


Dishonest Deed, Clear Conscience: When Cheating Leads to Moral Disengagement and Motivated Forgetting

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Abstract

People routinely engage in dishonest acts without feeling guilty about their behavior. When and why does this occur? Across four studies, people justified their dishonest deeds through moral disengagement and exhibited motivated forgetting of information that might otherwise limit their dishonesty. Using hypothetical scenarios (Studies 1 and 2) and real tasks involving the opportunity to cheat (Studies 3 and 4), the authors find that one's own dishonest behavior increased moral disengagement and motivated forgetting of moral rules. Such changes did not occur in the case of honest behavior or consideration of the dishonest behavior of others. In addition, increasing moral saliency by having participants read or sign an honor code significantly reduced unethical behavior and prevented subsequent moral disengagement. Although dishonest behavior motivated moral leniency and led to forgetting of moral rules, honest behavior motivated moral stringency and diligent recollection of moral rules.

Keywords

dishonesty, ethics, ethics codes, moral disengagement, motivated forgetting, unethical behavior

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In *Everybody Does It*, Thomas Gabor (1994) documents the pervasive immorality of ordinary people. Challenging the stereotype that only criminals violate the law, Gabor describes the numerous transgressions of everyday life and suggests that the excuses people make for their dishonest behavior parallel the justifications criminals make for their crimes. This common tendency of people to justify and distance themselves from their ethics has captured the attention of several psychologists. Bandura (1986, 1990), for example, argues that “moral disengagement,” in which cognitive mechanisms deactivate moral self-regulation, tends to result in dishonesty. Moral disengagement is the process of making detrimental conduct personally acceptable by persuading oneself that the questionable behavior is actually morally permissible (Bandura, 1990; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996). Moral disengagement mediates the relationship between the moral principles individuals hold and their behavioral transgressions. Although previous research has provided insights into the outcomes of moral disengagement as predictive of decisions or behaviors, we examine moral disengagement as a *behavioral consequence* with the goal to explain how ordinary people routinely justify their

dishonest behavior. We focus on cheating, defined as behavior accruing benefits to the self that violates accepted standards or rules (see Jones, 1991, for a similar definition). We show that being placed in a morally permissive environment is sufficient to increase both cheating and moral disengagement.

Dishonest Behavior and Moral Disengagement

Individuals care about being moral and behaving ethically (Aquino & Reed, 2002). Given their concern for good conduct and because dishonest behavior could motivate self-censure, people tend to refrain from intentionally behaving in ways that violate their moral standards (Bandura, 1990; Bandura et al., 1996). They aim to minimize the gap separating their moral standards from their real actions.

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When actions and goals do not align, individuals feel distress due to cognitive dissonance, a state of psychological tension that arises when beliefs are at odds with behavior (Festinger, 1957). Elliot and Devine (1994) show dissonance to be a form of psychological discomfort and demonstrate that when behavior typically labeled as negative is attributed internally (to one's own choice, not to another's force), there is dissonance motivation, or "psychological discomfort that motivates or 'drives' the attitude change process" (Fazio & Cooper, 1983, p. 132). Alarming, these dissonance-provoked changes in attitudes may be durable over time. Recent work demonstrates that attitude change from a counterattitudinal essay-writing task persists even 1 month after the experiment (Senemeaud & Somat, 2009).

The psychological discomfort of dissonance calls for alleviation through a reduction strategy (Elkin & Leippe, 1986). In moral domains, people attenuate this distress either by modifying their behavior to bring it closer to their goals (Baumeister & Heatherton, 1996) or by modifying their beliefs.

Understanding the psychological consequences of dishonesty has long been a topic of interest to psychologists. Klass (1978) reviews numerous studies of individual feelings of guilt, shame, and self-esteem people experience after breaking moral norms. In particular, Klass highlights the need to clarify the role of subjective definition of behavior in response to one's own moral transgressions, noting that "the same overt action seems to make some people feel better and others feel worse, and for still others, has no effects" (p. 766).

Mazar, Amir, and Ariely (2008) conducted studies to reconcile the subjectivity of one's response to one particular type of moral transgression: cheating. They propose a theory of self-concept maintenance wherein people engage in dishonesty for profit, but only to a certain extent: They still care to maintain a positive self-view, and therefore they do not take advantage of the maximum opportunity to cheat to gain financially. Participants in their experiments who had the opportunity to cheat to earn more money engaged in relatively low levels of cheating and, when asked how honest they considered themselves and how moral they are relative to others, regarded their honesty equally highly as participants who did not have the opportunity to cheat.

Bandura and others suggest that individuals modify their beliefs about such questionable actions through moral disengagement, thereby alleviating cognitive dissonance (Bandura, 1990; Bandura et al., 1996; Detert, Trevino, & Sweitzer, 2008). Moral disengagement may take any of the following forms: by portraying unethical behavior as serving a moral purpose, by attributing behavior to external cues, by distorting the consequences of behavior, or by dehumanizing victims of unethical behavior.¹ Together, these ways to morally disengage explain how individuals recode their actions to appear less immoral and, as a result, shift ethical boundaries.

Prior work has largely focused on moral disengagement as a predictor of future behavior. For instance, research has

demonstrated a positive relationship between moral disengagement and aggression in children (Bandura, Caprara, Barbaranelli, Pastorelli, & Regalia, 2001; Bandura et al., 1996; Bandura, Underwood, & Fromson, 1975), approval of violence toward animals (Vollum, Buffington-Vollum, & Longmire, 2004), and decisions to support military actions (Aquino, Reed, Thau, & Freeman, 2007; McAlister, Bandura, & Owen, 2006).

Recently, Detert et al. (2008) investigated both the antecedents and outcomes of moral disengagement through three large-scale surveys. The authors theorized that some people are more predisposed to moral disengagement than others and identified four individual differences that are precursors to moral disengagement: low empathy, lack of moral identity, trait cynicism, and chance locus of control orientation. In addition, the authors found support for the view that moral disengagement plays a mediating role between these individual differences and unethical decision making.

Our research reverses the causation established in prior work and investigates moral disengagement as a *consequence* of dishonesty and as a consequence of simply being in a morally permissive environment. We are interested in whether the decision to act dishonestly can motivate real changes in both morality and memory through moral disengagement. Our research is consistent with work by Mills (1958), who studied how temptation changes children's attitudes toward punishment of dishonesty. Specifically, Mills measured the attitudes of grade school children toward cheating after manipulating the level of temptation to cheat on a competitive task. His participants faced either high temptation (with high performance rewards and small likelihood answers will be checked) or low temptation (with low performance rewards and large likelihood answers will be checked). High temptation indeed led to more cheating: children who succumbed to temptation became lenient in their attitudes toward cheating, whereas those who resisted temptation became strict. Mills's measure of interest was severity of punishment toward cheaters. In his particular study, the disparity of participants' attitudes toward punishment could be explained by concern that attitudes students expressed might truly affect the outcome for those who cheated. Jordan and Monin (2008) offer yet another explanation for Mills's result; the authors show that self-threat can produce an increase in moralization through what they term "the sucker-to-saint effect." In one experiment, participants rated themselves on several virtuous dimensions, including moral superiority. Those who completed a tedious task and also observed a confederate get away with quitting the same task rated themselves higher in moral superiority than did those who solely completed the task or solely observed the confederate quit. The authors show how people justify their unnecessary choices by feeling more moral than others. Our study goals are parallel: We aim to show how people justify their dishonest choices by dispelling concern for moral rules. Yet, departing from prior work, we focus on situations where dissonance results from one's

own dishonest deeds and leads people to morally disengage by judging wrongdoing as less problematic.

One recent set of studies has observed moral disengagement as a consequence of making an unethical choice. Paharia and Deshpande (2009) investigated situations in which consumers desire certain products that have been produced through the use of unethical manufacturing practices (e.g., use of child labor to produce shoes). After contemplating hypothetical purchases, these consumers tend to morally disengage after deciding to buy a product produced through unethical manufacturing practices.

Our work focuses on the relationship between dishonesty and the moral disengagement that follows. We extend prior work in several ways. First, our studies consider whether merely contemplating dishonest behavior triggers moral disengagement and whether this differs based on whose behavior is being judged (one's own actions or another person's). Second, we investigate changes in moral disengagement after committing real acts of dishonesty. Third, we observe how features of the environment—whether or not it permits dishonesty as well as whether or not morality is made salient—lead to different levels of unethical behavior and subsequent differences in moral disengagement. Finally, we examine if dishonest behavior leads to motivated forgetting of ethical standards through moral disengagement.

Dishonest Behavior and Motivated Forgetting

Individuals are persistent “revisionist historians” when recalling their pasts (Ross, McFarland, Conway, & Zanna, 1983). They tend to recall selectively in ways that support their decisions; for instance, people engage in “choice supportive memory distortion” for past choices, overattributing positive features to options chosen and negative features to options not chosen (Mather & Johnson, 2000; Mather, Shafir, & Johnson, 2000). This memory bias does not exist for experimenter-assigned selections (Benney & Henkel, 2006; Mather, Shafir, & Johnson, 2003) but does exist when people are led to an incorrect belief about what their previous choice was (Henkel & Mather, 2007). These findings point to the role of motivation in recall.

