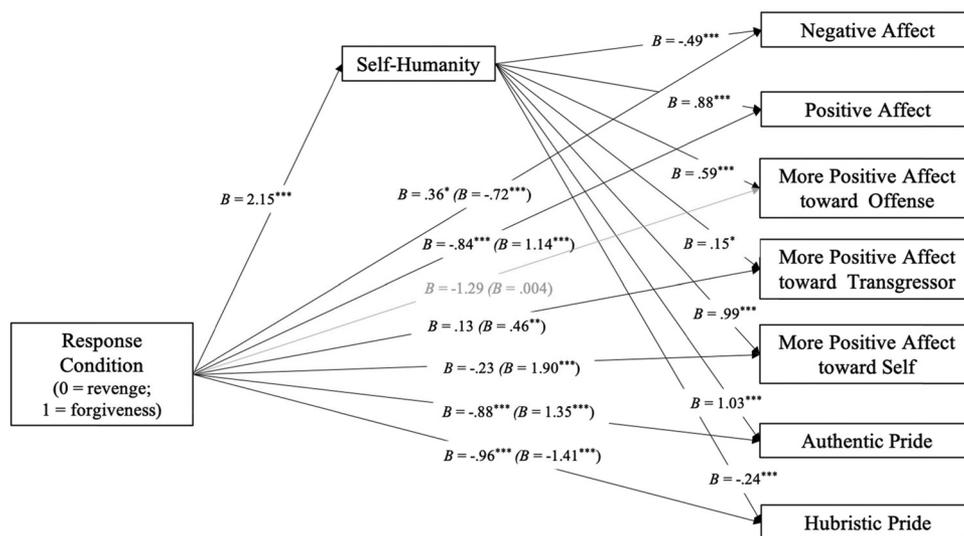
Self-Humanity as Distinct From General Affect or Self-Views

As in Study 1, we assessed whether the effects of forgiveness versus revenge on self-humanity were distinct from more general affective processes by testing whether condition effects persisted when controlling for negative affect and positive affect.⁵ The effect of response condition on postresponse self-humanity remained significant when controlling for both negative and positive affect, $B = 1.46$ ($SE = .13$), $t = 11.30$, $p < .001$, $d = 1.74$.

To assess whether the effects of forgiveness versus revenge on self-humanity were distinct from effects on self-views, in two separate regressions we controlled for the full authentic pride scale ("confident"; "fulfilled"; "accomplished"; "like I have self-worth") and the single item "like I have self-worth." The effect of response condition on postresponse self-humanity persisted in both of these analyses, $ps < .001$, $ds = 1.74$. As in Study 1, the effect of response condition on self-humanity also persisted controlling for the measure of more positive affect toward the self following their response, $B = 1.25$ ($SE = .14$), $t = 8.70$, $p < .001$, $d = 1.73$.

⁵ As in Study 1, the negative affect measure can be broken down into reliable measures of general negative affect, feeling diminished, and feeling self-conscious. Controlling for each measure individually did not reduce the effect of response condition on self-humanity, all $ps < .001$. Controlling for anger alone also did not reduce the effect of response condition on self-humanity, $p < .001$.

Figure 4
Effect of Response Condition on Affective Outcomes via Self-Humanity (Controlling for All Preresponse Measures)



Note. Path coefficients are unstandardized. Coefficients in parentheses represent total effect of response condition on each of the broader affective outcomes; adjacent coefficients outside of parentheses represent direct effects on these outcomes when controlling for self-humanity. Gray coefficients indicate nonsignificant paths.
 * $p < .05$. ** $p < .01$. *** $p < .001$.

Discussion

Replicating Study 1 but holding constant the offense to provide a clean causal test, Study 2 found that forgiveness effectively rehumanized victims of an interpersonal offense. The advantage of forgiveness over revenge was even more clear-cut in Study 2, because revenge yielded no rehumanizing benefit for participants. Instead, participants reported feeling less self-humanity after having taken revenge than before having responded. Also replicating Study 1, the benefits of forgiveness on self-humanity persisted when controlling for general affect and self-views, and forgiveness yielded greater emotional and psychological benefits than revenge through increased self-humanity. Notably, although both Studies 1 and 2 revealed that participants reported feeling more positive toward the self and the transgressor after having forgiven, in neither study did forgiveness yield more positive feelings toward the offense. This finding suggests that forgiveness is not blinding. It does not make people minimize the offense, even as it promotes an array of other positive outcomes.

Could participants have underestimated the benefits of revenge, especially in response to an imagined event? Contrary to this supposition, past research suggests that when people imagine taking revenge, they tend to *overestimate* rather than underestimate how good it will make them feel (Carlsmith et al., 2008). It is thus unlikely that participants simply did not anticipate the rehumanizing benefits of revenge. The findings from Study 2 thus converge nicely with the findings of Study 1 to suggest that forgiveness offers people agency to restore their self-humanity in the aftermath of an offense and more so than revenge.

Study 3: Including a No-Offense Control

A limitation of Studies 1 and 2 is that neither included a no-offense control condition, which could confirm the dehumanizing effects of an offense (Bastian & Haslam, 2010, 2011) and therefore test whether forgiveness in fact *restores* a sense of damaged humanity after an offense. Thus, Study 3 included this control condition. We hypothesized that participants who are victimized will feel less human than participants who are not and, further, that forgiveness will restore a sense of self-humanity, whereas taking revenge will leave participants in a dehumanized state.

A second limitation of Study 2 concerns the specific way people were asked to imagine taking revenge and forgiving. Because participants in the revenge condition imagined getting back at their coworker by focusing on his or her weaknesses in a peer review, they could have felt they were acting dishonestly and violating professional standards. Perhaps this self-perception contributed to their dehumanized state after having taken revenge. Indeed, recent research finds that behaving unethically results in a reduced sense of humanness (Kouchaki et al., 2018). We therefore removed this potential confound in Study 3 by changing how participants took revenge.

We also assessed several potential mediators of the effects of forgiveness and revenge on rehumanization. As noted in the introduction, we reasoned that people would infer their sense of humanity upon observing their own moral behavior (Bastian et al., 2013; Bem, 1972). People perceive morality as a fundamental human value (Bastian et al., 2011; Brandt & Reyna, 2011; Haslam et al., 2012; Schwartz, 1994), and forgiveness is considered a pro-social response that is morally superior to taking revenge (Enright, 1991; Enright & Fitzgibbons, 2000; Gassin, 1998). We therefore

predicted that people would perceive an act of forgiveness as consistent with moral values, which would in turn be associated with feelings of humanness.

By contrast, we anticipated that people are more likely to view acts of revenge—especially more retributive rather than restorative acts of revenge—as consistent with power and justice values (e.g., Gerber & Jackson, 2013; Strelan & van Prooijen, 2013, 2016); rather than with morality (e.g., Elster, 1990; Jacoby, 1983; O’Leary-Kelly et al., 1996; Uniacke, 2000). Thus, to the extent that revenge might have any rehumanizing effect (as in Study 1), it might be because they perceive their vengeful behavior as reflecting the human values of power or justice. We therefore tested each of these processes, examining whether forgiveness and revenge affected the extent to which participants saw their behavior as consistent with the values of (a) morality, (b) power, and (c) justice, and if any of these measures mediated the effect of response condition on self-humanity.

Method

Participants

We recruited 292 undergraduate students at a large university in the Mid-Atlantic. Eight participants who failed an attention check embedded in the questionnaire (“for this question, click ‘not at all’”) and two who did not complete any postresponse measures were dropped, leaving a final sample of 282 participants (141 female, 138 male, 1 nonbinary, 2 missing; $M_{\text{age}} = 18.86$, $SD = 1.25$; 190 White, 45 Asian, 26 mixed ethnicity, nine Black, nine Hispanic, one Pacific Islander, two unspecified). Participants received course credit for participating. Although Studies 1 and 2 revealed large effect sizes, we recruited a large sample to provide adequate power for tests of indirect effects (Kline, 2016).

