


Striving for the Moral Self: The Effects of Recalling Past Moral Actions on Future Moral Behavior

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Abstract

People's desires to see themselves as moral actors can contribute to their striving for and achievement of a sense of self-completeness. The authors use self-completion theory to predict (and show) that recalling one's own (im)moral behavior leads to compensatory rather than consistent moral action as a way of completing the moral self. In three studies, people who recalled their immoral behavior reported greater participation in moral activities (Study 1), reported stronger prosocial intentions (Study 2), and showed less cheating (Study 3) than people who recalled their moral behavior. These compensatory effects were related to the moral magnitude of the recalled event, but they did not emerge when people recalled their own positive or negative nonmoral behavior (Study 2) or others' (im)moral behavior (Study 3). Thus, the authors extend self-completion theory to the moral domain and use it to integrate the research on moral cleansing (remunerative moral strivings) and moral licensing (relaxed moral strivings).

Keywords

self-completion theory, morality, moral identity, moral self, moral compensation, cheating

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Although people value possessing a moral self-image (Monin & Jordan, 2009) and want to see themselves as moral actors (Mazar, Amir, & Ariely, 2008; Nisan, 1991), they also engage, at least occasionally, in immoral behavior. Similarly, after engaging in behaviors that jeopardize their moral self-images, individuals often engage in moral behavior. The media provide myriad examples of such moral oscillation: A prominent governor, lauded by *Fortune* for espousing "moral clarity" (Gimein, 2002), resigned in disgrace for acts of moral turpitude; a former drug addict and ex-convict now mentors parolees and helps deter at-risk youth from criminal behavior (Bold, 1999); after a life of devotion, an Omaha nun stole thousands of dollars from her archdiocese ("Nebraska nun," 2008); and 20 violent criminals completed their prison terms, earned college degrees, and vowed to uphold morally upright lives (Rubenstein, 2004). These examples highlight the dynamic nature of moral behavior, which, as we propose in the current investigation, results from individuals' attempts to maintain a moral self-image. We present three studies that demonstrate how recalling their prior behavior influences individuals' moral identities, intentions, and behaviors. In doing so, we hope to lay the groundwork for a more nuanced theory of dynamic moral behavior.

Self-completion theory (SCT; Gollwitzer & Kirchhof, 1998; Wicklund & Gollwitzer, 1982) provides a framework

for understanding the dynamics of moral behavior. SCT posits that individuals' personal (or group) identities act as defining goals that motivate them to acquire identity-relevant symbols (Barry & Tyler, 2009; Ledgerwood, Liviatan, & Carnevale, 2007). Thus, individuals feel a sense of incompleteness when they receive unfavorable feedback or fail to meet a critical performance threshold that is related to a cherished identity. The resulting tension (Lewin, 1926, as cited in Gollwitzer, Wicklund, & Hilton, 1982) leads to compensatory action aimed at acquiring alternative symbols of the cherished identity. In contrast, individuals feel a sense of completeness when they acquire important identity-relevant symbols, leading them to relax their subsequent identity-relevant strivings (Gollwitzer, Wicklund, & Hilton, 1982).

In this investigation, we extend SCT into the moral domain by suggesting that immoral and moral behavior lead

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to tension-inducing and tension-reducing forces, respectively: The tension resulting from immoral behavior motivates increased moral strivings, and the identity assurance that accompanies moral behavior allows individuals to relax their moral strivings. Thus, we predict that immoral behavior deprives individuals of symbols of a moral self, pushing them to increase their moral behaviors (or decrease their immoral behaviors), and moral behavior completes individuals' moral selves, allowing them to engage in fewer moral behaviors (or more immoral behaviors)—both processes performed in an effort to maintain a moral self-image. Research on *moral cleansing and moral licensing* supports these predictions.

An Incomplete Moral Self and Moral Cleansing

Consistent with SCT, research on moral cleansing suggests that acting immorally, which threatens or leads to a sense of incompleteness with respect to one's moral self, pushes people to engage in actions that figuratively cleanse themselves of their past transgressions and reassert their moral selves. Tetlock, Kristel, Elson, Green, and Lerner (2000), for instance, found that individuals who evaluated the acceptability of actions that threatened their sacred values (e.g., buying and selling body parts or votes for elected U.S. political office) subsequently behaved in ways that figuratively cleansed themselves: The mere contemplation of a "taboo trade-off" increased their intentions to volunteer for a political action group relative to people who did not first consider such trade-offs because, as the authors proposed, just thinking about these acts, "irreparably . . . compromise[d] one's moral identity" (p. 854). More literally, Zhong and Liljenquist (2006) found that recalling one's own immoral (vs. moral) behavior led people to rate cleansing products (e.g., soap) as more desirable than neutral products (e.g., pens), presumably because the cleansing products could help to figuratively wash away their sins. Taken together, these studies suggest that threats to individuals' moral self-images will lead them to engage in moral behavior as a way to acquire symbols of their moral selves.

A Complete Moral Self and Licensing Immoral Behavior

Also consistent with SCT, research suggests that moral behavior can provide individuals with moral credentials, licensing them to relax their moral strivings and engage in morally questionable behavior. Monin and Miller (2001), for instance, showed that individuals who signaled their egalitarianism by disagreeing with sexist or racist statements were subsequently more likely to recommend a man for a traditionally male job or a Caucasian for a job in an environment that seemed inhospitable to racial minorities, respectively. They argued that disagreeing with sexist or racist

statements helped allay individuals' concerns that their subsequent actions would be interpreted as morally questionable, thereby licensing their discriminatory behavior. These compensatory actions were unlikely to reflect strategic self-presentation motivations, as they surfaced even when participants believed that a different audience observed their initial demonstration of egalitarianism from that which observed their subsequent hiring recommendations.

Similarly, Sachdeva, Iliev, and Medin (2009) found that individuals who wrote self-relevant stories using a list of positively valenced words (e.g., *caring, generous*) indicated that they would donate less money to charity and engage in fewer environmentally friendly actions than individuals who wrote self-relevant stories using negatively valenced words (e.g., *greedy, disloyal*). Khan and Dhar (2006) also found that people who had imagined performing a prosocial task (e.g., donating to charity or volunteering) were subsequently more likely than control participants to choose a luxurious rather than a utilitarian purchase. This licensing effect seemed to operate beneath their conscious awareness: When asked why they chose the more hedonic item, only one participant in six noted that her choice was related to her initial prosocial action. Thus, consistent with SCT, research on moral licensing suggests that moral action can lead individuals to relax their moral strivings and engage in less moral behavior.