Given that motivation is a key component of memory, our studies also test whether there is a “strategic forgetting” of moral rules after one decides to behave unethically. People may selectively remember moral rules as a complementary strategy to moral disengagement after acting dishonestly.

Hypotheses Development

People possess personal standards of moral behavior that serve a self-regulatory role by guiding good behavior and deterring bad behavior (Bandura, 1986). People use these personal standards to anticipate, monitor, and judge their own

actions. Whenever behavior violates these standards, self-censure occurs. This self-regulatory function operates as described only if it is activated. Notably, individuals can activate and deactivate this moral self-regulation selectively via moral disengagement to avoid recognizing any violation of ethical standard (Bandura, 1999).

People face different incentives to revise their beliefs depending on whose actions are at question. A long stream of research has documented differences in the way people think about their own ethical behavior and that of others. Messick, Bloom, Boldizar, and Samuelson (1985) noticed that “we believe that we are fairer than others because we think that we do fair things more often and unfair things less often than others” (p. 497). Individuals are routinely more critical of the ethics of others than of their own ethics. People are more suspicious of others' motives for committing good deeds (Epley & Caruso, 2004; Epley & Dunning, 2000), and they assume that others are more self-interested than they are and more strongly motivated by money (Miller & Ratner, 1998; Ratner & Miller, 2001). Furthermore, people believe they are more honest and trustworthy than others (Baumhart, 1968; Messick & Bazerman, 1996) and that they try harder to do good (Alicke, 1985; Baumeister & Newman, 1994).

This research suggests that people will be more prone to justify their own dishonest actions than the same acts committed by others. Moral disengagement frees individuals from self-sanction and the accompanying guilt resulting from inconsistencies between behavior and internal standards. People have less motivation to justify the immoral behavior of others and thus are less likely to morally disengage as a result of observing others' behaviors. Thus, we hypothesize,

Hypothesis 1: People will be more likely to morally disengage when considering their own unethical behavior than when considering the behavior of another person.

Recent research suggests that people will behave dishonestly within a permissive environment far more often than we might expect (e.g., Gino, Ayal, & Ariely, 2009; Gino & Pierce, 2009a; Mazar et al., 2008). Combining this result with the prediction that one's own unethical actions lead to moral disengagement suggests that simply being in a permissive environment (rather than a nonpermissive environment) will result in greater moral disengagement, as there will be more dishonest people as a result of being in a permissive environment who have a need to morally disengage to justify their actions. This reasoning leads us to the following hypothesis:

Hypothesis 2: Permissive environments will lead to greater moral disengagement than less permissive environments.

Making morality salient could dampen the consequences of moral disengagement even in permissive environments.

Previous research has shown that when the moral categorization of a particular behavior is not clear-cut, people can, and in fact often do, categorize their own actions in positive terms, thereby avoiding the need to negatively update their moral self-image (Baumeister, 1998; Schweitzer & Hsee, 2002). However, Mazar et al. (2008) found that drawing people's attention to moral standards reduces dishonest behaviors. For example, after being asked to recall the Ten Commandments, participants who were given the opportunity to cheat and to gain financially from this action did not cheat at all; by contrast, when given the same opportunity to cheat, those who had not been reminded of the Ten Commandments cheated substantially. When unethical behavior is made salient, people may pay greater attention to their own moral standards and categorize the ethicality of their own behavior more rigidly. As a consequence, moral saliency may decrease people's tendency to engage in dishonest acts and increase the rigidity of their judgments of ethicality. Based on this reasoning, we hypothesize,

Hypothesis 3: Compared to a control condition, increasing moral awareness will lead to lower levels of moral disengagement for those who decided to behave honestly and higher levels of moral disengagement for those who decided to act unethically.

The saliency of ethical standards might produce different effects on an individual's likelihood to engage in dishonest behavior and moral disengagement depending on whether the person is actively or passively accepting such standards. Cioffi and Garner (1996) showed that making a volunteer decision (e.g., volunteer for a university committee or for an education project) by doing something (e.g., affirming one's own choice by selecting two items) results in more commitment to it than making the same decision by doing nothing (e.g., skipping items affirming a different choice). Similarly, in the ethics realm, individuals may commit more strongly to moral behavior when they have to actively agree to ethical standards (e.g., by signing an honor code) than when they passively observe the same standards (e.g., by only reading the honor code). Their (dis)honest behavior will then be reflected in the level of moral disengagement. Thus, we expect,

Hypothesis 4: Compared to a control condition, increasing moral awareness through an active choice will have stronger effects on behavior and subsequent moral disengagement than increasing moral awareness through passive observation.

A convenient way to bolster one's self-image after behaving unethically is to revise one's memory. Specifically, we predict that there will be motivated forgetting of moral rules when there is moral disengagement. Previous research

has shown that motivated memory errors are generally beneficial in reducing regret for options not taken but represent problems in memory accuracy, accountability, and learning (Mather et al., 2000). These problems are particularly relevant in the ethical domain, and our research directly tests for evidence of such motivated memory errors.

Hypothesis 5: Compared to a control condition, those who decide to act unethically will recollect fewer moral rules as stated in an honor code. This "strategic forgetting" will be mediated by moral disengagement.

We tested these hypotheses in four laboratory studies. Studies 1 and 2 test our first hypothesis using hypothetical scenarios. Studies 3 and 4 use behavioral measures to test the first hypothesis, in addition to Hypotheses 2, 3, 4, and 5. In Studies 3 and 4, participants were given the opportunity to behave dishonestly in permissive environment conditions, thus allowing us to link real unethical behavior with moral disengagement and strategic forgetting.

Study 1

Method

Participants. A total of 136 individuals (43% male; $M_{age} = 20$, $SD = 1.29$) participated in the study for \$3. All participants were college or graduate students at a university in the southern United States. The study took less than 10 minutes and was conducted with pencil and paper.

Design and procedure. Study 1 employed a 2 (unethical behavior: yes vs. no) \times 2 (target: self vs. other) between-subjects design. Participants were randomly assigned to one of four experimental conditions. In each condition, participants read a short scenario and answered a few questions after reading it. The scenario read,

Imagine that . . . You and another classmate missed the mid-term exam during the semester due to excused absences. You have the opportunity to make up the mid-term exam. The exam format is both multiple choice and essay. One section of students has already received the exam back with graded answer keys and essay scoring. You have never missed any exams in this class before, but other students have, and they confirm that make-up exams are the same as the original exams. The instructor does not rewrite make-up exams.

The second part of the scenario varied depending on whether the target cheated or behaved honestly and depending on whether the target was the respondent or the classmate. In the cheating condition, the scenario continued (*other* condition in parentheses),

You ask (your classmate asks) another classmate about the multiple choice and essay parts of the exam, and receive information about the exact questions and answers the graders are looking for. When you (your classmate takes) take the make-up exam, you are (they are) fully prepared and familiar with every multiple choice and essay question, and get (gets) full points for the exam with little effort.

In the honest condition, the scenario continued (*other* condition in parentheses),

You have (your classmate has) the opportunity to ask another classmate about the multiple choice and essay parts of the exam, but do not (does not) seek this information about the exact question and answers the graders are looking for. When you take (your classmate takes) the make-up exam, you (they) take it with no more knowledge of the exam content than those who took the exam on the original date.

After reading the scenario, participants completed the short questionnaire reported on the back of the same page. The questionnaire included items measuring moral disengagement. Bandura's measure of moral disengagement was designed and used only in samples of children and adolescents (Bandura et al., 1996; Bandura et al., 2001). We developed a more generalized and shorter measure to use in our setting. Our measure contains six items and was pilot tested prior to the study (see Appendix A).² For each of six statements measuring moral disengagement, participants were asked to indicate how much they agreed by using a 7-point scale (ranging from $-3 = \textit{strongly disagree}$ to $+3 = \textit{strongly agree}$). We randomized the order in which the six questions were presented to participants within each condition. A factor analysis revealed that the six items loaded onto the same factor. Thus, we computed the average across the six items and used the resulting aggregate measure of moral disengagement in the analyses below ($\alpha = .90$).

As their final task, participants answered a few demographic questions. Then they were paid and thanked.

Validation of the moral disengagement about cheating scale. Following the approach used by Detert et al. (2008) to validate their unethical decision making scale, we conducted two independent exercises to provide evidence regarding the construct validity of our moral disengagement about cheating scale. First, we contacted a group of 25 experts on research related to dishonesty and ethics via email and asked them to indicate whether the behaviors that are part of the moral disengagement about cheating scale represent a violation of ethical principles or rules, using a 7-point scale (1 = *not at all*, 7 = *very much*). The experts also rated four additional behaviors unrelated to ethics: (a) skipping class to have the time to go back home and pick up an assignment

you forgot and that is due today, (b) getting the bigger room in a two-bedroom apartment you're renting after drawing the longest straw for choosing bedrooms, (c) deciding to sign up for a class that is known to require little work, even when it is not as valuable as others, and (d) deciding not to complete a voluntary survey in one of your classes because you are too busy (adapted from Detert et al., 2008). The results show that experts found the six behaviors used in our moral disengagement about cheating scale to represent violations of ethical principles or rules. Their ratings for these behaviors were significantly higher than those for the four other behaviors unrelated to ethics ($M = 5.01$, $SD = 0.49$ vs. $M = 1.64$, $SD = 0.36$), $t(48) = 27.86$, $p < .001$. We repeated the same exercise with a group of 54 students and obtained a similar pattern of results.