Materials and Procedure

Offense Scenario and Control Condition. Participants randomly assigned to the forgiveness and revenge conditions imagined being wronged by a coworker, as in Study 2. Participants randomly assigned to the control condition also read a description of interactions with a coworker. However, these interactions were neutral to positive, not offensive. For example, rather than reading that the coworker had insulted their presentation, they read that the coworker had said, “great job in there” and mentioned that the weather on the weekend was “supposed be beautiful” (see the online supplemental materials for full text). As in Study 2, we gave participants an opportunity to experience an emotional response to this situation by asking them to take a moment to think about how they would feel after having this interaction, and then to write about these feelings. Participants then completed the same 8 items assessing self-humanity used in Studies 1 and 2, $\alpha = .82$ (Bastian et al., 2013).

Response Manipulation. Next, participants were asked to imagine that “soon after this occurs, you decide to throw a social gathering at your house.” Participants in the forgiveness condition then read, “You spend some time thinking about who to invite, and in the end you decide to forgive your coworker and invite them to the party.” Participants in the revenge condition read, “You spend some time thinking about who to invite, and in the end you decide to get back at your coworker by not inviting them

to the party.” Participants in the control condition read, “You spend some time thinking about who to invite, and in the end you decide to invite your coworker to the party.” To immerse participants in the emotions they might feel after having responded, they were then asked to take a moment to think about and describe how they would feel after having forgiven/gotten back at/deciding to invite their coworker. We later used the negative and positive affect dictionaries in the Linguistic Inquiry and Word Count program (LIWC; Pennebaker & King, 1999; Pennebaker et al., 2015) to assess general affect in these open-ended responses, thus providing a less obtrusive and nonself-reported measure.

Process Measures. Participants indicated the extent to which their decision regarding whether or not to invite their coworker would reflect the values of morality, power, and justice. We adapted Schwartz’s (1994) list of values to assess morality and power and developed items to assess justice. *Morality* was assessed with 10 items⁶ ($\alpha = .89$), including seven items from Schwartz’s benevolence and universalism subscales (for example, “Helpfulness [working for the welfare of others]”; “Broad-mindedness [being tolerant of different ideas and beliefs]”) and three additional items that we developed (e.g., “My decision regarding whether or not to invite my coworker reflects that I am a moral person”). *Power* was assessed with four items ($\alpha = .62$) tapping a desire for status and control over others (for example, “Social power [having control over others; dominance]”; “Preserving my public image [protecting my ‘face’]”). Finally, *Justice* was assessed with two items ($r = .66$) tapping a desire for people to receive the outcomes they deserve (for example, “Fairness [giving people the outcomes they deserve]”).

Postresponse Self-Humanity. Next, participants completed the same 8-item measure of self-humanity ($\alpha = .84$), this time regarding how they would feel after having decided to invite or to not invite their coworker to their party.

Additional Measures. As a manipulation check, we included questions assessing how offensive and intentionally hurtful the coworker’s behavior was on 7-point scales (1 = *not at all*, 7 = *extremely*). In addition, to ensure that participants viewed the situation as realistic, at the end of the study participants indicated on 7-point scales (1 = *not at all*, 7 = *extremely*) how easy to imagine and realistic they found the situation with their coworker. As in Study 2, they also indicated whether they had ever experienced a similar situation with a coworker. Finally, participants completed demographic measures, before being debriefed and thanked.

Results

Preliminary Analyses

Supporting the effectiveness of the offense manipulation, there was a significant difference between conditions on ratings of offensiveness, $F(2, 278) = 192.30$, $p < .001$. A Tukey post hoc test revealed that participants in the control condition rated their coworker’s behavior as significantly less offensive ($M = 1.87$,

⁶ Here, in Study 4, and in Supplementary Study 1, participants were also asked, “My decision regarding whether or not to invite my coworker (Study 3)/What I wrote (Studies 4 and Supplementary Study 1) . . . reflects my sense of humanity.” We removed this item from the scale due to overlap with the self-humanity outcome. Including this item does not change any results in the three studies.

$SD = 1.03$) than did participants in the forgiveness condition ($M = 4.56, SD = .91; p < .001$) or the revenge condition ($M = 4.55, SD = 1.23; p < .001$). Similarly, there was a significant difference between conditions on ratings of how intentionally hurtful the offense was, $F(2, 278) = 258.61, p < .001$, with a Tukey post hoc test revealing that participants in the control condition rated their coworker's behavior as significantly less intentionally hurtful ($M = 2.00, SD = 1.30$) than did participants in the forgiveness condition ($M = 5.64, SD = 1.18; p < .001$) or the revenge condition ($M = 5.67, SD = 1.29; p < .001$). Participants in the forgiveness and revenge conditions did not differ on ratings of either offensiveness ($p = .998$) or intentionally hurtful ($p = .982$).

Participants also indicated that they were able to imagine themselves in the situation ($M = 5.41, SD = 1.41$) and that the situation was realistic ($M = 5.44, SD = 1.39$). There were no differences between any of the conditions on either of these outcomes, all $ps > .20$. Forty-four percent of participants in the control condition and 38% of those in the transgression conditions reported that they had experienced a similar situation with a coworker, and an additional 36% of participants in the transgression conditions (and 31% in the control condition) reported that they had other types of conflicts with coworkers. Again, these results suggest that workplace conflict is common and it was easy for participants to immerse themselves in this situation.

Primary Analyses

A 2 (time: pre vs. post forgiveness/revenge response) \times 3 (response condition: offense + forgiveness versus offense + revenge versus no-offense control) repeated measures ANOVA revealed a significant main effect of time, $F(1, 278) = 48.26, p < .001, \eta_p^2 = .15$, qualified by a significant interaction with condition, $F(2, 278) = 47.20, p < .001, \eta_p^2 = .25$ (see Figure 5).

First, we tested for dehumanization. Did an offense make participants feel less human at the time of the offense? It did. As predicted, participants in the forgiveness condition ($M = 4.07, SD = 1.03$) and those in the revenge condition ($M = 4.08, SD = 1.08$) did not differ, $F < 1$. But both felt less human than participants in the control condition ($M = 5.12, SD = .95$), $F(1, 278) = 73.54, p < .001, d = 1.06$, and $F(1, 278) = 76.96, p < .001, d = 1.02$, respectively. See Table 2 for observed means and mean change by

response condition. This finding confirms that experiencing maltreatment can be dehumanizing.

Turning to rehumanization, replicating Studies 1 and 2, participants in the forgiveness condition showed a significant increase in self-humanity ($M = 5.50, SD = .80$) following their response, $F(1, 278) = 136.77, p < .001, d = 1.23$. By contrast, those in the revenge condition showed no change, $F(1, 278) = 1.08, p = .300, d = .08$, remaining in a less human state ($M = 3.96, SD = 1.08$) relative to the control condition ($M = 5.27, SD = .90$), $F(1, 278) = 118.03, p < .001, d = 1.31$. As in Studies 1 and 2, the rehumanizing benefit of forgiveness was large ($d = 1.23$), moving participants from just above the midpoint of the scale (one-sample t from midpoint < 1) to halfway between the midpoint and the ceiling of the scale (one sample t from midpoint = 17.91, $p < .001$). By contrast, those in the revenge condition stayed at the midpoint of the scale (one-sample t from midpoint < 1). As a consequence, after having acted, those who imagined having forgiven reported feeling significantly more human than those who imagined having taken revenge, $F(1, 278) = 166.09, p < .001, d = 1.61$. Indeed, those who imagined forgiving their coworker were able to fully restore their sense of self-humanity relative to the no-offense control condition, reporting a level of self-humanity that nearly exceeded that experienced by participants who had not been offended, $F(1, 278) = 3.78, p = .053, d = .27$. Those in the control condition showed no change in self-humanity over time, $F(1, 278) = 1.35, p = .246, d = .19$.