The Current Research

Despite this rich set of findings, several important questions about the dynamics of individuals' moral behavior remain. The first concerns whether compensatory moral behavior is driven by the elicitation of immoral or moral thoughts about the self, in particular, or by the elicitation of negatively or positively valenced thoughts about the self, more generally (Forgas, 1998; Tamir & Robinson, 2007). For example, although Sachdeva et al. (2009) demonstrated that writing a negatively versus a positively valenced personal story led to changes in subsequent moral intentions, the stories included negative and positive adjectives (e.g., *indifference, friendly*) that may have stimulated negative or positive images of the self rather than uniquely accessing individuals' moral selves.

A second unanswered question concerns whether moral behavior can license actual immoral behavior (rather than simply reducing the prevalence of moral behavior). Prior research on SCT has demonstrated that acquiring symbols of a cherished identity leads to relaxed goal strivings (e.g., Gollwitzer, Sheeran, Michalski, & Seifert, 2009; Wicklund & Gollwitzer, 1982), and research within the moral domain has documented that moral licensing can lead individuals to engage in behavior that supports gender stereotyping (Monin & Miller, 2001), express less cooperative intentions for environment conservation (Sachdeva et al., 2009), and consider purchasing luxurious items for themselves

(Khan & Dhar, 2006). In contrast, we test whether acquiring self-relevant moral symbols can lead individuals not only to relax their moral strivings but also to act in ways that directly conflict with their moral identity, that is, to engage in immoral behavior. Previous research suggests that failing to engage in moral behavior is not synonymous with engaging in immoral behavior; moral and immoral behaviors are not opposite ends of a single scale but rather two, distinct dimensions (Schwartz & Bilsky, 1990; Tannenbaum & Bartels, 2010). Thus, although donating blood may be perceived as a moral act, not donating blood is not perceived as immoral. In sum, we investigate whether acquiring symbols of a cherished moral identity is powerful enough to stimulate individuals to engage in behaviors that are counter to their moral self (i.e., cheating).

Third, previous research has not addressed whether moral compensatory processes are inversely proportional to the magnitude of the initial moral behavior. If individuals want to rebuild their moral self-images, recollections of egregious immoral behavior should require more intense remunerative action. We explore this question, as well as whether behaviors that create stronger symbols of one's moral self also lead to greater relaxation of subsequent moral strivings.

Finally, and perhaps most importantly, the current research provides a unifying theoretical framework with which to comprehensively understand moral cleansing and licensing. By using SCT as an overarching theoretical framework, we hope to advance understanding of when and why individuals engage in moral and immoral behavior. In particular, the current findings, in concert with research on SCT (Braun & Wicklund, 1989; Wicklund & Gollwitzer, 1982), provide a parsimonious theoretical explanation for the effects of reflections on one's moral self on future moral intentions and action.

Overview

We conducted three studies to illustrate the effects of individuals' recollections of their past immoral behaviors on their moral identity, prosocial intentions, and immoral behavior. Study 1 examined the effects of recalling one's own past immoral or moral behavior on subsequent, explicit attempts at symbolizing one's moral self. We found that individuals who recalled their past immoral behavior reported that they participated in more activities that symbolized the centrality of their moral selves (Aquino & Reed, 2002) compared to individuals who recalled their past moral behavior. This compensatory effect was inversely proportional to the moral magnitude of the recalled behavior.

Study 2 demonstrated that, in comparison to a control condition, recalling one's own past immoral behavior increased subsequent prosocial intentions, whereas recalling one's own past moral behavior decreased subsequent prosocial intentions. Study 2 also demonstrated that these compensatory

effects were unique to recollections of immoral and moral behavior: They did not emerge for individuals who recalled negative or positive nonmoral behaviors. In addition, like Study 1, the compensatory effects were inversely proportional to the moral magnitude of the recalled behavior.

Study 3 investigated the effects of recalling either one's own or others' moral behavior on subsequent, immoral behavior and persistence in completing a challenging task. In addition to replicating the compensatory effects found in Studies 1 and 2, Study 3's findings suggested that compensation occurred exclusively when the prior demonstration of one's moral incompleteness and completeness was self-referential and did not occur, at least not to the same magnitude, when recalling another's moral behavior. Study 3 also replicated the moral magnitude finding: The magnitude of individuals' immoral behavior was positively correlated with the moral magnitude of their recalled behavior.

Study 1

Study 1 examined the effects of individuals' recollections of their own prior moral or immoral behavior on their moral identity. Individuals' moral identities, which indicate how much they have "a self-conception organized around a set of moral traits" (Aquino & Reed, 2002, p. 1424), have two dimensions, internal and symbolic, both of which motivate moral choices and actions (Reed, Aquino, & Levy, 2007). A standard measure of moral identity (Aquino & Reed, 2002) asks individuals to consider nine traits that are exemplars of a moral individual and indicate the importance of possessing these traits (internal moral identity) and of demonstrating them to others (symbolic moral identity).

Individuals typically have strong desires to be moral people, as indicated by consistently high internal moral identity scores (Aquino & Reed, 2002; Monin & Jordan, 2009). For example, people's mean self-ratings on internal moral identity were 4.6 on a 5-point scale (Aquino & Reed, 2002) and 6.3 on a 7-point scale (Reed et al., 2007).¹ These consistently high scores suggest that people have a strong, general desire for a moral self-image. Thus, we predict that recalling their past immoral or moral behavior will not alter the value that individuals place on the importance of possessing moral traits (i.e., their internal moral identity). However, because people value having a moral identity, consistent with SCT, we predict that when individuals recall their immoral behavior (and experience a lack of moral self-completion), they will report a stronger tendency toward self-symbolizing their moral identities to others (i.e., their symbolic moral identity) compared to when they recall their moral behavior (and experience a sense of moral self-completion). Thus, we predict that internal moral identity scores will remain stable and high across conditions but that symbolic moral identity scores will exhibit compensatory

effects following individuals' recall of their own previous immoral or moral behaviors.

Method

Participants and design. As part of a classroom exercise, 23 MBA ($M_{age} = 28.83$, $SD = 2.71$; 48% women) and 43 executive MBA students ($M_{age} = 39.71$, $SD = 6.14$; 24% women) participated. We randomly assigned them to the moral or the immoral recall conditions in a between-participants design. A total of 5 participants did not complete the recall prompt (1 in the moral, 4 in the immoral), resulting in a final $N = 61$.