In the second exercise, we conducted two surveys of 61 business students at the same university ($M_{\text{age}} = 21$, $SD = 1.66$; 46% male). First, the students answered our moral disengagement about cheating scale ($\alpha = .80$) together with other unrelated personality measures. Two weeks later, the same students were asked to answer another survey in which they indicated how often they engaged in 10 ethically questionable behaviors (e.g., "copying from another student on a test," and "using a false excuse to delay taking an exam or turning in an assignment"). We used a modified and shorter version of Detert et al.'s (2008) cheat-lie-steal scale ($\alpha = .71$) and a 7-point scale (ranging from 1 = *never* to 7 = *many times*). A correlation analysis indicates that ratings on our moral disengagement about cheating scale were correlated with more frequent dishonest behavior, as captured by the cheat-lie-steal scale ($r = .52$, $p < .001$).

Results

We conducted an analysis of variance (ANOVA) with our composite measure of moral disengagement as the dependent variable and unethical behavior (yes vs. no) and target (self vs. other) as between-subjects factors. Supporting Hypothesis 1, moral disengagement was higher when self was the target ($M = -0.15$, $SD = 1.70$) than when a classmate was the target ($M = -1.35$, $SD = 1.11$), $F(1, 132) = 29.19$, $p < .001$, $\eta^2 = .18$. Moral disengagement was also higher in the cheating condition ($M = -0.47$, $SD = 1.84$) than in the honest condition ($M = -1.04$, $SD = 1.13$), $F(1, 132) = 7.36$, $p = .008$, $\eta^2 = .05$.

More interestingly, our analysis also revealed a significant interaction effect between unethical behavior and target, $F(1, 132) = 31.38$, $p < .001$, $\eta^2 = .19$. When the scenario described the target behaving dishonestly, participants reported higher levels of moral disengagement for the self ($M = 0.76$, $SD = 1.61$) than for others ($M = -1.65$, $SD = 1.15$), $t(67) = 7.15$, $p < .001$. When the scenario described the target behaving honestly, participants reported the same level of moral disengagement for the self ($M = -1.06$, $SD = 1.26$) as for

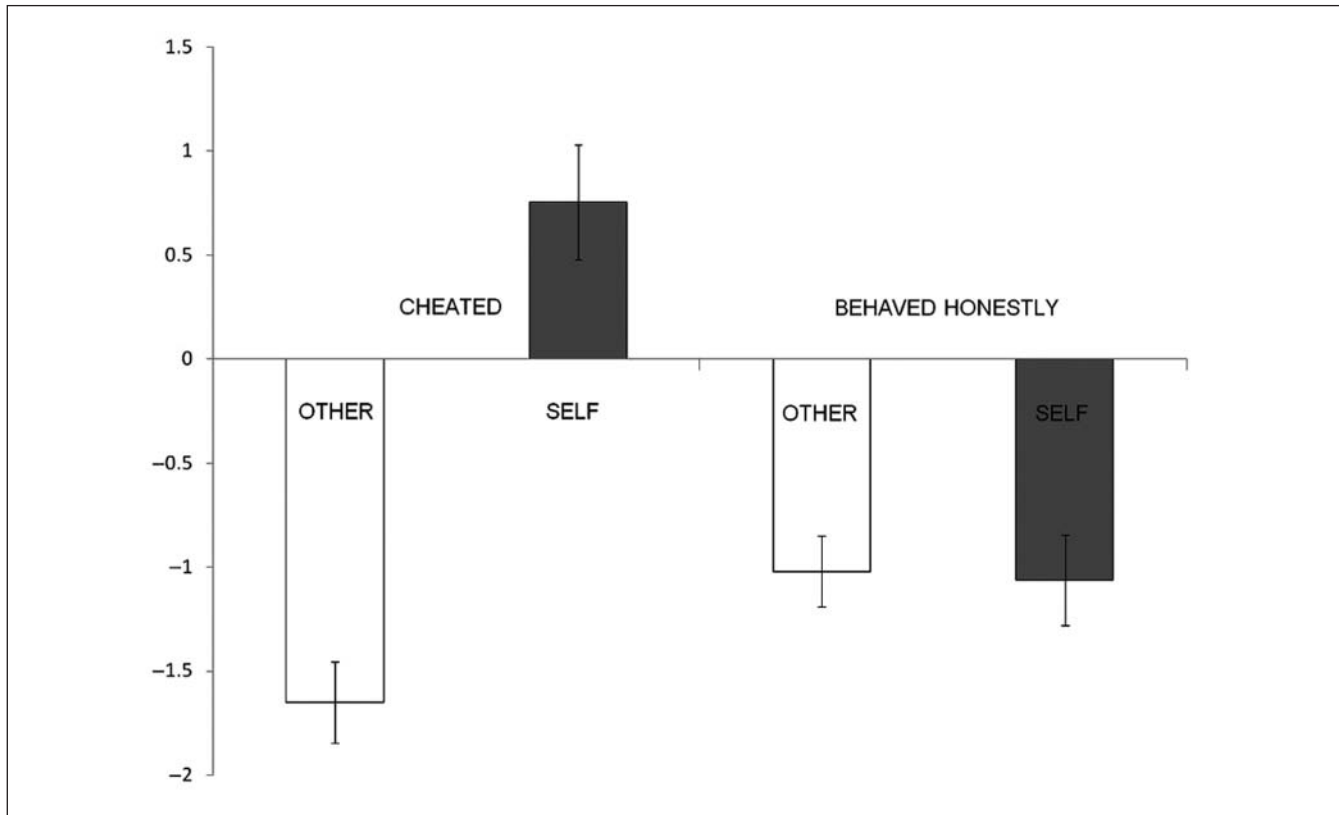


Figure 1. Mean values for moral disengagement by condition, Study 1

others ($M = -1.02$, $SD = 0.99$), $t(65) < 1$, $p = .88$. This interaction is depicted in Figure 1.

Additional analyses revealed that, when considering the dishonesty of others, participants reported lower ratings for moral disengagement compared to both the control condition describing honest behavior for others and the control condition describing honest behavior for the self (both $ps < .05$).

Discussion

The results of our first study demonstrated real changes in reported moral codes as measured by moral disengagement. Using hypothetical scenarios, we found that mere descriptions of dishonesty triggered moral disengagement. Furthermore, we found higher levels of moral disengagement when one considered one's own dishonest behavior in contrast to when one considered the dishonest behavior of another person. In fact, when considering the dishonesty of others, participants reported even lower moral disengagement compared to control conditions describing honest behavior; they became more morally stringent merely imagining the dishonesty of others but became more morally lenient merely imagining their own dishonesty.

Study 2

Although Study 1 provides some initial evidence for the effect of dishonest and honest behavior on moral disengagement, it did not establish a baseline measure for moral disengagement. Study 2 addresses this issue and examines whether it is moral leniency after behaving dishonestly or moral stringency after behaving honestly that drives the divergence in moral disengagement observed in Study 1.

Method

Participants. A total of 79 individuals (51% male; $M_{age} = 22$, $SD = 3.00$) participated in the study for \$7. All participants were college or graduate students at a university in the southern United States. The study took less than 30 minutes and was conducted by computer.

Design and procedure. Study 2 employed one between-subjects factor: dishonest versus honest behavior. Participants were first asked to answer a short questionnaire that included irrelevant questions and our measures of moral disengagement. The latter is used as a baseline for the study. Next, participants completed an unrelated filler task for about 10 minutes.