Self-Humanity as Distinct From General Affect

To assess whether the effects of forgiveness versus revenge on self-humanity were distinct from more general affective processes as in Studies 1 and 2, we used LIWC to code for negative and positive affect in participants' descriptions of their emotional response to forgiving or taking revenge and tested whether the condition effect on self-humanity persisted controlling for this measure. Participants in the forgiveness condition communicated less negative affect in their responses relative to participants in the revenge condition ($p < .001$), but there was no condition difference in positive affect ($p = .821$). Notably, however, the effect of forgiveness versus revenge on postresponse self-humanity remained significant controlling for both negative and positive affect, $B = 1.50 (SE = .14), t = 10.84, p < .001, d = 1.61$.

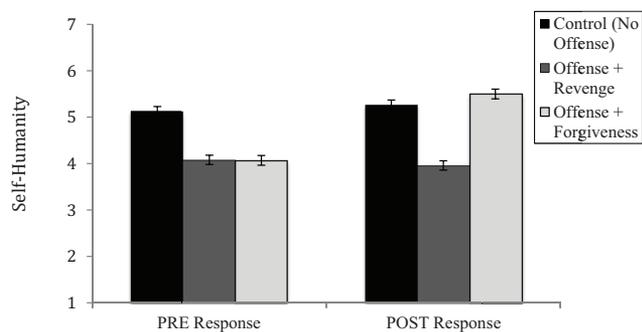
Process Measures and Mediation Analyses

Examining correlations among the process measures, we found that justice values were modestly positively correlated with both moral and power values. However, moral and power values were not associated with each other (see Table 3 for all correlations).

Next, we tested whether each process measure was influenced by condition. Of primary importance, participants in the forgiveness condition, as compared with those in the revenge condition, were more likely to report that their behavior reflected moral values, and less likely to report that their behavior reflected the values of power and justice. See Table 4 for all effects.

Next, we examined which process measures predicted postresponse self-humanity in a simultaneous regression model including dummy variables for forgiveness versus revenge and forgiveness versus control, the three process measures, and preresponse ratings of self-humanity as predictors of postresponse self-humanity. Adherence to moral values was the only process measure that

Figure 5
Ratings of Self-Humanity as a Function of Response Condition (Forgiveness vs. Revenge vs. Control) and Time (Pre vs. Postresponse), Study 3



Note. Error bars represent the standard error of the mean.

Table 2*Descriptive Statistics and Mean Change for Self-Humanity by Response Condition, Study 3*

Measure	Pre			Post			Change		
	Control	Revenge	Forgive	Control	Revenge	Forgive	Control	Revenge	Forgive
<i>M</i>	5.12 _a	4.08 _b	4.07 _b	5.27 _a	3.96 _b	5.50 _a	0.13	-0.12	1.43
<i>SD</i>	0.95	1.08	1.03	0.90	1.08	0.80			

Note. Means within rows that do not share a subscript differ significantly at $p < .05$. Change scores reflect change over time (post – pre), with positive scores indicating increases following the response.

emerged as a significant predictor of self-humanity (see Table 5 and Figure 4). Using Hayes (2013) PROCESS macro v3.4 for SPSS (model 4, with 10,000 bootstrap samples), results provided evidence of an indirect path from forgiveness (vs. revenge) to self-humanity through moral values (indirect effect = .67, $SE = .12$, 95% CI [.4485, .9115]), suggesting that those who imagined forgiving felt more human in part because they saw their behavior as adhering to moral values. An indirect path from forgiveness versus control to self-humanity through moral values also emerged, indirect effect = .25, $SE = .07$, 95% CI [.1157, .3955]).

Rerunning the analysis to test indirect effects of revenge versus control condition on self-humanity revealed a significant indirect effect through moral values (indirect effect = -.42, $SE = .11$, 95% CI [-.6411, -.2343]), indicating that those who imagined taking revenge (vs. those in the no-offense control) felt less human at least in part because they saw their behavior as adhering less to moral values. No other significant indirect effects emerged.

Discussion

Study 3 replicates and extends Studies 1 and 2 in important ways. First, Study 3 included a no-offense control condition, and confirmed that participants who had experienced an offense reported a reduced sense of humanness relative to those who had not. The control condition further confirmed that forgiveness is, as hypothesized, *rehumanizing*. Even as participants experienced dehumanization in response to an offense, forgiveness fully restored their sense of self-humanity. Second, Study 3 replicated Study 2 using different acts of forgiveness and revenge, thus showing that the rehumanizing effect of forgiveness relative to forgiveness does not depend on the specific stimuli used in Study 2.

Finally, Study 3 sheds light on how forgiveness rehumanizes victims. In the forgiveness condition, participants felt that their response reflected moral values of acceptance and benevolence, which statistically mediated the effect of the forgiveness condition (vs. revenge and vs. control) on rehumanization. Although

statistical tests of mediation cannot support strong conclusions about psychological process due to their fundamentally correlational nature, among other limitations (e.g., Fiedler et al., 2011); this finding provides a foundation for future research that experimentally manipulates potential mediators to fully test how forgiveness can help people regain a sense of humanness after an offense (see Spencer et al., 2005).

Study 4: A Current, Unresolved Offense

The primary goal of Study 4 was to move beyond reflected experiences of forgiveness or revenge—whether recalled (Study 1) or imagined (Studies 2 and 3)—to examine the experience of forgiveness or revenge in the moment. To achieve this while maintaining experimental control, we asked participants to identify someone who had hurt them, and then randomly assigned them to either forgive or take revenge against the transgressor in a letter to this person.

This method has its challenges. Because forgiveness is the choice of the victim—a self-initiated process by which a person works through and releases their negative emotions (Enright, 2001)—we can only encourage participants toward forgiveness. Likewise, we cannot oblige participants to take revenge. We therefore anticipated that some participants would reject our request. Some might even do the opposite of what we asked them to do. Because this pattern of responding would sharply weaken our ability to detect an effect, we excluded participants who clearly did not follow the instructions. However, doing so weakens our ability to draw causal inferences. Further, we anticipated that effects using this methodology would be weaker than in the previous three studies because the full processes of forgiveness and revenge cannot be reduced to an induced letter and would thus likely be incomplete (see Worthington et al., 2000). Therefore, we view Study 4 as providing convergent, in vivo evidence for the rehumanizing power of forgiveness versus revenge in combination

Table 3*Bivariate Correlations and Descriptive Statistics for Main Variables, Study 3*

Variable	1	2	3	4
1. Self-humanity (postresponse)	—			
2. Moral values	.67***	—		
3. Power values	-.12*	-.004	—	
4. Justice values	.06	.15*	.23***	—
<i>M</i>	4.88	4.33	4.41	4.51
<i>SD</i>	1.16	1.26	1.16	1.57

* $p < .05$. *** $p < .001$.

Table 4*Effects of Experimental Condition on Potential Process Measures, Study 3*

Measure	Experimental condition		
	Control <i>M</i> (<i>SD</i>)	Revenge <i>M</i> (<i>SD</i>)	Forgiveness <i>M</i> (<i>SD</i>)
Moral values	4.62 _a (1.00)	3.42 _b (1.24)	5.04 _c (0.86)
Power values	4.16 _a (1.05)	4.79 _b (1.12)	4.23 _a (1.21)
Justice values	4.63 _a (1.33)	4.91 _a (1.66)	3.97 _b (1.55)

Note. All responses were indicated on a 7-point scale. Means within the same row that do not share a subscript differ significantly at $p < .05$.