Procedures. Participants completed the materials online and anonymously. The experimental conditions asked them to recall "a time when [they] did something (ethical/unethical) in a work or professional setting."² Following a filler task (a work-related decision-making task), they completed the 10-item moral identity scale (Aquino & Reed, 2002). After reading nine moral identity adjectives (*helpful, honest, caring, hardworking, compassionate, kind, fair, friendly, generous*), participants indicated on 7-point scales how much they agreed with statements that reflected the importance of possessing (internal) and demonstrating to others that they possessed (symbolic) these traits. Sample items included, "It would make me feel good to be a person who has these characteristics" (internal) and "The types of things I do in my spare time (e.g., hobbies) clearly identify me as having these characteristics" (symbolic). Responses to the internal and symbolic items were averaged separately to create measures of internal ($M = 6.50$, $SD = 0.51$, $\alpha = .57$) and symbolic moral identity ($M = 4.80$, $SD = 1.05$, $\alpha = .80$), respectively. The subscales were positively correlated, $r(61) = .35$, $p = .01$.

Story coding. We provided two coders, blind to conditions and hypotheses, with the following definition of moral behavior: "act[ing] in the service of human welfare" (Aquino & Reed, 2002, p. 1423). They then evaluated the morality of the recalled behaviors (7-point bipolar scale: $-3 = \textit{very immoral}$, $+3 = \textit{very moral}$). Initial interrater reliability was high (Intraclass correlation coefficient [ICC] = .85); coders discussed discrepancies to reach consensus.

Results

Manipulation check. The recall manipulation had the intended effect: Coders rated stories in the moral condition as more moral than stories in the immoral condition, $F(1, 59) = 199.72$, $p < .001$, $\eta_p^2 = .77$ (see Table 1).

Moral identity. Recall did not affect individuals' internal moral identities (which were consistently high), but as predicted, participants who recalled immoral behavior had significantly higher symbolic moral identity scores than participants who recalled moral behavior. A 2 (recall: moral, immoral) \times 2 (moral identity: internal, symbolic) mixed-design ANOVA (with moral identity as the repeated factor)

Table 1. Descriptive Statistics for Coders' Ratings of the Morality of the Essay and Participants' Internal and Symbolic Moral Identity Scores by Recall Condition, Study 1

	Content of recalled stories			
	Moral ($n = 34$)		Immoral ($n = 27$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Morality of essay	1.57 _a	0.83	-1.33 _b	0.76
Internal moral identity	6.44 _a	0.54	6.59 _a	0.46
Symbolic moral identity	4.48 _c	1.11	5.19 _b	0.84

Morality of the essay ranges from -3 (*very immoral*) to $+3$ (*very moral*). Moral identity scores range from 1 (*completely disagree*) to 7 (*completely agree*). Means with different subscripts within each row differ significantly from each other at $p < .05$.

led to two significant main effects and the predicted interaction:³ Internal scores were higher than symbolic scores, $F(1, 59) = 181.13$, $p < .001$, $\eta_p^2 = .75$, and overall moral identity was greater in the immoral than the moral recall condition, $F(1, 59) = 6.95$, $p = .011$, $\eta_p^2 = .11$.

The interaction, $F(1, 59) = 5.17$, $p = .027$, $\eta_p^2 = .07$, showed that, as predicted (see Table 1), there was no significant effect of recall on internal moral identity, $F(1, 59) = 1.21$, $p = .28$, $\eta_p^2 = .02$, but symbolic moral identity scores in the immoral recall condition exceeded those in the moral recall condition, $F(1, 59) = 7.59$, $p = .01$, $\eta_p^2 = .11$. In addition, the correlation between coders' ratings of the morality of participants' behavior and their symbolic moral identity was negative and significant, $r(61) = -.28$, $p = .027$, indicating that decreasingly moral behavior was associated with higher symbolic moral identity scores.

Discussion

As predicted, activating memories of their past immoral behavior, compared to memories of their past moral behavior, led individuals to report that they were more moral actors in their everyday lives. Consistent with SCT, these effects appeared to be a function of individuals' motivation to protect their cherished moral self-images (by bolstering their symbolic moral identity after recalling their past immoral behavior). In addition, variation in individuals' symbolic moral identities was related to the moral magnitude of their recalled behavior, with recall of more immoral behavior leading to larger increases in individuals' symbolic moral identities.

In contrast, we found that recalling moral or immoral behavior did not influence individuals' internal moral identities. The high mean of internal moral identity scores in both conditions is consistent with the observation that individuals highly value their moral identities (regardless of whether that identity has been affirmed or threatened). That said, we

cannot rule out the possibility that the lack of a difference in internal moral identity resulted from ceiling effects: People's consistently high scores limited the likelihood of detecting changes to individuals' internal moral identity based on their moral recall.

Study 1 provided preliminary evidence of the compensatory effects of recollections of one's own moral behavior; however, it also had limitations. Namely, the symbolic moral identity items assessed individuals' interpretations of their current behavior rather than their future moral intentions. Thus, individuals' self-reported behaviors might have reflected attempts at impression management rather than attempts to reconstitute a threatened moral self (Schneider, 1981). This motivation might have also been stimulated by asking participants to recall their own (im)moral behavior and rate their moral identity in the same session. In addition, the recall instructions were fairly intrusive, particularly in the immoral condition, possibly making participants more attuned to our research goals than to their actual tendencies. To alleviate these concerns, Study 2 used a different set of recall instructions and a different method to assess moral self-completion.

Study 2

In Study 2, participants recalled previous actions that helped or harmed others (Jones, 1991; Reed et al., 2007; Velasquez & Rostankowski, 1985). We also included a control condition to determine whether recalling (im)moral behavior affected subsequent moral intentions over a nonmoral baseline. And finally, we included two additional conditions in which participants recalled negative and positive nonmoral behaviors to examine whether the negative or positive valence of recalled behavior might account for our previous results. We predicted that, in comparison to control participants, recalling immoral behaviors would increase prosocial intentions and recalling moral behaviors would decrease prosocial intentions. In contrast, we predicted that recalling negative or positive nonmoral behaviors would have no significant impact on individuals' prosocial intentions relative to a nonmoral baseline. Thus, we predicted that compensatory effects would surface only following recalls that evoked the moral self.

Method

Participants and design. We recruited participants ($N = 155$; 62% women; $M_{age} = 31.61$, $SD = 10.25$) from an online participant pool; they received \$5 for participating. We randomly assigned them to the moral, immoral, positive nonmoral, negative nonmoral, or control condition. In all, 7 participants did not complete the essay task (1 in the negative nonmoral condition, 3 in the immoral condition, and 3 in the moral condition), resulting in a final $N = 148$.