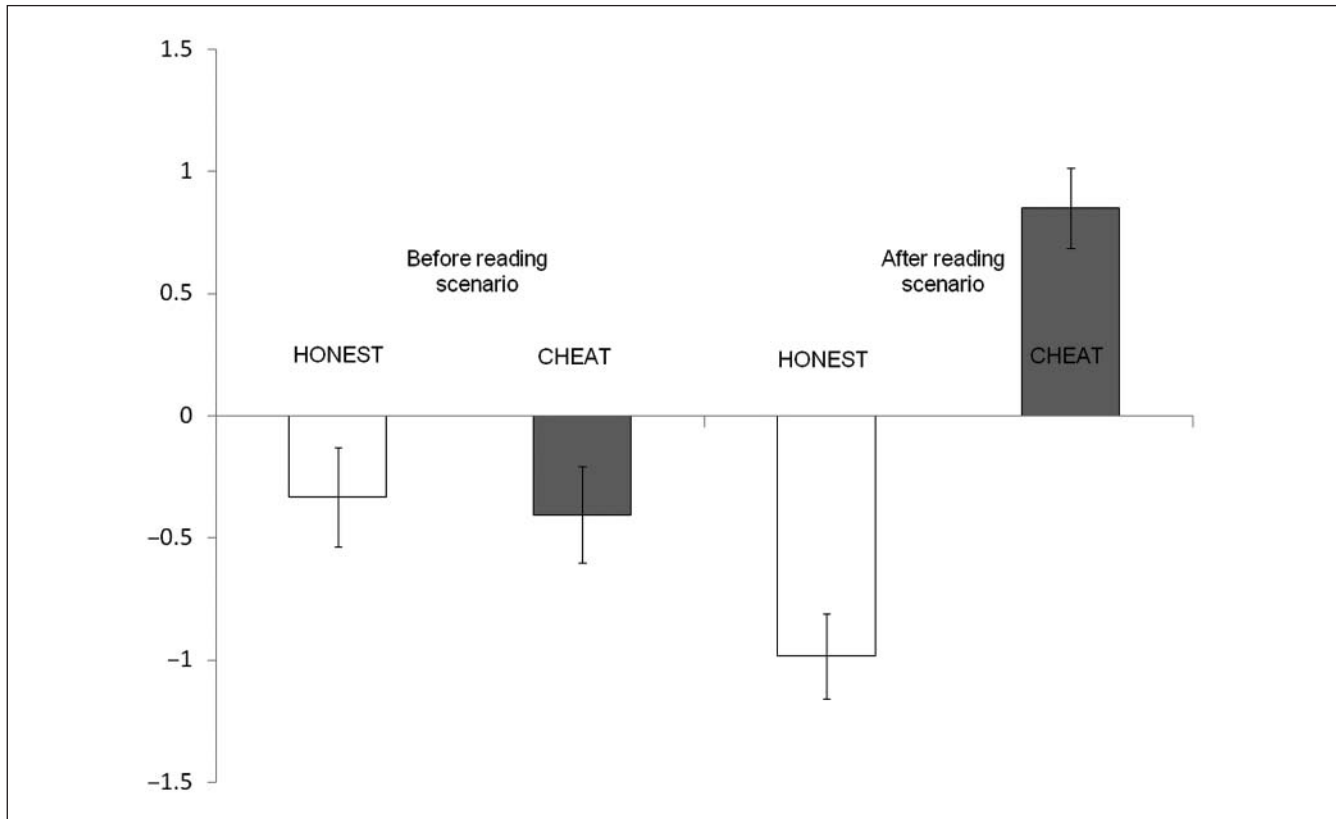


Figure 2. Mean values for moral disengagement by condition, Study 3

Finally, participants read one of the two versions of the scenarios used in Study 1 that described one's own behavior. Half were told to imagine they cheated, whereas half were told to imagine they behaved honestly. Participants then answered the questions measuring moral disengagement a second time after reading the scenario. Finally, they answered a few demographic questions, were paid, and then were thanked and dismissed.

Results

We conducted a 2 (within subjects: moral disengagement before and moral disengagement after reading the scenario) \times 2 (between subjects: unethical behavior vs. honest behavior) ANOVA. This analysis revealed a significant main effect for our behavior-type manipulation, $F(1, 77) = 13.16, p = .001, \eta^2 = .15$, and a significant effect for our within-subjects factor, $F(1, 77) = 9.28, p < .01, \eta^2 = .11$. More importantly, the interaction between the within-subjects factor and our behavior-type manipulation was significant, $F(1, 77) = 92.03, p < .001, \eta^2 = .54$. Compared to prior baseline levels, the level of moral disengagement significantly increased when the scenario described dishonest behavior, $F(1, 39) = 68.69,$

$p < .001, \eta^2 = .64$. The inverse relationship was also true: The level of moral disengagement significantly decreased when the scenario described honest behavior, $F(1, 38) = 25.89, p < .001, \eta^2 = .41$. These results are depicted in Figure 2.

Discussion

The results of our second study establish divergence from baseline measures of moral disengagement after reading hypothetical descriptions of one's own honest and dishonest behavior. Participants became more morally stringent when merely imagining they behaved honestly but became more morally lenient when merely imagining their own dishonesty. The results provide further evidence for the influence of one's own dishonest and honest behavior on moral disengagement.

Study 3

Our third study had three main goals. First, we aimed to observe changes in moral disengagement following real behavior. Participants were given the opportunity to behave dishonestly by overstating their performance on a problem-solving task to earn more money. Second, we investigated how simply

being put into an environment that permits unethical behavior affects behavior and moral views. Specifically, we examine whether permissive environments lead to greater moral disengagement than less permissive environments. Third, we test the effect of increasing moral awareness on unethical behavior and moral disengagement. Participants either read or did not read an honor code, and we observed whether awareness of honesty standards influenced dishonest behavior and moral disengagement.

We based our methods on those of Mazar et al. (2008), who designed an environment that allowed participants to cheat with anonymity to earn more money. The authors observed relatively low levels of cheating and no difference in opinion about one's own honesty between cheaters and noncheaters. In our study, instead of asking participants about their moral self-concept, we ask participants about the behavior of cheating. If, as Mazar and coauthors found, cheaters rate themselves to be equally moral to noncheaters, then it can be expected that the opinion of cheating behavior is changing through moral disengagement. Furthermore, Mazar and her coauthors did not measure moral disengagement or motivated forgetting. We extend their work by examining the effect of cheating on both variables in Studies 3 and 4.

We chose honor codes to manipulate participants' awareness of honesty standards because of their theoretical relevance and applied significance. Honor codes are used by many academic institutions, though evidence of their effectiveness remains unclear (Mazar et al., 2008). Previous studies using honor codes asked participants to sign the honor code as a way of declaring their commitment to honesty before completing a task (Dickerson, Thibodeau, Aronson, & Miller, 1992; Mazar et al., 2008; McCabe & Trevino, 1993, 1997). For instance, Mazar et al. (2008, Experiment 5) asked respondents to print their names and sign below the following statement: "I understand that this short survey falls under the [university] honor system." In our experiment, participants were not asked to sign the honor code but rather were instructed to read it carefully.

Method

Participants. A total of 140 individuals (51% male; $M_{age} = 22$, $SD = 3.48$) participated in the study for a maximum payment of \$12. Participants received a \$2 show-up fee and had the opportunity to earn an extra \$10 during the study. Most participants (94%) were college or graduate students at a university in the southeastern United States.

Design and procedure. Study 3 employed a 2 (possibility of cheating: control vs. shredder) \times 2 (honor code: read honor code vs. no honor code) between-subjects design. Twelve distinct experimental sessions were conducted, each lasting about 30 minutes. Each session had between 9 and 13 participants. The four conditions varied across the sessions. At the

beginning of each session, participants in the no-honor-code conditions were told that they were going to be taking part in a study to determine problem-solving skills under time pressure. Participants in the read-honor-code conditions instead were told that the study included two tasks, a comprehension task and a problem-solving task. As part of the comprehension task, participants were asked to spend a few minutes reading an academic honor code (see Appendix B). Once participants completed this task, the experimenter collected the sheets of paper with the honor code and then explained the instructions for the problem-solving task (initially developed by Mazar et al., 2008).

All participants received a brown envelope that contained \$10 (nine one-dollar bills and four quarters) and an empty white envelope. Each participant also received two sheets of paper. The first was a worksheet with 20 matrices, each based on a set of 12 three-digit numbers (e.g., 4.57). The second sheet was a collection slip on which participants were supposed to report their performance and answer questions about their gender and age. Once the experiment started, participants had 4 minutes to find two numbers per matrix that added up to 10, a duration that was not sufficient for anyone to solve all 20 matrices. For each pair of numbers correctly identified, participants were allowed to keep \$0.50 from their supply of money. At the end of the allotted time, they were asked to transfer the unearned amount to the white envelope.

There were two boxes in the room: a blue recycling box for the questionnaires and a cardboard box for the white envelopes containing unearned money. In the control conditions, the two boxes were located on the experimenter's desk. After the 4 minutes had passed, participants in these conditions were asked to line up near the desk and hand the test to the experimenter. The experimenter checked how many matrices each participant had correctly solved, wrote down their score on the collection slip, and deposited both sheets in the blue recycling box. Next, the experimenter made sure that participants left the correct amount of unearned money in the white envelope (based on their performance) and deposited the white envelope into the cardboard box.

In the shredder conditions, the boxes were located in two different corners of the classroom, and the recycling box stood next to an electric shredder. After the 4 minutes had passed, participants in these conditions were asked to count the number of correctly solved matrices, write this number down on the collection slip, walk to the shredder, and shred their worksheet. Next, participants were asked to transfer their unearned money from the brown envelope into the white envelope and to place it and the collection slip into the cardboard box (which was in a different corner of the room). During this process, the experimenter remained at her desk and did not check that the participants followed her instructions.

After completing the matrix task, participants in all conditions completed a postexperiment questionnaire that included

Table 1. Dependent Variables Measured in Study 3 by Condition

	No opportunity to cheat	Opportunity to cheat
No honor code	Moral disengagement Scored performance	Moral disengagement Self-reported performance
Read honor code	Moral disengagement Memory task Scored performance	Moral disengagement Memory task Self-reported performance

questions measuring moral disengagement as well as some demographic questions. Participants in the read-honor-code conditions completed an additional task after the final questionnaire. The task, called a “memory task,” consisted of a few questions about the honor code participants read at the beginning of the study.

Dependent Measures and Summary of Predictions

Table 1 depicts the conditions in Study 3 and the dependent variables of interest in each condition. We are interested in differences in the following three variables between conditions: dishonest behavior, moral disengagement, and remembering the honor code.

Dishonest behavior. We use the difference between objective scored performance (for those with no opportunity to cheat) and self-reported performance (for those with an opportunity to cheat) as a proxy for cheating. We predict cheating will occur in permissive environments—in other words, that self-reported performance will be higher than objective scored performance. We also predict that making morality salient through exposure to the honor code will reduce cheating among those who had the opportunity to cheat.