Table 5
Simultaneous Regression Analysis for Full Model on Postresponse Self-Humanity, Study 3

Predictor	<i>b</i>	<i>SE</i>	95% CI	<i>t</i>	<i>p</i>
(Constant)	2.63	0.32	[1.99, 3.26]	8.13	<.001
Forgiveness vs. Revenge	0.90	0.15	[0.61, 1.20]	6.09	<.001
Forgiveness vs. Control	0.30	0.13	[0.04, 0.56]	2.29	.023
Moral values	0.41	0.05	[0.32, 0.51]	8.60	<.001
Power values	-0.04	0.04	[-0.12, 0.05]	-0.89	.377
Justice values	0.04	0.03	[-0.02, 0.11]	1.32	.187
Preresponse self-humanity	0.19	0.05	[0.10, 0.29]	4.18	<.001

Note. All responses were indicated on a 7-point scale. Means within the same row that do not share a subscript differ significantly at $p < .05$.

with the other studies reported here, rather than as the definitive or ultimate test.

In Study 4 we also tested three potential downstream consequences of rehumanization. These outcomes go beyond the simple affective measures assessed in Studies 1 and 2, tapping views of the self that have meaningful impacts on how people treat themselves and others. First, we examined whether a restored sense of humanness would reduce self-harm. Because past work has demonstrated that victims of dehumanizing treatment often feel shame (Bastian & Haslam, 2011), which predicts self-harm (Gilbert et al., 2010), we explored whether people would be less likely to aggress against themselves when they felt a repaired sense of self-humanity. Second, we examined whether a restored sense of humanness would increase people's feelings of belongingness to a human community. We reasoned that feeling less human after a victimization experience could cause people to feel cut off from the broader community of humans, and that restoring that sense of humanness could help reestablish that fundamentally important connection (Baumeister & Leary, 1995). Finally, we examined whether a restored sense of humanness would enhance the centrality of morality to participants' self-concept. We anticipated that feeling a restored sense of humanness after perceiving one's forgiving behavior as moral could heighten people's identity as a moral person relative to feeling a diminished sense of humanness.

Study 4 is a preregistered replication of a prior study with a smaller sample, which yielded similar results (Supplemental Study 1, reported in full in the supplement; see <https://bit.ly/3jiJ84N> for preregistration). The main change in the replication was that we attempted to further reduce noncompliance with the forgiveness and revenge instructions by adapting an induced compliance paradigm (Festinger & Carlsmith, 1959).

Method

Participants

We recruited 546 participants⁷ (267 female, 266 male, 12 nonbinary; one unspecified; $M_{\text{age}} = 32.17$, $SD = 11.39$, range: 18–72) from *Prolific*, an online research platform. Nineteen participants (3.5% of sample) were excluded because they requested that their data be withdrawn, a choice they were given after being debriefed (see Additional Measures in Method section). In addition, we excluded participants who did not follow instructions based on preregistered exclusion decisions, including those who (a) failed

an attention check ($n = 5$, .9% of sample), (b) did not recall an offense committed against them ($n = 9$, 1.7% of sample), (c) explicitly stated that they would not write a letter of that nature (forgiveness $n = 8$, 3.1% of condition; revenge $n = 19$, 7.5% of condition), or (d) wrote a letter that clearly did not comply with the instructions they were given (e.g., someone in the forgiveness condition who stated they would never forgive or wished death upon the transgressor; someone in the revenge condition who stated they forgave and loved the transgressor; forgiveness $n = 30$, 11.5% of condition; revenge $n = 10$, 4.0% of condition). In total, while not an insignificant percentage of the total sample, the induced compliance instructions reduced noncompliance (those who did not write a letter or who wrote a noncompliant letter) by one third as compared with Supplemental Study 1 (12.3% vs. 18.5%).

Participants' letters were coded for how forgiving and how vengeful they were on separate 7-point scales (1 = *not at all*; 7 = *extremely*). We then created a difference score between these ratings (possible range: -6 to 6) so that positive numbers represent greater compliance with the instructions they received (e.g., more forgiveness than revenge in the forgiveness condition), and negative numbers represent a lack of compliance (e.g., more revenge than forgiveness in the forgiveness condition). Confirming that participants in the "did not comply with instructions" category failed the manipulation, their letters were rated as highly noncompliant ($M = -2.93$, $SD = 2.04$). Conversely, the remaining participants' letters were rated as highly compliant with the instructions they received ($M = 2.24$, $SD = 2.51$), suggesting that the final sample of 446 (forgiveness condition $n = 222$, revenge condition $n = 224$; 233 female, 202 male, 10 nonbinary; one unspecified; $M_{\text{age}} = 31.92$, $SD = 11.08$, range: 18–68) successfully engaged in the forgiveness or revenge letter writing task. A sensitivity analysis conducted in G*Power showed that this sample provides power to detect small to medium effects (Cohen's $d = .27$; $\alpha = .05$, $1 - \beta = .80$).

Materials and Procedure

Offense Recall. Participants were first prompted to describe a time someone had hurt or offended them in a way that was currently unresolved—something they still felt hurt or angry about. They then entered the transgressor's initials (e.g., DT) into a text box, so that these initials could be embedded in future questions referring to the transgressor. They described the offense and also answered a number of questions about it, including when it happened, their relationship with the transgressor, how close they were to the transgressor, and how "severe," "intentional," and "personal (specifically directed toward you)" the offense was on 7-point scales (1 = *not at all*, 7 = *extremely*). In addition, we asked participants to rate the extent to which the offense remains

⁷We preregistered a sample size of 800 participants. However, a randomization programming error sent a third of the sample to the dependent variables without writing a letter. These participants fell between the forgiveness ($p = .100$) and revenge ($p = .386$) conditions on self-humanity. They also reported weaker moral values ($p < .001$) and stronger power values ($p = .009$) than those in the forgiveness condition, but weaker justice values than those in the revenge condition ($p = .010$). On the whole, these participants' scores on the outcome measures differed from those in the forgiveness condition, suggesting that forgiveness is more rehumanizing than doing nothing.

unresolved using five items (e.g., “This offense continues to affect my life in a negative way”; “I am angry at DT for this offense”) that were averaged to create a composite ($\alpha = .83$).

Response Manipulation. Next, participants were instructed to write a letter to the transgressor. Using tools from the induced compliance literature, we encouraged cooperation by (a) giving participants a neutral reason for our request (i.e., we have received other types of responses) and (b) emphasizing participants’ autonomy and free choice, especially with regards to *how* they would carry out forgiveness or revenge in their letter. Participants were randomly assigned to receive either forgiveness or revenge instructions, which read:

We would now like you to write a letter to DT. There are many things you could write in this letter. However, because we have received other kinds of responses, we would like to make a special request that you use this letter as an opportunity to forgive [get back at] DT. If you choose to follow this request, it is completely up to you how you choose to forgive [get back at] DT. We recognize that people’s situations differ. But, whatever your situation, we would appreciate it if, as much as you are able, you use this letter to release [express] your resentment and negative emotions toward DT and let go of any desire to see DT hurt [make DT experience some of the pain that he or she made you feel]. Although this would be helpful for our project, it is completely up to you what to write and what to focus on. Thank you so much for your help.

All participants then saw a text box in which to write their letter. By giving participants free choice regarding whether or not they would comply with our request (rather than coercing them to comply), we allowed them to experience the psychological consequences of their choice to write either a forgiving or vengeful letter.

As in Study 3, we later used the negative and positive affect dictionaries in the LIWC program (Pennebaker & King, 1999; Pennebaker et al., 2015) to assess the expression of general affect in the letters participants wrote.

Postresponse Self-Humanity. Next, participants completed the same eight-item measure of self-humanity used in Studies 1–3 ($\alpha = .75$) regarding how they felt “right now.”