Procedures. Participants logged in to the study website and learned that they would be completing two unrelated studies. To enhance this cover story, a separate consent form preceded each study. "Study 1" asked participants to write a story about their typical Tuesday (control) or about a time when they helped other people (moral), used others to get something they wanted (immoral), achieved an important goal (positive nonmoral), or failed to achieve an important goal (negative nonmoral). The positive and negative nonmoral conditions captured situations that led to positive or negative self-assessments, respectively (Brunstein, 1993; Diener, 1984).

In "Study 2," participants completed a filler task (10 trivia questions) before responding to a series of randomly ordered items about their likelihood of donating to charity, donating blood, volunteering, vacationing, attending a party, and seeing a movie in the next month (7-point scales: $-3 = \text{very unlikely}$, $+3 = \text{very likely}$). A principal components analysis (varimax rotation) revealed that the first three items loaded onto one, prosocial intentions component (eigenvalue = 2.09; loadings ranged from .68 to .77; $\alpha = .60$), and the latter three loaded onto another, leisure activities component (eigenvalue = 1.21; loadings ranged from .66 to .77; $\alpha = .59$).

Story coding. As in Study 1, two coders, blind to conditions and hypotheses, evaluated the morality of the recalled behaviors (7-point bipolar scale: $-3 = \text{very immoral}$, $+3 = \text{very moral}$). Initial interrater reliability was high ($ICC = .86$); coders discussed discrepancies to reach consensus.

Results

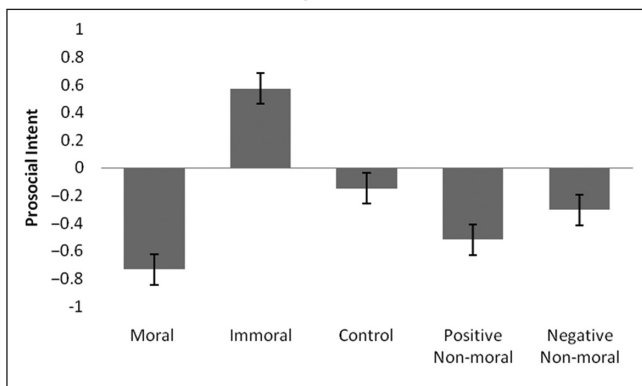
Manipulation check. The recall manipulation had the intended effect: a one-way ANOVA revealed a significant effect of condition on the coders' morality ratings, $F(4, 142) = 27.87$, $p < .001$, $\eta_p^2 = .44$ (see Table 2).⁴ Relative to the control condition, coders rated stories in the moral condition as more moral, $t(38.79) = 4.87$, $p < .001$, $\eta_p^2 = .30$, and stories in the immoral condition as less moral, $t(25.95) = 5.14$, $p < .001$, $\eta_p^2 = .39$. Story ratings in the positive and negative nonmoral conditions did not differ from the control condition, $t(63) = 1.26$, $p = .21$, $\eta_p^2 = .03$, and $t(45.15) = 1.58$, $p = .12$, $\eta_p^2 = .03$, respectively.

Prosocial intentions. As predicted, relative to the control, recalling moral or immoral behavior led to compensatory prosocial intentions, but remembering a positive or negative nonmoral behavior did not. A one-way ANOVA on participants' prosocial intentions revealed a significant effect of condition, $F(4, 143) = 3.46$, $p = .01$, $\eta_p^2 = .09$ (see Table 2). Relative to controls, participants in the moral condition had marginally weaker prosocial intentions, $F(1, 143) = 3.36$, $p = .069$, $\eta_p^2 = .05$, and participants in the immoral condition had significantly stronger prosocial intentions, $F(1, 143) = 4.12$, $p = .044$, $\eta_p^2 = .06$. Also as predicted, participants' prosocial intentions in the positive and negative nonmoral conditions

Table 2. Descriptive Statistics for Coders' Ratings of the Morality of the Essay and Participants' Prosocial Behavior and Leisure Activity Intentions as a Function of Condition, Study 2

	Moral (<i>n</i> = 30)		Immoral (<i>n</i> = 21)		Control (<i>n</i> = 38)		Positive nonmoral (<i>n</i> = 27)		Negative nonmoral (<i>n</i> = 32)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Morality of essay	0.91 _a	0.83	-0.71 _c	0.66	0.11 _b	0.38	0.26 _b	0.56	0.01 _b	0.12
Prosocial behavior	-0.73 _a	1.06	0.57 _c	1.22	-0.15 _b	1.55	-0.52 _{a,b}	1.29	-0.30 _b	1.24
Leisure activities	0.17 _a	1.31	0.38 _a	1.78	0.48 _a	1.43	-0.21 _a	1.73	0.23 _a	1.71

Morality of the essay ranges from -3 (*very immoral*) to +3 (*very moral*); prosocial behavior and leisure activities range from -3 (*very unlikely*) to +3 (*very likely*). Means with different subscripts within each row differ significantly from each other at $p < .05$, with the exception of the moral versus control comparison for prosocial behavior, where $p = .06$.

Figure 1. Likelihood of Engaging in Prosocial Behavior as a Function of Condition, Study 2.

Note: Error bars represent ± 1 standard error of the mean.

did not differ from controls', $F(1, 143) = 1.27, p = .26$, and $F(1, 143) = 0.24, p = .63$, respectively. (See Figure 1.)

In addition, the correlation between coders' ratings of the morality of participants' behavior and their prosocial intentions was again negative and significant, $r(147) = -.21, p = .01$, indicating that increasingly moral behavior was associated with decreasingly prosocial intentions. The correlation between morality ratings and prosocial behavior in only the moral and immoral conditions yielded a similar result, $r(50) = -.34, p = .02$.

Leisure activities. A one-way ANOVA revealed that participants' intentions to engage in leisure activities did not significantly differ as a function of condition, $F(4, 142) = 0.83, p = .51$ (see Table 2).

Discussion

These results provided additional support for our hypotheses using a less intrusive set of recall instructions and a different dependent measure. By presenting the recall and intention tasks within separate studies, we reduced the possibility that moral compensation was the result of motivations to strategically self-present (Schneider, 1981). We found that, relative

to controls, recalling immoral behavior led to stronger prosocial intentions whereas recalling moral behavior led to (marginally) weaker prosocial intentions. The findings also suggest that changes in prosocial intent were related to the intensity of individuals' previous moral behavior. In addition, recalling failure or success at reaching a goal had little impact on prosocial intentions relative to control participants. We should note that although participants in the immoral condition reported stronger prosocial intentions compared to participants in the negative nonmoral condition, participants in the moral and positive nonmoral conditions reported similar prosocial intentions. One could interpret these findings as revealing that recalling immoral behavior (i.e., inducing a feeling of incompleteness) had stronger effects than recalling moral behavior (i.e., inducing a feeling of completeness). However, the lack of a difference in the moral and positive nonmoral conditions may also originate from the American link between goal achievement and moral righteousness (Greenwald, 1980; Uhlmann, Poehlman, Tannenbaum, & Bargh, in press): Completing a nonmoral goal may have affirmed (albeit to a lesser extent) individuals' moral selves, leading to similarly attenuated prosocial intentions as participants who recalled their own moral behavior.