Moral disengagement. We predict two main effects. First, a permissive environment (providing the opportunity to cheat) will lead to increased moral disengagement, as compared to a control environment wherein cheating is not possible. Second, reading an honor code prior to the problem-solving task will reduce moral disengagement. Making morality salient will prevent moral leniency.

Remembering the honor code. We anticipate a “strategic forgetting” effect: Those who cheated in permissive environments will remember fewer items on the honor code than those who did not have the opportunity to cheat. Furthermore, we expect this difference in memory to be mediated by moral disengagement.

Results

Table 2 reports the descriptive statistics for the variables measured in Study 3 by condition.

Dishonest behavior. We first examined the effect of our manipulations on participants’ reported performance on the problem-solving task using a 2 (possibility of cheating) \times 2 (honor code) between-subjects ANOVA. As expected, participants reported higher performance when they had the opportunity to cheat ($M = 11.64$, $SD = 5.11$) than when they did not ($M = 7.91$, $SD = 4.08$), $F(1, 136) = 23.41$, $p < .001$, $\eta^2 = .15$. In addition, participants reported higher performance when they did not read the honor code before the problem-solving task ($M = 10.78$, $SD = 5.16$) than when they did ($M = 8.96$, $SD = 4.69$), $F(1, 136) = 4.63$, $p < .05$, $\eta^2 = .03$. Finally, the possibility of cheating and honor code interaction was also significant, $F(1, 136) = 4.03$, $p < .05$, $\eta^2 = .03$. When participants did not have the possibility to cheat, reading the honor code did not affect their performance on the problem-solving task (7.86 vs. 7.97), $t(65) < 1$, $p = .91$. But when presented with the opportunity to cheat (by shredding the task worksheet), participants’ self-reported performance was significantly higher in the no-honor-code condition ($M = 13.22$, $SD = 4.88$) than in the read-honor-code condition ($M = 10.03$, $SD = 4.88$), $t(71) = 2.79$, $p < .01$. We also note that participants’ performance in the shredder/read-honor-code condition was higher than participants’ performance in the control/read-honor-code condition (10.03 vs. 7.86), suggesting that reading the honor code reduced cheating but did not eliminate it completely, $t(69) = 1.99$, $p = .05$.

Moral disengagement. Just as in Studies 1 and 2, we averaged responses to six items on our moral disengagement about cheating scale ($\alpha = .91$). We used this aggregate measure as the dependent variable in a 2 (possibility of cheating) \times 2 (honor code) between-subjects ANOVA. Participants’ levels of moral disengagement were higher when they had the opportunity to cheat ($M = 0.17$, $SD = 1.43$) than when they did not ($M = -1.27$, $SD = 1.03$), $F(1, 136) = 52.32$, $p < .001$, $\eta^2 = .28$, suggesting that the opportunity to cheat made them more morally lenient. In addition, participants’ levels of moral disengagement were higher when they did not read the honor code before the problem-solving task ($M = 0.02$, $SD = 1.31$) than when they did ($M = -1.04$, $SD = 1.38$), $F(1, 136) = 4.63$, $p < .05$, $\eta^2 = .03$. Reading the honor code made participants more morally stringent. This difference was significant in both the conditions in which participants had the opportunity to cheat (-0.72 vs. -1.78), $t(65) = 4.85$, $p < .001$, and in the control conditions (0.66 vs. -0.34), $t(71) = 3.17$, $p < .001$. Finally, the possibility of cheating and honor code interaction was insignificant, $F < 1$, ns .

Remembering the honor code. To test for strategic forgetting, we counted participants’ correct answers to the memory task (see Appendix C). Of those who read the honor code,

Table 2. Descriptive Statistics by Condition for the Variables Measured in Study 3

		Performance		Moral disengagement		Items of honor code remembered correctly	
		M	SD	M	SD	M	SD
No opportunity to cheat	No honor code	7.97	3.92	-0.72	1.09		
	Read honor code	7.86	4.27	-1.77	0.66	3.54	1.17
Opportunity to cheat	No honor code	13.22	4.88	0.66	1.15		
	Read honor code	10.03	4.88	-0.34	1.52	2.44	1.08

Table 3. Hierarchical Regression Analysis, Study 3

	Items correctly remembered					
	Moral disengagement		Step 1		Step 2	
	β	<i>t</i>	β	<i>t</i>	β	<i>t</i>
Possibility of cheating	.53	5.14***	-.44	-4.11***	-.23	-1.95
Moral disengagement					-.41	-3.43**

Adding moral disengagement increased variance explained significantly for our dependent variable from $R^2 = .20$ to $R^2 = .32$, $F(1, 68) = 11.77$, $p = .001$. ** $p < .01$. *** $p < .001$.

participants in the shredder condition remembered fewer items of the honor code ($M = 2.44$, $SD = 1.08$) compared to participants in the control condition ($M = 3.54$, $SD = 1.17$), $t(69) = -4.11$, $p < .001$. Those with the opportunity to cheat showcased motivated forgetting of the honor code.

We tested whether moral disengagement mediated the effect of cheating opportunity on the number of items participants correctly remembered. We followed the hierarchical regression procedures recommended by MacKinnon, Fairchild, and Fritz (2007). The effect of the possibility of cheating on items correctly remembered was reduced to nonsignificance when moral disengagement was included in the equation, and moral disengagement was a significant predictor of memory of honor code content (see Table 3). To examine whether the indirect effect of the possibility-to-cheat manipulation on number of items correctly remembered through moral disengagement was significant, we used bootstrap procedures to construct bias-corrected confidence intervals based on 1,000 random samples with replacement from the full sample (Stine, 1989). Mediation is present when the size of an indirect effect differs significantly from zero (MacKinnon et al., 2007; Shrout & Bolger, 2002), which was the case for our indirect effect, since the 95% bias-corrected confidence interval excluded zero (-.55, -.17). In summary, moral disengagement mediated the effect of cheating opportunity on the number of items the honor code participants correctly remembered.

Discussion

Study 3 suggests that moral disengagement is influenced by the opportunity to cheat and by awareness of ethical standards.

At the aggregate level, when the opportunity to cheat is present, we observe increased moral disengagement. Our results substantiate prior work showing that giving participants the opportunity to cheat led to higher levels of dishonesty (e.g., Gino & Pierce, 2009b; Mazar et al., 2008) and extend it by demonstrating a divergence in beliefs as measured by moral disengagement following unethical behavior. This effect is due to treatment—not to selection—as participants in all conditions should have the same ex ante levels of moral disengagement prior to the experiment. Any differences we observed between conditions can therefore be attributed to differences in treatment.

In addition, we find that asking participants to simply read an honor code reduced dishonesty when participants had the opportunity to cheat but did not completely eliminate cheating. Finally, we show that moral disengagement mediated the effect of opportunity to cheat on memory of honor code content, explaining how those who cheated exhibited motivated forgetting of the honor code. The relationship among permissibility of environment, moral saliency, cheating behavior, beliefs, and memory of honor code (which we tested in this study) is depicted in Figure 3.

Study 4

Study 4 builds on Study 3 in two ways. First, we distinguish those who cheated from those who did not cheat when presented with the opportunity. Although Study 3 manipulated moral permissiveness and saliency to demonstrate their impacts on aggregate levels of moral disengagement and memory, Study 4 identified cheaters from noncheaters, allowing us to

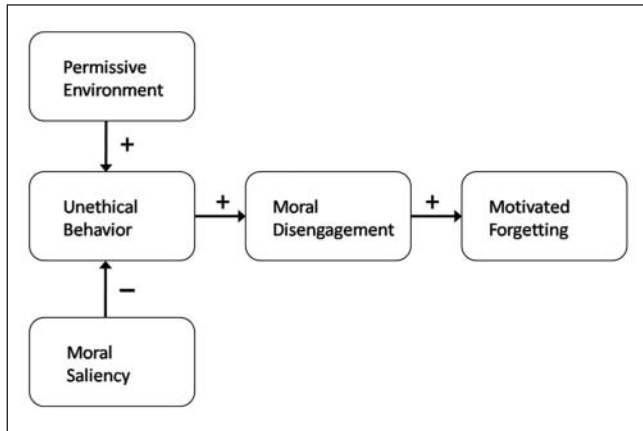


Figure 3. Tested relationships among variables, Study 3 and Study 4

measure the impact of the decision to cheat on subsequent levels of moral disengagement and memory. The second goal was to test whether providing an environment with higher commitment to moral standards (through signing an honor code as opposed to just reading it) would lead to differences in behavior, beliefs, and memory.

Our design allowed us to measure real changes in reported morality and memory on an individual-by-individual basis, giving us the opportunity to explore not just the consequences of bad behavior but also the antecedents of good behavior.

Method

Participants. A total of 138 individuals (55% male; $M_{age} = 21$, $SD = 2.48$) participated in the study for a maximum payment of \$12. Participants received a \$2 show-up fee and had the opportunity to earn an extra \$10 during the study. Most participants (93%) were college or graduate students at a university in the eastern United States.