Process Measures. Participants completed the same process measures as in Study 3, including a 10-item measure of *moral*

values ($\alpha = .88$), a four-item measure of *power values* ($\alpha = .74$), and a two-item measure of *justice values* ($r = .70$).

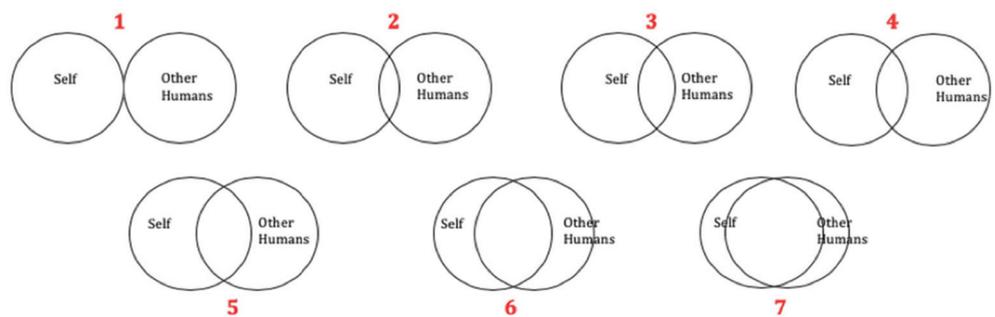
Consequences of Self-Humanity

Self-Harm. To assess postresponse self-harm, we used the voodoo doll self-injury task (Chester et al., 2017). Participants saw an image of a voodoo doll (see Figure 6) and were told “This doll represents you. Please take a moment to look at the doll and imagine it as yourself.” They were then told that in a few moments they would choose how many pins to stab into the doll representing them, from 0–51 pins. Following the procedure of Chester et al. (2017), participants then saw a picture of the voodoo doll with pins stabbed into it, providing a vivid image of what the doll looked like with the pins stabbed in, and were told “here is the doll that represents you with the maximum of 51 pins stabbed into it.” They then indicated on a slider bar (from 0–51) how many pins they wished “to stab into the doll that represents you.” This measure has been validated as a measure of state and trait levels of self-harm tendencies, correlating with established risk factors for self-harm (e.g., depression, history of self-injury), and showing sensitivity to experimental manipulations that increase self-harm (Chester et al., 2017).

Belonging to Human Community. To assess a sense of belonging to the broader human community, we adapted an item from the Identification with All Humanity Scale (McFarland et al., 2012). Participants saw seven pairs of circles that ranged in their degree of overlap from no overlap (1) to almost completely overlapping (7). In each pair, one circle was labeled *self* and the other circle was labeled *other humans* (see Figure 6). Participants read that the amount of overlap represented different degrees of connection and belonging between them and other humans and were asked to select which pair represented their current relationship with other humans.

Centrality of Morality to the Self-Concept. To examine whether a restored sense of self-humanity would enhance participant’s moral identity, participants completed a validated measure of centrality of moral identity (the internalization subscale; Aquino & Reed, 2002). Participants saw a list of nine moral traits (e.g., *compassionate*; *honest*) and visualized a person who possessed

Figure 6
Self-Harm and Belonging to Human Community Outcome Measures, Study 4



Note. Left: Voodoo doll with 51 pins stabbed into it (self-harm measure). Right: Belonging to the human community. See the online article for the color version of this figure.

these traits (they were told they could visualize themselves or another person). Then they responded on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*) to five items assessing the extent to which those moral traits are central to their self-concept (e.g., “Being someone who has these characteristics is an important part of who I am”; $\alpha = .81$).

Additional Measures. Participants completed demographic questions. Then, to ensure that participants who had been assigned to the revenge condition did not leave the study feeling vengeful, participants in that condition were provided with information regarding the benefits of forgiveness and asked to write another letter to the transgressor, this time using it as an opportunity to forgive. Finally,

participants were debriefed, given the choice to withdraw their data (as required by IRB) and thanked for their participation.

Results

Preliminary Analyses

For a sample of the kinds of events participants considered, and how they took revenge or forgave, see Table 6.

We first tested whether participants followed instructions by recalling offenses that were still unresolved. On average, the offenses were rated as unresolved ($M = 4.83$, $SD = 1.36$)

Table 6
Sample Offenses and Letters in Forgiveness and Revenge Condition, Study 4

Condition	Offense description	Letter
Low severity examples: Personal insult (victim-rated severity = 2)		
Revenge	[T] looked at me and said I was ugly and mentioned one of my facial features that I was insecure of, but was meant to be as a joke.	[T], you said I am ugly? Really? How about you take a look in the god damn mirror and look at your resented face? Your nose is big as living hell and you're face basically spells ugly in braille with all the acne scars you have on your face. Think twice about crossing me, little one.
Forgiveness	[T] constantly comments on my weight gain. She was just going on about how I need to change my diet and exercise more because I don't wanna get super fat and not be able to lose the weight. Her intentions were good but she does this all the time and it makes me feel bad about myself and it's also none of her business.	[T], I understand that your intentions were good and I forgive you for hurting my feelings because you are just trying to help me. In the future please refrain from these types of comments to avoid any conflict between us and hurting my feelings.
Moderate severity examples: Belittling treatment (victim-rated severity = 4/5)		
Revenge	This person demeaned me verbally and unnecessarily questioned my intelligence in a controlling manner.	Dear [T], You continue to speak to me in a demeaning way no matter how many times I remind you that I do not like it. You treat me like a child and I can tell you do so because you need to feel some sense of control. You aren't aware of this, but I am bidding my time to put space between us and it is very conditional on your actions in the next 12 months. I think you need me more than I need you and that is going to become apparent soon.
Forgiveness	He treats me like a child, as if I don't know how to do anything. It makes me feel anxious and panicky, because if I ever do anything wrong, I am validating his wrong view of me. It's insulting and belittling.	Dear [T], I know that the reason you act the way that you do is because you feel like you should be like Dad, and he always put unrealistic expectations on you. I'm sorry that you had to go through that, and I'm sorry you never got the chance to reconcile that with him before he died. I want you to know that what he did wasn't right, and what you do to me isn't right either. I forgive you for not learning from his mistakes, and I forgive you because I never said anything to you before now. I want you to know that I love you, and when you look down on me, it doesn't make me love you less, it only makes me think you love me less. Love, [V]
High severity examples: Infidelity (victim-rated severity = 7)		
Revenge	I was cheated on and my whole world broke apart. I still think about it daily and it still haunts me.	[T], You hurt me more than you could ever imagine. I still think about what you did every single day. To make you feel the same pain that I have felt, I am going to lie to you, cheat on you, and then hold it in for a long time and then tell you the truth when the time is right, like on your birthday or our anniversary. I am going to make sure you felt every single bit of pain that I have felt and then even more. I am going to go farther than you did, and will do it more times than you did. You're going to finally feel the pain that I have felt.
Forgiveness	He cheated on me. There was a girl that showed up at my door and said that my boyfriend and her are seeing each other. I am crushed because he has definitively denied it.	Dear [T], Even though I am very hurt by what you have done I realize that mistakes happen. That people make bad decisions and sometimes wish they could take them back. I don't know that this relationship can proceed but I have decided to forgive you and not hold any ill feelings towards you. If this causes our relationship to end I want you to know that I have forgiven you and I hope you can forgive yourself one day.

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relative to the neutral midpoint of the scale (i.e., 4, one-sample $t = 12.86, p < .001$), thus allowing them room to respond, either by forgiving or taking revenge against the transgressor. Participants in the forgiveness and revenge conditions did not differ in the extent to which their offense was unresolved ($p = .289$), nor in their ratings of closeness to the victim ($p = .169$), or judgments of how severe, intentional, or personal the offense was ($ps > .194$).