Taken together, the results of Studies 1 and 2 bolster our model of moral self-completion. They still have limitations, however, and leave important questions unanswered. For example, both studies included participants' self-reports rather than their actual behavior. Previous research has considered the presence or absence of moral (or "questionably moral"; viz., Monin & Miller's, 2001, hiring task) intent and behavior but has not examined individuals' explicitly immoral behavior. Thus, Study 3 assessed the effects of immoral and moral recall on actual immoral behavior.

Study 3

SCT is an intensely self-referent theory. It explains how individuals behave in light of threats to and affirmations of valued parts of their identities (Wicklund & Gollwitzer, 1982). The social world, however, provides myriad opportunities for

people to observe instances of others' behaviors, which might also lead them to take stock of their own behavior (Festinger, 1954). Thus, to provide a more comprehensive analysis of the dynamics of moral behavior, Study 3 examines the effects of recalling one's own, as well as another's, (im)moral behavior on cheating behavior. Although recalling others' behaviors and achievements can potentially influence an individual's own sense of completeness via social comparison processes, the indirect effects of others' behaviors on one's own identity completeness and subsequent identity strivings have received little attention in the SCT literature. Some research suggests that moral compensation occurs only when the moral recollections are personal (e.g., Sachdeva et al., 2009); however, other research (e.g., Goldstein, Cialdini, & Griskevicius, 2008) suggests that others' behaviors set standards that individuals must reach to maintain their cherished moral self-images, particularly when those others are similar to the individuals observing the behavior (Cialdini, Reno, & Kallgren, 1990; Larimer, Turner, Mallett, & Geisner, 2004). Thus, others' exemplary moral behavior could signal individuals' own moral incompleteness and create a threat to their moral selves—stimulating increases in moral behavior. Similarly, observations of others' immoral behavior could have the reverse effect, reinforcing the completeness of individuals' moral selves and relaxing their moral strivings. If, however, feelings of incompleteness or completeness exclusively occur in response to one's own behavior, then these kinds of consistent (rather than compensatory) behavioral reactions should not surface in response to others' behavior.

Given the centrality of persistence behaviors in SCT (Gollwitzer et al., 1982; Mahler, 1933, as cited in Gollwitzer et al., 1982), we also examined how long participants would persist on a task before engaging in immoral behavior (i.e., cheating). Participants who feel a sense of moral self-incompletion should be motivated to persist longer before cheating than participants who feel morally self-completed. Thus, we predicted that recalling one's own immoral behavior would lead to less cheating (and more persistence) than recalling one's own moral behavior. And we explored whether recalling others' immoral behavior would lead to more cheating (and less persistence) than recalling others' moral behavior. Finally, we again tested whether the magnitude of an individual's cheating behavior would be directly related to the moral magnitude of his or her recalled behavior (and whether it would be inversely related to the moral magnitude of another person's recalled behavior).

Method

Participants and design. We randomly assigned 168 undergraduates ($M_{\text{age}} = 20.08$, $SD = 3.01$; 69% women) to conditions in a 2 (target: self, other) \times 2 (recall: moral, immoral) between-participants design. They were paid \$8 for participating.

Procedures. We told participants that the study was about transferring paper-and-pencil tasks to the computer and that they would be completing both a qualitative (writing) and a quantitative (mathematical) task. To avoid demand characteristics, we used Study 2's recall instructions. The "other" recall conditions used the same instructions except that we asked participants to write about the past behavior of someone with whom they shared an identity (March, 1994; Terry, Hogg, & White, 1999) rather than about their own past behavior.

Participants then solved a series of 15 math problems (i.e., adding 10 two-digit numbers) that required them to submit a "correct" answer before they could continue to the next problem (adapted from von Hippel, Lakin, & Shakarchi, 2005). The experimenter told participants that if they did not hit the spacebar immediately after the problem appeared onscreen, a programming bug would reveal the correct answer. The experimenter also explained that, although no one would know whether the participant had seen the answer, seeing it would sabotage the experiment. The "answer" appeared at the bottom right-hand corner of the participant's screen 3.5 seconds after the problem appeared—unless the participant hit the spacebar. Once the participant hit the spacebar, he or she had unlimited time to answer the question and could attempt each problem up to five times before automatically being moved on to the next question (all participants either got the answer correct or cheated within the five possible tries). Von Hippel and colleagues used the appearance of the answer as a measure of cheating; however, because we were concerned that the answer would appear for slow responders as well as intentional cheaters, we altered the task so that the answer that appeared was ± 1 from the mathematically correct answer. For example, a problem string of " $-25 + -12 + 18 + 32 + 18 + -19 + -24 + 26 + 14 + -23$ " would lead to a "6" appearing at the bottom right-hand corner of the computer screen if the participant did not hit the space bar within 3.5 seconds (more than sufficient time to hit the spacebar; von Hippel et al., 2005); 5 was the correct answer. This change allowed us to differentiate participants who forgot to hit the spacebar from participants who intentionally used the provided answer (i.e., cheated). Participants could advance to the next problem only by entering the correct answer or the answer shown on the computer screen.

Before leaving the lab, participants completed a questionnaire that included questions about their math skills and the task: "How good are you at doing math calculations in your head?" (1 = *not good at all*, 7 = *very good*) and "How easy did you find the mental math task to be?" (1 = *very difficult*, 7 = *very easy*). We also probed for suspicion using a funneled debriefing technique (Bargh & Chartrand, 2000): We first asked participants what they thought the study was about and then if they found any of the instructions or tasks unusual or confusing. A total of 16 participants (4 in the immoral-self condition, 3 in the moral-self condition, 7 in the immoral-other condition, and 2 in the moral-other

Table 3. Descriptive Statistics for Coders' Ratings of the Morality of the Essay, Measures of Cheating Behavior, and Persistence as a Function of Target by Recall Condition, Study 3