Design and procedure. Study 4 employed a 2 (possibility of cheating: control vs. recycle) \times 3 (honor code: read honor code vs. sign honor code vs. no honor code) between-subjects design. Study 4 followed the same procedure used in Study 3, with two differences. In the possibility of cheating conditions, we used only the recycling bin and no shredder. So that participants would feel the problem-solving task was anonymous, we asked them not to report their study ID on the matrix sheet—only on the rest of the material they had received. To match participants' score reporting slips to their test sheets after the study, we changed one of the three-digit numbers in the last matrix on the test sheet so that it matched participants' study ID. This design allows us to track each individual's performance.

The second change was the addition of a new condition for the honor code manipulation. In the sign-honor-code conditions, participants printed their names and signed below a statement appearing at the bottom of the page with the honor

code they had received. The statement read, "I understand that this study falls under the [university] honor system." This condition is similar to the one employed by Mazar et al. (2008, Experiment 5), which was successful in eliminating dishonesty when study participants had the opportunity to act unethically. See Table 4 for summary of the dependent variables measured by conditions in this study.

Results

Table 5 reports the descriptive statistics for the variables measured in Study 4 by condition.

Dishonest behavior. Participants' reported performance on the problem-solving task was used as the dependent variable in a 2 (possibility of cheating) \times 3 (honor code) between-subjects ANOVA. Participants' reported performance was higher when they had the opportunity to cheat ($M = 10.39$, $SD = 5.06$) than when they did not ($M = 7.52$, $SD = 3.38$), $F(1, 132) = 16.67$, $p < .001$, $\eta^2 = .11$. This analysis also revealed a main effect of honor code, $F(2, 132) = 5.60$, $p < .01$, $\eta^2 = .08$, as well as a significant possibility of cheating and honor code interaction, $F(2, 132) = 4.00$, $p < .05$, $\eta^2 = .06$. These results are depicted in Figure 4. Exposure to the honor code did not affect reported performance when there was no opportunity to cheat (all p s for comparisons are insignificant). In contrast, with the opportunity to cheat, participants' performance was significantly higher in the no-honor-code condition ($M = 13.09$, $SD = 4.80$) than in both the read-honor-code condition ($M = 10.05$, $SD = 4.99$, $p < .05$) and the sign-honor-code condition ($M = 7.91$, $SD = 4.11$, $p < .001$).

We should also note that among those who simply read the honor code, performance in the recycle condition was higher than performance in the control condition (10.05 vs. 7.39), suggesting that reading the honor code reduced cheating but did not eliminate it completely, $t(43) = 2.04$, $p < .05$. However, when we move from those who simply read the honor code to those who signed the honor code, performance in the recycle condition was not statistically significantly different from performance in the control condition (7.91 vs. 7.37), $t(44) < 1$, $p = .63$. This suggests that reading an honor code reduced cheating but did not eliminate it, whereas signing the same honor code in effect eliminated cheating (i.e., reduced it to a level not statistically different from when cheating was not possible).

As expected, participants' actual performance on the problem-solving task did not vary across conditions, effect of possibility of cheating $F(1, 132) < 1$, $p = .87$, effect of honor code manipulation $F(2, 132) < 1$, $p = .83$, interaction effect $F(2, 132) < 1$, $p = .98$. This confirms that performance differences found in this study and in our previous one were entirely due to differences in participants' self-reports (as determined by the opportunity and decision to cheat).

Study 4 allowed us to disaggregate the cheaters from the noncheaters in the recycle conditions. The percentage of

Table 4. Dependent Variables Measured in Study 4 by Condition

	No opportunity to cheat	Opportunity to cheat: Did not cheat	Opportunity to cheat: Cheated
No honor code	Moral disengagement Scored performance	Moral disengagement Self-reported performance	Moral disengagement Self-reported performance
Read honor code	Moral disengagement Memory task	Moral disengagement Memory task	Moral disengagement Memory task
Sign honor code	Scored performance Moral disengagement Memory task Scored performance	Self-reported performance Moral disengagement Memory task Self-reported performance	Self-reported performance Moral disengagement Memory task Self-reported performance

Table 5. Descriptive Statistics by Condition for the Variables Measured in Study 4

		Reported performance		Actual performance		Moral disengagement		Items of honor code remembered correctly	
		M	SD	M	SD	M	SD	M	SD
No opportunity to cheat	No honor code	7.79	3.35	7.79	3.35	-0.56	1.17		
	Read honor code	7.39	3.65	7.39	3.65	-1.59	0.64	3.39	1.20
	Sign honor code	7.38	3.28	7.38	3.28	-2.19	0.55	4.00	1.14
Opportunity to cheat	No honor code	13.09	4.80	7.61	2.61	0.38	1.34		
	Read honor code	10.05	4.99	7.23	2.47	-1.05	1.84	2.82	1.87
	Sign honor code	7.91	4.10	7.45	3.70	-2.15	1.63	4.27	1.70