Primary Analysis

A linear regression with response condition (revenge = 0; forgiveness = 1) as a predictor of self-humanity revealed a significant effect, $B = .21$ ($SE = .09$), $t = 2.42, p = .016$ (see Table 7). Consistent with Studies 1–4, participants reported higher levels of self-humanity in the forgiveness condition ($M = 5.38, SD = .79$) than in the revenge condition ($M = 5.17, SD = 1.01$), $d = .23$. This effect was smaller than that observed in Studies 1–3 as anticipated, possibly because forgiveness is a process that unfolds over time and it is unlikely that participants experienced it fully by writing a letter at our request. However, as can be seen in the examples of offenses and letters provided in Table 6, participants in the forgiving condition took an important step toward forgiving real offenses that had remained a negative force in their lives. The observed effect therefore represents a meaningful shift in victims' sense of humanness after at least beginning to engage in the forgiveness process.

Self-Humanity as Distinct From General Affect. To assess whether the effects of forgiveness versus revenge on self-humanity were distinct from more general affective processes, we tested whether the condition effect persisted when controlling for negative and positive affect (coded by the LIWC program) expressed in participants' letters. Participants communicated less negative affect ($p = .018$) and more positive affect ($p = .017$) in the forgiveness condition than in the revenge condition. Yet the effect of forgiveness versus revenge on self-humanity remained significant when controlling for negative and positive affect, $B = .19$ ($SE = .09$), $t = 2.18, p = .030, d = .22$.

Process Measures and Mediation Analyses. We first examined correlations among the process variables, and found that moral, power, and justice values were, in general, positively associated with each other (see Table 8 for correlations). Next, we tested whether each process variable was influenced by response

condition using a linear regression. As can be seen in Table 7, significant effects of forgiveness versus revenge response condition emerged on moral values ($p < .001$), power values ($p = .003$), and justice values ($p = .045$). As in Study 3, participants in the forgiveness (vs. revenge) condition were more likely to report that their behavior reflected moral values, and less likely to report that their behavior reflected power and justice values.

Next, we examined which process measures predicted postresponse self-humanity in a simultaneous regression model including response condition and the three process measures as predictors of self-humanity. Consistent with Study 3, this analysis revealed that perceived moral values emerged as a significant predictor of self-humanity (see Table 9). However, unlike Study 3, power values (negatively) and justice values (positively) also predicted self-humanity (see Table 9). Using PROCESS (model 4, with 10,000 bootstrap samples), results provide evidence of an indirect path from forgiveness (vs. revenge) to self-humanity through moral values (indirect effect = .23, $SE = .05$, 95% CI [.1405, .3304]), indicating that those who forgave (vs. took revenge) felt more human in part because they saw their behavior as adhering to moral values (see Figure 7). A smaller indirect effect through power values also emerged (indirect effect = .05, $SE = .02$, 95% CI [.0135, .0964]), indicating that those who forgave (vs. took revenge) felt more human in part because they saw their behavior as adhering less to power values.

Consequences of Self-Humanity. The voodoo doll self-harm task typically results in a zero-inflated, positively skewed distribution (Chester et al., 2017). A Kolmogorov–Smirnov test revealed that the distribution in the current study was positively skewed, $k(298) = .31, p < .001$. Thus, as recommended by Chester et al. (2017), we adopted a Poisson loglinear distribution using generalized linear modeling instead of standard parametric approaches. This analysis revealed a significant effect of response condition, $B = -.13, \chi^2(1, 424) = 12.42, p < .001$, with participants in the forgiveness condition choosing fewer pins than those in the revenge condition (see Table 7). Although in the expected direction (see Table 7), the condition effect did not reach significance for either belonging to a human community ($p = .139$) or centrality of morality to the self-concept ($p = .162$).

Next, we tested whether response condition indirectly influenced these downstream consequences by affecting the process measures and then self-humanity in a serial mediation model (Hayes, 2013). Using PROCESS (model 6, with 10,000 bootstrap samples), significant indirect effects emerged through the sequential mediators of moral values and self-humanity for all three outcomes (see Figure 7 and Table 10 for indirect effects). Significant indirect effects also emerged through the sequential mediators of power values and self-humanity. Thus, those who forgave (vs. took revenge) were more likely to feel that their actions reflected moral values and less likely to feel that their actions reflected power values, which was associated with feeling more human, which in turn was associated with less self-harm, greater sense of belonging to a human community, and greater centrality of morality to one's self-concept. Including LIWC-coded negative and positive affect did not alter these indirect effects. Thus, the downstream benefits of forgiveness through self-humanity are not simply attributable to changes in general expressed affect.

Meta-Analysis of Response Condition on Downstream Consequences. To understand our full data, we conducted a

Table 7

Effects of Condition on Self-Humanity, Process Measures, and Downstream Consequences, Study 4

Variable	Revenge <i>M</i> (<i>SD</i>)	Forgiveness <i>M</i> (<i>SD</i>)
Self-humanity	5.17 _a (1.01)	5.38 _b (0.79)
Moral values	4.00 _a (1.29)	4.76 _b (1.07)
Power values	3.54 _a (1.36)	3.16 _b (1.37)
Justice values	4.71 _a (1.65)	4.40 _b (1.62)
Self-harm	7.77 _a (12.99)	6.84 _b (13.30)
Belonging to human community	4.03 _a (1.61)	4.25 _a (1.54)
Importance of moral identity	6.14 _a (0.93)	6.26 _a (0.83)

Note. All responses were on 7-point scales, except for self-harm (possible range of 0–51 pins). Means within the same row that do not share a subscript differ significantly at $p < .05$.

Table 8
Bivariate Correlations and Descriptive Statistics for Main Variables, Study 4

Variable	1	2	3	4	5	6	7
1. Self-humanity	—						
2. Moral values	.39***	—					
3. Power values	-.04	.27***	—				
4. Justice values	.21***	.39***	.36***	—			
5. Self-harm	-.21***	-.08	.04	-.07	—		
6. Belonging to human community	.21***	.18***	.10*	.15**	-.20***	—	
7. Importance of moral identity	.33***	.17***	-.12	.07	-.06	.26***	—
<i>M</i>	5.27	4.38	3.35	4.56	7.31	4.14	6.20
<i>SD</i>	0.91	1.24	1.38	1.64	13.14	1.58	0.88

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

meta-analysis on the effect of forgiveness versus revenge response condition on the three downstream outcomes across Study 4 and Supplemental Study 1. As recommended by Goh and colleagues (2016), we first transformed p values into Pearson’s correlations, then Fisher’s z transformed for analyses and converted back to Pearson correlations for ease of reporting. The overall effect of condition was significant for self-harm (mean $r = .14$, $Z = 3.95$, $p = .0001$) and centrality of morality to self-concept (mean $r = .08$, $Z = 2.31$, $p = .021$), and marginal for belonging to a human community (mean $r = .07$, $Z = 1.87$, $p = .061$).

Discussion

Study 4 replicated the humanizing benefits of forgiveness versus revenge using in-vivo experiences of these responses. Moreover, replicating Study 3, we again found that perceived adherence to moral values served as the primary mediator of the rehumanizing effect of forgiveness versus revenge.

This study also provided intriguing evidence for the downstream benefits of feeling a restored sense of humanness after a victimization experience, with increased self-humanity after forgiveness predicting less self-harm, a stronger sense of belonging to a human community, and greater centrality of one’s moral identity. There was also a direct effect of forgiveness on the reduction of self-harm and, when combining Study 4 with Supplemental Study 1, on the centrality of morality to participants’ self-concept. Nonetheless, the greater consistency of indirect effects as compared with total effects suggests the possible presence of countervailing processes between response condition and these downstream outcomes (Hayes, 2013). For example, because participants in the forgiveness condition did not self-initiate the forgiveness process but rather followed instructions to write a forgiving letter, it is possible they viewed the transgressor as undeserving of their forgiveness—a perception that undermines the benefits of forgiving (Strelan et al., 2016). However,

the current findings provide evidence that forgiveness (vs. revenge) influences these downstream consequences by promoting perceptions of the self as being more moral and human.