	Content of recalled story			
	Moral		Immoral	
	M	SD	M	SD
Morality of essay				
Self	1.42 _a	0.78	-0.89 _b	0.87
Other	1.25 _a	0.68	-1.66 _c	0.65
Cheating: Frequency of allowing answer to appear (range = 0–15)				
Self	3.58 _a	3.83	0.71 _b	1.21
Other	2.00 _c	3.46	3.84 _a	5.56
Cheating: Frequency of using provided answer (range = 0–15)				
Self	3.03 _a	3.52	0.45 _a	1.01
Other	1.47 _c	2.59	2.82 _{a,c}	4.60
Persistence: Number completed before first cheat (range = 0–15)				
Self	6.76 _a	3.37	12.89 _b	0.96
Other	10.63 _c	6.21	10.00 _c	6.59

Coder's ratings of the morality of the essay range from -3 (*very immoral*) to +3 (*very moral*). Higher values on the frequency of allowing the answer to appear and using the provided answer indicate greater cheating. Lower values on the number of problems completed before first cheating indicate lesser persistence before cheating. Means with different subscripts within the same row or column for each dependent measure significantly differ from each other at $p < .05$, with the exception of the moral-other versus immoral-other comparison on frequency of allowing the answer appear, where $p = .08$.

condition) believed that the computer bug was part of the experimental procedures and were eliminated from the analyses, leaving $N = 152$ for the analyses.⁵

Cheating measures. We included two measures of cheating: von Hippel et al.'s (2005) original measure, *the frequency of allowing the answer to appear*, as well as a more sensitive measure, the participant's *frequency of using the provided answer*. Scores on both of these measures could range from 0 (indicating they did not cheat on any problem) to 15 (indicating that they cheated on all 15); the two measures were highly correlated, $r(152) = .896$, $p < .001$.

Persistence measure. We also assessed participants' persistence on the task by measuring the number of problems they correctly completed before they cheated for the first time (*number completed before first cheat*). Participants' scores on this measure could range from 0 (indicating that they cheated immediately) to 15 (indicating that they never cheated).

Story coding. As in Studies 1 and 2, two coders, blind to conditions and hypotheses, rated the morality of the recalled behavior (7-point bipolar scale: -3 = *very immoral*, +3 = *very moral*). Interrater reliability was high (ICC = .80); coders discussed discrepancies to reach consensus.

Results

Manipulation check. The recall manipulation had the intended effect: a 2 (target: self, other) \times 2 (recall: moral, immoral) ANOVA indicated that the stories in the moral condition were rated as more moral than those in the immoral condition, $F(1, 148) = 460.42$, $p < .001$, $\eta_p^2 = .76$. We also

observed an unpredicted target effect, $F(1, 148) = 15.22$, $p < .001$, $\eta_p^2 = .09$, with self-stories rated as more moral than other-stories, and a significant target by recall interaction, $F(1, 148) = 6.21$, $p = .014$, $\eta_p^2 = .04$, indicating that, although moral-self and moral-other stories did not differ in moral magnitude, $F(1, 148) = 0.18$, $p = .67$, other-immoral stories were rated as less moral than self-immoral stories, $F(1, 148) = 21.53$, $p < .001$, $\eta_p^2 = .22$ (see Table 3). Thus, although the difference between moral and immoral stories differed by target, coders rated moral stories as more moral than immoral stories for both the *self* and the *other* conditions.

Math skill. On average, participants reported being proficient (i.e., above the scale midpoint) at calculating math problems in their head ($M = 4.47$, $SD = 1.82$) and rated the task as slightly difficult ($M = 3.78$, $SD = 1.74$); these ratings were not significantly different across conditions, all $ps > .60$.

Allowing the answer to appear. More than half of the participants ($n = 86$; 57%) allowed the answer to appear at least once. Results of a 2 (target: self, other) \times 2 (recall: moral, immoral) ANOVA on the frequency that individuals allowed the answer to appear revealed the predicted target by recall interaction, $F(1, 148) = 14.32$, $p < .001$, $\eta_p^2 = .09$ (see Table 3).⁶ A comparison of the *self* stories indicated that, after recalling moral behavior, participants allowed the answer to appear more than they did after recalling immoral behavior, $t(44.26) = 4.29$, $p < .001$, $\eta_p^2 = .21$. In contrast, for *other* stories, they allowed the answer to appear (marginally) less after recalling moral behavior in comparison to recalling immoral behavior, $t(61.80) = 1.79$, $p = .08$, $\eta_p^2 = .04$.⁷ The main effects of target and recall were not significant ($F_s < 1.56$, $ps > .22$).

Using the provided answer. Just fewer than half of all participants ($n = 71$; 47%) used the provided answer at least once. A 2 (target: self, other) \times 2 (recall: moral, immoral) ANOVA on the frequency that individuals used the provided answer revealed the predicted target by recall interaction, $F(1, 148) = 14.17, p < .001, \eta_p^2 = .09$ (see Table 3). For self-stories, participants used the revealed answer more after recalling moral behavior than they did after recalling immoral behavior, $t(44.89) = 42.88, p < .001, \eta_p^2 = .19$. In contrast, participants used the provided answer more after recalling others' immoral behavior than after recalling others' moral behavior, although this difference was not significant, $t(58.46) = 1.64, p = .11, \eta_p^2 = .04$. Again, the target and recall main effects were not significant ($F_s < 1.42, p_s > .23$).

Persistence. A 2 (target: self, other) \times 2 (recall: moral, immoral) ANOVA revealed a significant main effect for recall: Participants who recalled a moral behavior completed fewer problems ($M = 8.70, SD = 6.54$) than those who recalled an immoral behavior ($M = 11.45, SD = 6.06$) before they cheated for the first time, $F(1, 148) = 7.71, p = .006, \eta_p^2 = .05$. A significant interaction, $F(1, 148) = 11.62, p = .001, \eta_p^2 = .07$ (see Table 3), and planned comparisons indicated that participants who recalled their own moral behavior answered fewer problems before their first instance of cheating than participants who recalled their own immoral behavior, $t(70.43) = 4.34, p < .001, \eta_p^2 = .20$. There was no difference in persistence for participants who recalled others' moral versus immoral behavior, $t(73.71) = 0.63, p = .53$.⁸

Morality ratings and magnitude of cheating and persistence. The coders' morality ratings were positively correlated with the magnitude of cheating (i.e., frequency of using the provided answer), $r(76) = .34, p = .002$, and negatively correlated with persistence, $r(76) = -.29, p = .01$, in the *self* conditions, but they were not significantly correlated with the magnitude of cheating, $r(76) = -.10, p = .35$, or persistence, $r(76) = .02, p = .85$, in the *other* conditions.

Discussion

Consistent with our previous results, the immoral-self condition led people to cheat less than the moral-self condition did, and the immoral-other condition led people to cheat marginally more than the moral-other condition did (at least on the allowing the answer to appear variable). Participants in the moral-self condition also cheated sooner (i.e., persisted less) than participants in the immoral-self condition did, whereas persistence was unrelated to cheating in the *other* conditions. Finally, individuals' cheating behavior was related to the moral magnitude of their recalled behavior in the *self* but not in the *other* conditions.