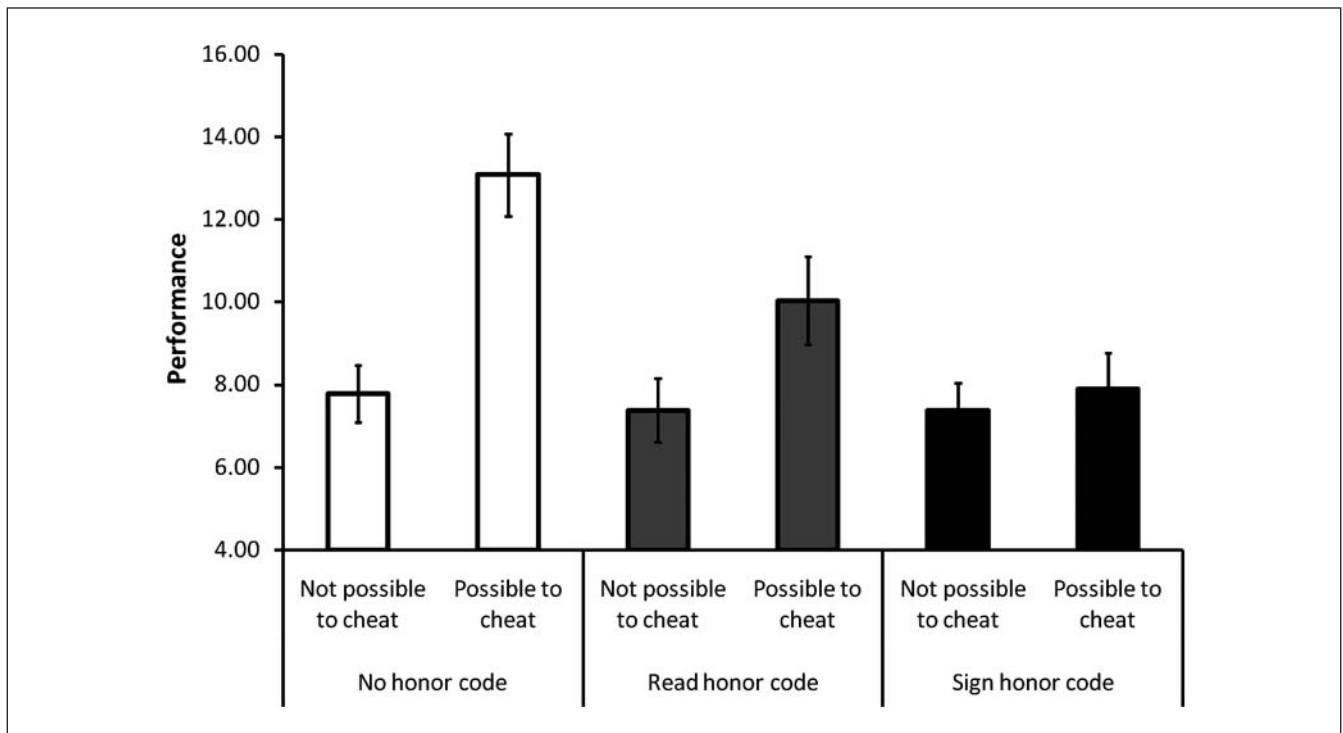


Figure 4. Reported performance on the problem-solving task by condition, Study 4

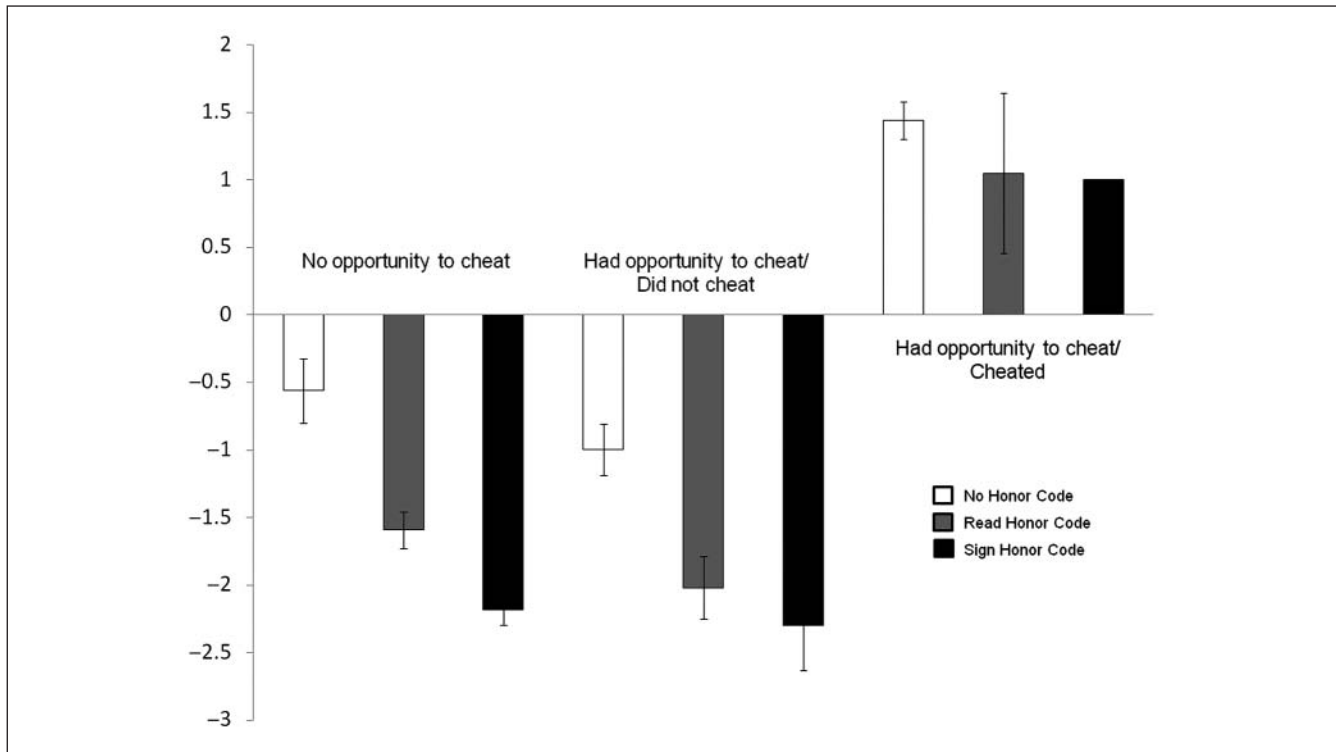


Figure 5. Mean values for moral disengagement by condition, Study 4

participants who behaved dishonestly when they had the opportunity to do so varied based on the honor code manipulation, $\chi^2(2, N = 67) = 14.12, p = .001$. In the no-honor-code condition, 57% of participants (13 out of 23) overreported their performance. This percentage was significantly lower in the read-honor-code condition, in which 32% of participants (7 out of 22) overreported their performance. Finally, in the sign-honor-code condition, only 1 participant out of 22 overreported his performance. Simply reading an honor code reduced cheating behavior by almost half; signing the same honor code almost eliminated cheating altogether.

Moral disengagement. As before, a factor analysis revealed that the six items of the moral disengagement about cheating scale loaded onto the same factor. Thus, we computed the average across the six items and used the resulting aggregate measure of moral disengagement in the analyses below ($\alpha = .94$). We used this aggregate measure as the dependent variable in a 2 (possibility of cheating) \times 3 (honor code) between-subjects ANOVA. As expected, participants' ratings for moral disengagement were higher when they had the opportunity to cheat ($M = -0.92, SD = 1.90$) than when they did not ($M = -1.45, SD = 1.07$), $F(1, 132) = 5.48, p < .05, \eta^2 = .04$. This analysis also revealed a main effect of honor code, $F(2, 132) = 31.22, p < .001, \eta^2 = .32$, on levels of moral disengagement. There was no significant interaction between possibility of cheating and honor code manipulations, $F(2, 132) = 1.46, p = .24, \eta^2 = .02$.

We next examined the level of moral disengagement for participants who had the opportunity to cheat and compared the ratings of people who behaved dishonestly by overreporting their performance to those who behaved honestly. Figure 5 reports the mean values of moral disengagement by condition, distinguishing between people who cheated and those who did not in the conditions in which all participants had the opportunity to behave dishonestly.

Honor code readers. Those who read the honor code reported a higher level of moral disengagement after they cheated ($M = 1.05, SD = 1.57$) than those who did not cheat ($M = -2.02, SD = 0.90$), $t(20) = 5.88, p < .001$. Furthermore, cheaters who read the honor code reported higher levels of moral disengagement than participants who read the honor code but did not have the opportunity to cheat ($M = -1.59, SD = 0.64$), $t(28) = 6.64, p < .001$. Finally, those who had the opportunity to cheat but behaved honestly reported a lower level of moral disengagement than did participants with no opportunity to cheat, but this difference reached only marginal significance, $t(36) = -1.72, p = .09$. This suggests that moral standards tighten when the opportunity to cheat is rejected in favor of honest behavior.

No honor code. Those who cheated in this condition reported a level of moral disengagement that was higher than that of those who did not cheat (1.44 vs. -1), $t(21) = 10.66, p < .001$, and higher than that of those with no opportunity to cheat (1.44 vs. -0.56), $t(35) = 5.85, p < .001$. We expected that

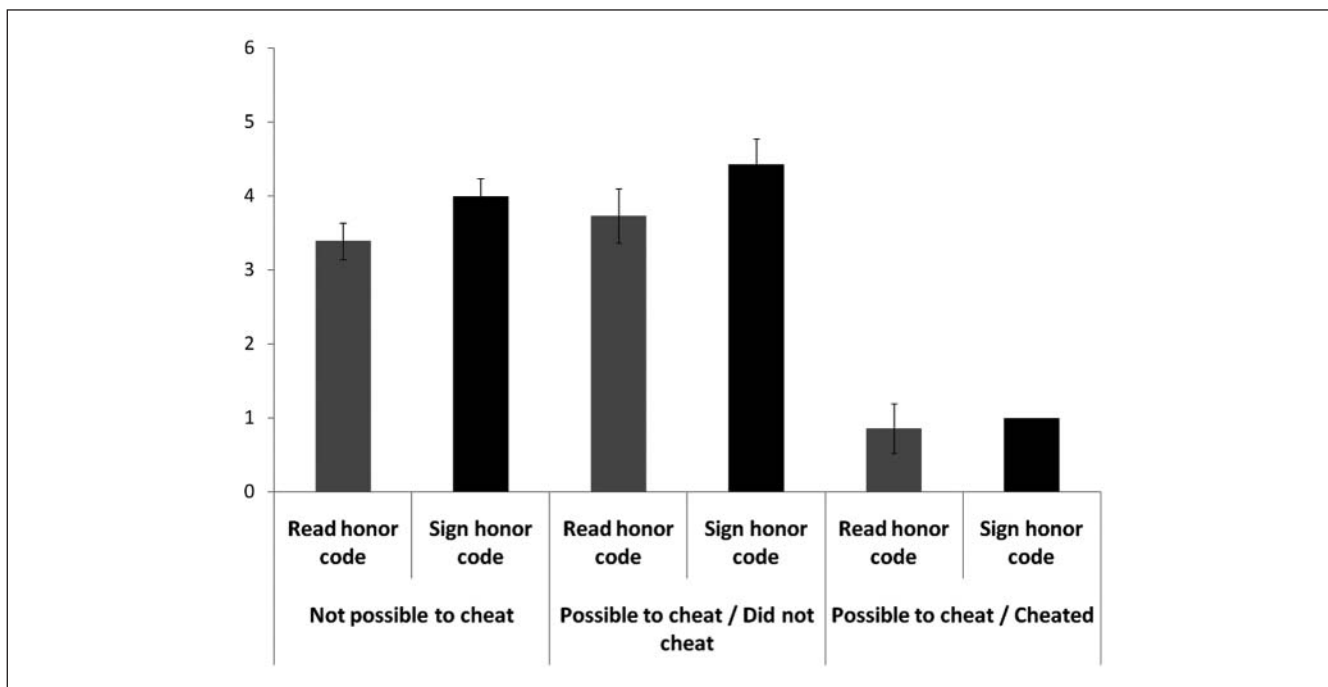


Figure 6. Number of items correctly remembered by condition, Study 4

those who had the opportunity to cheat but behaved honestly would report lower levels of moral disengagement than participants with no opportunity to cheat. The results were in the expected direction (-1 vs. -0.56), but the difference did not reach significance, $t(32) = -1.12, p = .27$.

Remembering the honor code. In our final set of analyses, we examined whether our manipulations influenced the number of items of the honor code that participants remembered. For these analyses, we did not consider participants who did not read the honor code, as they did not complete the memory task. We tested the number of correctly remembered items in a 2 (possibility of cheating: control vs. recycle) $\times 2$ (honor code: read vs. sign) between-subjects ANOVA. This analysis revealed a main effect for signing the honor code, $F(1, 87) = 10.78, p = .001, \eta^2 = .11$; participants remembered fewer items when they only read the honor code ($M = 3.11, SD = 1.57$) than when they signed it ($M = 4.13, SD = 1.42$). The main effect for possibility of cheating was not significant, $F(1, 87) < 1, p = .63, \eta^2 = .00$, nor was the interaction between possibility of cheating and honor code, $F(1, 87) = 1.81, p = .18, \eta^2 = .02$.

We tested for the existence of strategic moral forgetting within the condition in which participants faced the opportunity to cheat. A comparison between those who cheated and those who resisted cheating points to differences in memory: Participants who did cheat recalled significantly fewer items than did participants who did not cheat, $F(1, 40) = 15.81, p < .001, \eta^2 = .28$. Figure 6 reports the average number of items

that participants correctly remembered in each condition and distinguishes between participants who cheated and those who did not when they were given the opportunity to do so.