These consequences extend beyond the immediate affective consequences examined in Studies 1 and 2 and are meaningful for how people treat themselves and others. Curbing any desire or tendency to inflict self-harm has clear benefits for the victim, who has already suffered at the hands of the transgressor. Feeling a sense of belonging is among the most powerful of human motives (Baumeister & Leary, 1995) and sources of meaning (Lambert et al., 2014), and it predicts a variety of adaptive behaviors related to social functioning, motivation and achievement, and health and wellbeing (Baumeister et al., 2002; Cacioppo & Patrick, 2008; Walton & Cohen, 2011). Having a strong moral identity is a powerful predictor of moral behavior, such as volunteering, charitable giving, and honesty (Aquino & Reed, 2002; Aquino et al., 2009; Bryan et al., 2013). As Damon and Hart (1992) write, “people whose self-concept is organized around their moral beliefs are highly likely to translate those beliefs into action” (p. 455). Thus, the current study suggests that, by enhancing victims’ sense of humanness, acts of forgiveness might have enduring benefits by promoting future kindness to the self and others.

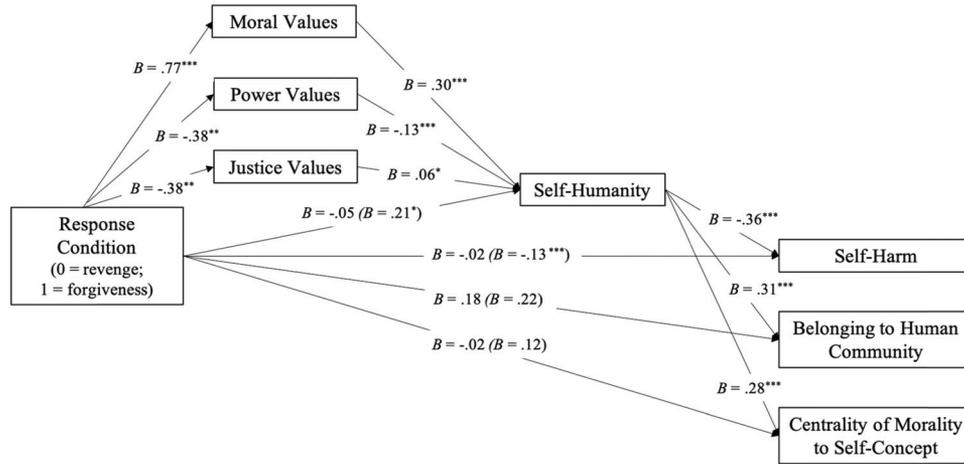
General Discussion

A fundamental cost of experiencing mistreatment from another person is the damage this experience can cause to one’s basic sense of being human. Can this sense of humanity be restored, and do victims have agency to restore it? The current studies provide strong evidence that they do, by extending forgiveness to the person who has harmed them. Compared with both how they felt before having forgiven (Studies 1–3) and to people who took revenge (Studies 1–4), victims who recalled forgiving, who imagined forgiving, or who forgave the transgressor reported higher levels of fundamentally and uniquely human qualities. Moreover, they reported levels of self-humanity that nearly exceeded the levels reported by participants who had not been offended at all, suggesting that forgiveness can fully restore a damaged sense of humanness, at least in some cases (Study 3). To our knowledge, this is the first work to show that victims’ sense of humanness can be restored in the wake of a dehumanizing transgression, and that victims themselves can achieve this rehumanization by forgiving the one who harmed them. Further, the benefits of forgiveness on self-humanity arose above and beyond either general affect or general self-views. Rather, self-humanity predicted these affective

Table 9
Simultaneous Regression Analysis for Full Model on Self-Humanity, Study 4

Predictor	<i>b</i>	<i>SE</i>	95% CI	<i>t</i>	<i>p</i>
(Constant)	4.14	0.16	[3.82, 4.46]	25.43	<.001
Response condition	-0.05	0.09	[-0.21, 0.12]	-0.57	.567
Moral values	0.30	0.04	[0.22, 0.37]	7.87	<.001
Power values	-0.13	0.03	[-0.19, -0.07]	-4.14	<.001
Justice values	0.06	0.03	[0.01, 0.12]	2.33	.020

Figure 7
Effect of Response Condition on Downstream Consequences via Process Measures and Self-Humanity, Study 4



Note. Path coefficients are unstandardized. Coefficients in parentheses represent total effect of response condition on self-humanity or downstream consequences; adjacent coefficients outside of parentheses represent direct effects on these outcomes when controlling for the potential process measures (for self-humanity) or the process measures and self-humanity (for the downstream consequences). * $p < .05$. ** $p < .01$. *** $p < .001$.

outcomes and other downstream outcomes related to the treatment of the self and others. The results suggest that self-humanity is a distinct and meaningful psychological process, one supported by forgiveness in the wake of a transgression and that in turn gives rise to more positive affect, views of the self, views of the transgressor, and related measures.

This research extends the literature on the psychological, physiological, and relational benefits of forgiveness (e.g., Braithwaite et al., 2011; Bono et al., 2008; Witvliet et al., 2001) by demonstrating its role in rehumanization and broader outcomes that likely benefit the victim, transgressor, and others. These benefits are especially meaningful because forgiving—although not easy—is under the control of the victim to give unlike, for instance, an apology from a transgressor. The current research also extends past work on dehumanization by focusing on the target’s psychological experience rather than the dehumanizer’s—a perspective

that is critical but that has largely been neglected in the literature (Bastian & Haslam, 2011).

We found little evidence for the rehumanizing benefits of revenge. Although participants who recalled taking revenge reported a somewhat higher sense of humanness in Study 1 after than before having responded, those who imagined taking revenge remained in a dehumanized state in Studies 2 and 3. Victims may reap other benefits from seeking revenge, such as feeling they have acted in accordance with power or justice values (Studies 3 and 4), reducing perceptions of the transgressor’s power (see the online supplemental materials), or deterring future harm (Nisbett & Cohen, 1996), but revenge may not reliably restore victims’ own sense of humanness.

The current studies have several limitations, and the prospect of addressing them presents exciting directions for future research. First, a strength of the present studies is their use of complementary

Table 10
Indirect Effects of Response Condition on Downstream Outcomes via Process Measures and Self-Humanity, Study 4

	Indirect effect	SE	95% CI
Condition→Moral Values→Self-Humanity→Outcome			
Self-harm	-.82	.29	[-1.46, -.31]
Belonging to human community	.09	.03	[.04, .15]
Centrality of morality to self-concept	.08	.02	[.05, .11]
Condition→Power Values→Self-Humanity→Outcome			
Self-harm	-.15	.08	[-.34, -.04]
Belonging to human community	.02	.01	[.004, .03]
Centrality of morality to self-concept	.01	.01	[.004, .03]

Note. Confidence intervals for the indirect effects reflect unstandardized estimates; confidence intervals that do not include the value 0 are considered statistically significant.

methods. However, each study examined only a snapshot in time, and only the victim's internal psychological experience and self-perceptions following their response to the transgressor. However, it is also important to understand this experience in a broader context, including how transgressors and third-party observers in turn perceive and respond to forgiving and vengeful victims. Longitudinal methods, including daily diaries or ecological momentary assessments, could examine the effect of forgiveness over time on both self-humanity and downstream outcomes, including the victim's relationship with the transgressor. Complementing such designs, targeted scenario studies can examine how a forgiving or vengeful response shapes a sequence of specific interpersonal processes (see Okonofua et al., 2016 Studies 1 and 2; Word et al., 1974). For example, are victims who forgive seen as more human than nonforgiving ones by transgressors or third-party observers? How does experiencing forgiveness versus revenge affect transgressors' own sense of humanness and subsequent behaviors toward the victim or others? If victims who forgive are seen as more human than those who do not forgive, will the expression of this perception of humanness in transgressors' or third-parties' behavior toward victims help sustain self-humanity among victims?