These findings suggest that recalling their own (im)moral behavior influenced individuals more than did recalling others' (im)moral behavior—even others with whom they shared an identity. Thus, these findings are consistent with the notion that SCT is a deeply personal phenomenon: Compensatory

behavior does not occur when a stimulating behavioral recollection concerns others; instead, it appears that recollections must be explicitly linked to the self (Gollwitzer, 1986; Gollwitzer & Kirchoff, 1998).

These weaker effects of others' behaviors on one's own (im)moral behavior appear inconsistent with the literature on the effects of social norms (Gino, Ayal, & Ariely, 2009; Goldstein et al., 2008). Unlike research on social norms, however, we asked participants to *recall* another person's behavior rather than to witness the behavior firsthand. Thus, the recall task may have dampened the effects of social standards, as recalling behavior may not have sufficiently activated social standards the way that firsthand observations of others' behavior might.

Study 3 extends the results of Studies 1 and 2 by demonstrating that recalling (im)moral behavior not only affects an individual's reported moral behavior and moral intentions but also affects an individual's actual (im)moral behavior. Study 3's findings also suggest that recalling another's (im)moral behavior may have a small influence on the (in)completeness of an individual's own moral self-image, and certainly a smaller effect than recalling one's own behavior does.

General Discussion

The current results demonstrate the impact of recalling one's own (versus others') moral behavior on subsequent moral identity, intentions, and behavior. The desire to accumulate symbols of one's moral self or to relax strivings after accumulating these symbols was most robust after people considered their own past behavior. Moreover, individuals' recollections of their own moral behaviors were powerful enough to allow not just reduced strivings for a moral self (e.g., reduced intentions to donate to charity or volunteer one's time) but also behaviors completely counter to a moral self (i.e., cheating).

We also found evidence that individuals' compensatory (im)moral behaviors were proportional to the moral magnitude of the initial stimulating event—recollections of more immoral behavior seemed to provide a stronger sense of incompleteness and increased subsequent moral strivings. Similarly, recollections of more moral behavior appeared to provide stronger symbols of one's moral self, increasing subsequent relaxation. In addition, we found evidence that compensatory moral action was broadly construed: Individuals' recollections of their (im)moral behaviors (e.g., volunteering at a soup kitchen or stealing a classmate's scarf) influenced their willingness to engage in other unrelated (im)moral behaviors (e.g., cheating or donating blood). These findings suggest that individuals use multiple routes to realize their desired moral selves. This extends prior research, which has largely examined the effects of prior moral behavior on subsequent moral behavior within the same domain (e.g., recommending a man for a traditionally male job role after

responding to questions about women and domestic life; Monin & Miller, 2001; see Sachdeva et al., 2009, for an exception). Although our finding that individuals generalize across activities within the moral domain fits SCT's prescription on the substitutability of activities that serve an overarching goal (Gollwitzer et al., 1982; Mahler, 1933, as cited in Gollwitzer et al., 1982), these results have interesting implications for how people cognitively categorize fairly disparate activities (e.g., helping and cheating) within a single moral rubric.

Moral Recollections and the Pendulum of Moral Behavior

A broad view of the current results, combined with previous findings (e.g., Monin & Miller, 2001; Sachdeva et al., 2009) and SCT, provides the basis for a theory of dynamic moral behavior. The current research suggests that an individual's moral behavior is not static. Rather, it fluctuates over time as a function of self-perceptions of the current completeness of the moral self. Although behaving morally allows individuals to accumulate symbols of a moral identity and boost their sense of moral self-completion, it also seems, paradoxically, to lead to relaxed moral strivings. Acting immorally, in contrast, creates a sense of moral self-incompletion, requiring remunerative moral action. Combining these effects within the same individual suggests that moral behavior will oscillate in response to the salience of the individual's own moral behaviors and sense of moral self-completion.

It also appears that these compensatory effects occur only when recalling one's own behavior activates a sense of (in)completeness. Thus, although evidence indicates that the moral behaviors of similar others act as a signal of moral standards (Gino et al., 2009), recalling others' moral behavior does not appear to sufficiently affect the completeness of an individual's moral self-image to elicit significant changes in individuals' subsequent moral behavior.

Research on SCT suggests that both an initial threat (or affirmation) and subsequent compensatory behavior will have their greatest effects when they are publicly acknowledged (Brunstein & Gollwitzer, 1996; Gollwitzer, 1986; Gollwitzer et al., 2009). Although our data do not directly resolve whether an audience is necessary to affect individuals' moral-self strivings, they do provide suggestive evidence. Across all three studies, participants recalled prior (im)moral behavior relatively anonymously (e.g., in Study 2 the online participants knew they would never meet the experimenter), and the instructions in Studies 2 and 3 indicated that their recalled stories would be used for a study that was unrelated to our morally relevant dependent measures. Although the recalled behavior may have had an audience when it originally occurred and participants likely assumed that someone would eventually read their essays, their recall of that behavior (and the subsequent behavior it elicited) was fairly, and possibly

completely, private (Gollwitzer et al., 2009). This suggests that private reflections on one's past behavior may be enough to produce changes in an individual's current moral self-image, which, in turn, produce compensatory effects. We encourage future researchers to directly test this conclusion.

Limitations and Other Future Directions

Because our research focused on the direct effects of recollections of moral behavior, we did not investigate a host of potential moderators of the past to future linkages of moral behavior. Because maintaining a moral self is central to our hypotheses, moderators related to individual differences in moral reasoning or the tendency to experience moral emotions may shed additional insight into when reflecting on past behavior is likely to lead to compensatory actions. For example, a person's cognitive moral development, that is, how one reasons about moral issues (Kohlberg, 1981), may affect the relationship between considerations of past behavior and future moral behaviors. Highly developed reasoners, for instance, might exhibit stronger linkages than less developed reasoners or may construe more behaviors as relevant to the moral domain. Similarly, people who are more prone to experiencing moral emotions, such as shame or guilt (Cohen, Wolf, Panter, & Insko, in press), might be more likely to spontaneously reflect on their initial moral behavior relative to those without such proclivities and subsequently engage in stronger compensatory patterns.