Second, although the current studies provided evidence for perceived morality as a mechanism of the rehumanizing benefits of forgiveness, they did not examine other potential processes. For example, the present studies found that forgiveness reduced participants' feelings of anger toward the transgressor. Although this feeling did not explain the increase in self-humanity, it is possible that a reduced likelihood of *acting* in anger toward the transgressor could increase people's sense of humanness by causing them to feel less impulsive or animalistic. It is also possible that forgiveness bolstered participants' sense of humanness in part because it satisfied a fundamental need to exert agency over their own and the transgressor's outcomes. However, because agency often involves self-promotion in the form of social power and dominance (Frimer et al., 2011), it is likely that revenge would have also been effective at providing participants with a sense of agency, albeit a form of agency that may feel less moral and thus less rehumanizing. Future work should more carefully examine these possibilities and other mechanisms of the forgiveness-rehumanization link to more fully understand the psychology that underlies this effect.

Third, although Studies 1 and 4 sampled diverse offenses that occurred across a variety of relationship types, Studies 2 and 3 focused on a conflict with a work colleague and an offense of moderate severity. All of the studies also examined adults from the United States. Future work may examine how forgiveness and revenge function in different relationship or cultural contexts, and with different kinds of offenses and levels of severity. For instance, in cultures of honor, where offenses are experienced as emasculating attacks on one's reputation and status, perhaps revenge might be an effective strategy for defending one's honor and restoring a sense of self-humanity (Cohen et al., 1996; Schumann & Ross, 2010). In a similar vein, it would be useful to examine potential individual difference or contextual moderators of the rehumanizing effects of forgiveness and revenge. It is possible, for example, that forgiveness is especially rehumanizing for people who tightly associate forgiveness with morality (e.g., those who ascribe to certain religions; Rye & Pargament, 2002; Schumann et al., 2014) or when this forgiveness is offered in response to a

rehumanizing apology. By contrast, revenge might be rehumanizing for those who tend to view it as a moral endeavor aimed at deterring future harm or upholding justice (Bies & Tripp, 1995; Strelan, 2018).

Although forgiveness can have costs—such as removing the negative consequences (e.g., anger, relationship stress) that discourage transgressors from reoffending (McNulty, 2011)—or feel unsatisfying, such as when the forgiveness feels undeserved due to a transgressor's lack of apology (Strelan et al., 2016)—it is also likely that there are many situations in which people tend not to forgive to their own detriment (e.g., Harris & Thoresen, 2005; Rasmussen et al., 2019; Tsang et al., 2006). The present research thus raises the question of whether interventions designed to cultivate forgiveness could promote victims' sense of humanness and other positive psychological and relational outcomes (for approaches to addressing other interpersonal conflicts, see Finkel et al., 2013; Okonofua et al., 2016; Thomaes et al., 2009; Yeager et al., 2014; see also Walton & Wilson, 2018, for a review of psychologically wise interventions). Such interventions should not coerce but empower victims and should be conducted in settings in which forgiveness is likely to benefit victims.

What might such interventions look like? Our letter-writing task in Study 4 suggests that most victims may be able to at least initiate the process of forgiveness by taking some time to actively release resentment and offer goodwill to the transgressor. Additional work suggests that creating opportunities to build empathy (see Worthington et al., 2000) or positive emotional capital in close relationships (e.g., sharing leisure activities or laughing together; Walsh & Neff, 2020) can foster forgiveness, and that promoting growth (vs. fixed) mindsets of personality can curtail revenge (Yeager et al., 2014) and promote forgiveness (Iwai & de França Carvalho, 2020). Thus, it appears that victims can engage in experiences or call on certain mindsets that facilitate a path toward forgiving their transgressors. Future work should examine whether these techniques can promote lasting forgiveness toward transgressors, and whether other tried-and-true methods for creating attitudinal and behavioral change are effective in this context. For example, victims could read testimonials from other people about the process of coming to forgive and the benefits forgiveness gave them, then complete a *saying-is-believing* exercise where they explain these benefits in their own words to other victims to promote internalization and personalization (Higgins & Rholes, 1978; Walton & Wilson, 2018). In doing so, people could even describe an example of a specific transgression they are working toward forgiving and how they are doing so. Field-experimental studies that promote forgiveness can further distinguish the psychological and relational consequences that occur when victims experience forgiveness (e.g., write a forgiving letter; reflect on their forgiveness of the transgressor) and when they share this forgiveness with the transgressor (e.g., send the letter; communicate forgiveness to the transgressor). Such theory- and research-based interventions have the potential to serve both applied functions—promoting well-being and relationship functioning—and theoretical functions—offering causal tests of the effects of forgiveness in ecologically valid settings and over time.

Tutu argued that forgiveness can be a form of both altruism and self-interest, suggesting that victims might use forgiveness intentionally as a self-help strategy (Worthington & Scherer, 2004). If people are aware or made aware of the rehumanizing effect of

forgiveness and other benefits, for instance in interventions like those described above, are they able and motivated to use forgiveness strategically in response to specific transgressions to reclaim their humanness and to achieve these benefits? Past research in other contexts suggests that awareness itself may not undermine intervention benefits but awareness that feels coercive and that reduces people's sense of free choice in engaging in intervention activities may be (cf. Knowles et al., 2010; Sherman et al., 2009; Silverman et al., 2013). Future work should thus examine how awareness influences the effectiveness of different types of forgiveness interventions.

The current findings also generate a number of important questions regarding rehumanization. For instance, even as we have focused on interpersonal processes and forgiveness, it is also relevant to compare forgiveness to intrapsychic techniques victims might use to rehumanize themselves, such as mindfulness strategies or physical activity, both of which promote a host of benefits for the self (e.g., Schreiner & Malcolm, 2008; Webster, 2015).

Finally, in demonstrating the agency that people have to restore their sense of humanness after it has been damaged by common indignities, the present findings raise the question of whether people also have agency to rehumanize themselves in response to blatant, severe, or group-based threats such as sexual assault, physical abuse, or gross racial stereotypes by forgiving their offenders. Martin Luther King Jr. advised to "meet the forces of hate with the power of love" (King, 1958). What are the psychological, interpersonal, and intergroup consequences for victims of following this advice? Notably, dehumanizing group stereotypes are often perpetrated in cultural artifacts (see Goff et al., 2008; Haslam, 2006; Turner, 1994) or institutional contexts (e.g., buildings named after eugenicists, objects that caricature groups of people, convey stereotypes, or signal exclusion, such as American Indian mascots; see Fryberg et al., 2008; Phillips, 2017). What would it mean to forgive these offenses, and would the benefits of forgiveness for rehumanization be contingent on substantive institutional actions to redress these harms (e.g., official apologies; renaming buildings, changing mascots, asserting inclusive cultural values; Blatz et al., 2009)? Additionally, how does forgiveness compare with other potential strategies to rehumanize the self, such as acting in other ways that signal a commitment to important moral values (e.g., acting prosocially in general) or that demonstrate the possession of fundamental and uniquely human qualities (e.g., expressing emotion through art or music; engaging in refined activities)? What is the role of other people in restoring or bolstering feelings of humanness, such as treatment by ingroup members that reflects respect and value or participation in and a commitment to minority-group cultures and communities that embody this dignity (see Brannon et al., 2015)? Given the prevalence of both subtle and blatant forms of dehumanization (Kteily & Bruneau, 2017), it is essential to further understand whether and how people can recover their sense of humanness—through either their own actions or the actions of others—in response to a range of dehumanizing experiences.

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