Future research might also explore the effects of the timing of past moral behavior on subsequent moral behavior. The current studies provided a relatively short time span between the recall task and subsequent measurements, essentially making the recalled behavior (no matter how long ago it actually occurred) salient just prior to expressing (im)moral intentions or engaging in behavior. It would be interesting to explore how the magnitude of initial acts influences the length of time that they continue to affect subsequent behavior. Egregious immoral acts, for instance, might have long-term effects on an individual's moral self-image and thus subsequent behavior (e.g., requiring multiple acts of moral behavior to repair one's tarnished moral self-image). In addition, in the current studies, merely recalling one's own (im)moral behavior was sufficient to produce compensatory effects, but future research could also investigate whether these same compensatory effects emerge when individuals engage in (im)moral behavior without being prompted to reflect on their behavior.

Conceiving of moral striving as goal pursuit might also provide a new frame of reference for theories of morality. We suggest that, just as people who have a goal of losing weight will occasionally engage in countergoal behaviors (e.g., consume high-calorie foods; Fishbach, Zhang, & Koo, 2009), people who have a goal of being a moral person will occasionally engage in immoral behavior. Research on goal

pursuit suggests that the certainty of individuals' commitments to a goal influences whether their past actions lead to consistent or compensatory future actions: When they are uncertain of their goal commitment, individuals construe goal-consistent behavior as evidence of commitment to the goal, and this, in turn, increases goal-consistent behavior. In contrast, when individuals are certain of their goal commitment, they construe goal-consistent actions as evidence of goal progress, which licenses them to engage in goal-inconsistent behavior (Koo & Fishbach, 2008). The current investigation (Study 1) provided evidence that individuals were committed to being moral people. Thus, consistent with these findings, being reminded of past goal progress should decrease rather than increase motivations to achieve a moral self. Future research could manipulate individuals' construal of moral behaviors as evidence of commitment versus progress and examine how construals affect the relationship between past and future moral behavior.

Finally, another worthy avenue for future research would be an investigation of the relative impact of individuals' past (im)moral behaviors on their subsequent motivation. Although Study 2 did not reveal a sizable difference (effect sizes for compensatory effects in response to immoral and moral behavior relative to controls were $\eta_p^2 = .06$ and $.05$, respectively), the desire to engage in self-completion following immoral behavior may be stronger than the relaxation of moral strivings following moral behavior. Theoretically, we would expect that a violated moral self-image would be more motivating than a completed moral self-image (Gollwitzer et al., 1982); however, future research should probe these effects more closely.

Conclusions

This research suggests that even though individuals have strong desires to be moral, their moral behaviors seem to be dynamic and malleable. Our findings suggest that individuals increase their moral strivings and behavior after experiencing threats to their moral selves, and they relax their strivings and decrease their moral behavior after fortifying their moral selves. Thus, stable and consistent moral behavior may not be an accurate picture of people's behavior patterns. This need not, however, be a discouraging story. Instead, it reflects positive desires to be a moral person paired with human failings, leading to predictable oscillations in moral intentions and behavior.

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Notes

1. Participants reported a weaker drive to signal their moral identities to others (i.e., their symbolic moral identity): Mean scores in this previous research were 3.10 and 4.43, respectively.
2. Like other scholars (e.g., Jones, 1991; Treviño, 1986; Weber, 1996), we use the terms *moral* and *ethical* interchangeably.
3. Including sample (MBA vs. executive MBA) as a variable in the analyses did not yield a significant three-way interaction among sample, moral identity, and (im)moral recall: $F(1, 57) = 1.42, p = .24$. In addition, there was not a significant main effect of sample, $F(1, 57) = 0.05, p = .82$, but there was a marginally significant interaction between moral identity and sample, $F(1, 57) = 3.00, p = .09, \eta_p^2 = .05$. However, the differences as a function of sample in internal or symbolic moral identity were not significant: MBA students reported a similar internal moral identity ($M = 6.63, SD = 0.42$), relative to executive MBA students ($M = 6.43, SD = 0.54$), $t(57) = 1.46, p = .15$, and executive MBA students reported a similar symbolic moral identity ($M = 4.88, SD = 1.04$) relative to MBA students ($M = 4.65, SD = 1.09$), $t(57) = 0.83, p = .41$.
4. The coders' morality ratings did not exhibit homogenous variance across conditions, Levene's $F(2, 142) = 13.35, p < .01$, and sample sizes were unequal. Thus, the ANOVA should be interpreted with caution. We report unequal-variance t tests in the follow-up comparisons (Welch, 1937); these tests led to identical conclusions as equal-variance (i.e., traditional) t tests.
5. Suspicion rates did not significantly differ by recall condition, $\chi^2(1, N = 168) = 2.04, p = .15$, target condition, $\chi^2(1, N = 168) = 0.181, p = .67$, or their interaction, Breslow-Day $\chi^2(1, N = 168) = 0.64, p = .43$.
6. To rule out the possibility that these effects were the result of participants' math skills, we conducted ANCOVAs for both the cheating and the persistence variables using self-reported math skill and the ease with which the individuals perceived the task as covariates. All recall condition by target interactions remained significant; all $F_s > 12.24$, all $p_s < .001$.
7. The cheating and persistence variables did not exhibit homogeneity of variance across conditions, all Levene's $F_s > 4.36$, $p_s < .01$. However, the equal n in each condition significantly reduced the chances of increased Type I errors (Mulligan, Wong, & Thompson, 1987). As a precaution, however, we report unequal-variance t tests. The conclusions from these t tests were identical to those from equal-variance t tests with the following exceptions: For other stories, individuals allowed the answer to

appear significantly (rather than marginally) less after recalling others' moral behavior in comparison to recalling immoral behavior, $t(148) = 2.16, p = .033$, and individuals used the provided answer marginally (rather than not significantly) less after recalling others' moral behavior in comparison to recalling immoral behavior, $t(148) = 1.89, p = .06$.

8. We also tested whether recalling one's own behavior differed from recalling another's behavior separately in the moral and immoral recall conditions. Relative to participants who recalled their own immoral behaviors, participants who recalled others' immoral behaviors allowed the answer to appear more frequently, $t(40.53) = 3.49, p < .001, \eta_p^2 = .14$, used the answer more frequently, $t(40.57) = 3.19, p = .003, \eta_p^2 = .12$, and answered fewer problems before first cheating, $t(69.90) = 2.34, p = .02, \eta_p^2 = .07$. In contrast, relative to participants who recalled others' moral behaviors, participants who recalled their own moral behaviors allowed the answer to appear (marginally) more frequently, $t(73.06) = 1.86, p = .07, \eta_p^2 = .05$, used the answer more frequently, $t(67.62) = 2.10, p = .04, \eta_p^2 = .06$, and answered fewer problems before first cheating, $t(73.85) = 2.46, p = .02, \eta_p^2 = .08$.

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