We also tested whether moral disengagement mediated the effect of awareness of ethical standards (read honor code vs. sign honor code) on the number of items of the honor code that participants correctly remembered. The effect of awareness of ethical standards on items correctly remembered was reduced to nonsignificance when moral disengagement was included in the equation, and moral disengagement was a significant predictor of our dependent variable (see Table 6). A bootstrap analysis showed the 95% bias-corrected confidence interval for the size of the indirect effect of the honor code manipulation on number of items correctly remembered through moral disengagement excluded zero ($-.94, -.61$), suggesting a significant indirect effect (MacKinnon et al., 2007; Shrout & Bolger, 2002). These results show that moral disengagement mediated the effect of awareness of ethical standards on the number of items of the honor code that participants correctly remembered.

Discussion

The results of our fourth study, which allowed us to separate cheaters from noncheaters, provided further evidence that the decision to cheat changes levels of moral disengagement and that awareness of ethical standards affects the decision to cheat. When we strengthened participants' awareness of

Table 6. Hierarchical Regression Analysis, Study 4

	Moral disengagement		Items correctly remembered			
			Step 1		Step 2	
	β	t	β	t	β	t
Possibility of cheating	.11	1.08	-.05	< 1	.03	< 1
Honor code (1 = sign, 0 = read)	-.32	-3.13**	.33	3.23**	.12	1.47
Moral disengagement					-.41	-0.66***

Adding moral disengagement increased variance explained significantly for our dependent variable from $R^2 = .11$ to $R^2 = .49$, $F(1, 87) = 65$, $p < .001$.

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

ethical standards by having them sign an honor code, cheating was in effect eliminated.

This finding is convergent with what previous studies using honor codes have found: When participants sign an honor code, they functionally declare their commitment to honesty before beginning a task (Dickerson et al., 1992; Mazar et al., 2008; McCabe & Trevino, 1993, 1997). The participants in our study who read an honor code but did not sign it still benefitted from having a moral reminder (they cheated less and morally disengaged less as a group)—but did not demonstrate the full commitment to honesty that participants who signed an honor code did. We believe this gap is due to the difference between passively absorbing material and actively committing to it, and our data support this: Honor code signers who were more engaged with the content than honor code readers showed the effect of higher awareness of ethical standards. Cheating and subsequent moral disengagement were in effect eliminated for signers, whereas they were only reduced for readers.

General Discussion

Our findings contribute to the literature examining the ways in which people can switch ethicality on or off. We find that honesty is affected by the situation in which one finds oneself; our studies show that people respond to the permissiveness of their environments and seize the opportunity to cheat. On one hand, the results of our studies provide further evidence of the pervasive dishonesty of ordinary people. On the other hand, they support previous evidence that an intervention as simple as exposure to a moral code reduces dishonest behavior—and, furthermore, that signing a moral code can completely eliminate dishonesty.

That a simple signature following an honor code can drastically change behavior points to the malleability of moral self-regulation. Determinants of honesty do not lie completely within the individual; seemingly innocuous factors outside the individual can dramatically affect the decision to behave honestly or dishonestly. Many real-world decisions require self-regulation of ethical behavior (e.g., punching time cards, citing sources, preparing one's resume when applying for

jobs, claiming tax deductions), and it is important not to underestimate the role of situational cues in encouraging ethical behavior. If a situation permits dishonesty, then one should expect to observe dishonesty. At the same time, a simple intervention, such as merely reminding actors about established moral codes, could counteract the effect of a permissive situation.

Our studies also provide evidence of motivated cognition. Morality and memory are not fixed dimensions of a person; rather, they function as sliding scales. It has been well established that moral disengagement is a predictor of unethical behavior. Our studies suggest the converse is also true in the cheating domain: We find that bad behavior motivates moral leniency and leads to the strategic forgetting of moral rules. Combining our finding that moral disengagement is a consequence of behavior with established work on unethical behavior as a consequence of moral disengagement, we suggest people could set off on a downward spiral of having ever more lenient ethics and ever more unethical behavior. In alignment with social cognitive theory, we believe the moral disengagement we observe in our studies serves to reduce cognitive dissonance and alleviate guilt after cheating. Future research could establish whether or not this is indeed the case as well as test the duration of moral disengagement that follows bad behavior to shed light on whether or not such a feedback loop of unethical behavior and lax ethics indeed exists.

A question that arises from this work is whether or not moral disengagement occurs when another person acted unethically on one's own behalf. In instances where dishonesty is not an act of commission but one of omission (i.e., failing to correct another person's wrong to one's own benefit), will the same motivation to morally disengage be observed? Our laws distinguish between active and passive unethical behavior, but do our personal scruples make the same distinction? Our first study suggests that it is only one's own behavior, and not the behavior of others, that shifts moral disengagement, but the study does not consider the difference between acts of omission and commission. Exploring this distinction between passive and active unethicality and its impact on levels of moral disengagement would be an interesting venue for future research.

Future research could also investigate whether the findings observed in our studies about dishonesty through cheating extend to moral violations in other domains. Would moral disengagement be observed after engaging in hurtful behaviors such as cheating on a spouse, insulting another person, abusing a controlled substance, or passively standing by while others commit atrocious acts?³ Extending the domains to which the relationship among morality, moral disengagement, and motivated forgetting applies helps situate our current findings to other types of unethical or immoral behaviors in everyday life.

In addition to testing for the role of moral disengagement after moral violations in other domains, future research could also examine the conditions under which moral disengagement occurs before or after dishonest behavior. Such conditions may relate to the level of arousal, type of focus the decision maker is using, or amount of time for reflection available at the moment of the decision. So, for instance, we would expect that when people are under time pressure (i.e., they have little time to reflect on the decision they are facing) or when their dishonesty may benefit others (i.e., they are focused on the potential helpful consequences of their actions to others), moral disengagement may be more likely to occur after unethical actions instead of before. Future theoretical and empirical work exploring the role of moral disengagement as a case rather than an outcome of dishonest behavior may provide important insights for our understanding of ethical decision making and moral judgment.

Another future direction for research stems from the motivated forgetting observed in Studies 3 and 4. One wonders whether “forgetting” was strategic; that is, participants in all conditions remembered equally well, but cheaters might have knowingly underreported their recollection of moral rules. Another possibility could be that cheating is cognitively demanding (Mead, Baumeister, Gino, Schweitzer, & Ariely, 2009) and those who cheat depleted and impaired their cognitive resources. Yet another alternative is that those most inclined to cheat are also the least attentive to moral rules, and therefore the differences we observe in recollection may actually result from differences in encoding. Whether participants in our studies were engaged in self-deception or experimenter-deception and whether cognition or resource depletion plays a role in strategic forgetting are interesting questions to pursue. Teasing these explanations apart from one another would be a new area of pursuit at the intersection of memory and morality.

Conclusion

Why do people engage in unethical behavior repeatedly over time? Scholars have argued that the best explanations for unethical decision making may reside in underlying psychological processes (Messick & Bazerman, 1996; Tenbrunsel & Messick, 2004). Consistent with such arguments, this

research examined the influence of dishonest behavior and awareness of ethical standards on moral disengagement. Bandura (1986) suggested that moral disengagement explains why ordinary people are able to engage in unethical behavior without apparent guilt or self-censure.

Here, we extend this assertion and propose that moral disengagement is not always a necessary condition leading to unethicality but that it may in fact result from dishonesty. Across four studies, we demonstrated that the decision to behave dishonestly changes levels of moral disengagement and that awareness of ethical standards affects the decision to engage in unethical behavior. Our results bear both encouraging and discouraging news. On one hand, we find that once people behave dishonestly, they are able to morally disengage, setting off a downward spiral of future bad behavior and ever more lenient moral codes. Yet we also provide evidence that this slippery slope can be forestalled with simple measures, such as honor codes, that increase people’s awareness of ethical standards. As a result, making morality salient not only reduces cheating behavior but also makes individuals’ judgments more scrupulous.

Our results move away from a static model of personal morality to support a dynamic model of malleable morality, thus sharing a recent moral psychology perspective (see Monin & Jordan, 2009). We show that seemingly innocuous aspects of the environment can promote the decision to act honestly or dishonestly. Such a decision then sets off subsequent changes in moral beliefs, which in turn predict future behavior. By linking the steps among situation, behavior, and belief, we demonstrate how each component affects the others. Even small drops may lead to ripples of change.

People bind cognition with action. When bad behavior precedes moral questioning, people bend their moral beliefs to match the preceding action. When moral saliency precedes the temptation to act dishonestly, people adjust their actions to align with the established moral code. Action, belief, and memory are more susceptible to situational nudges than intuition leads us to believe.

Appendix A

Moral Disengagement About Cheating Scale Used in Studies 1–4

Please indicate the extent to which you agree with the following statements (–3 = Strongly Disagree, +3 = Strongly Agree):

1. Sometimes getting ahead of the curve is more important than adhering to rules.
2. Rules should be flexible enough to be adapted to different situations.
3. Cheating is appropriate behavior because no one gets hurt.

4. If others engage in cheating behavior, then the behavior is morally permissible.
5. It is appropriate to seek short-cuts as long as it is not at someone else's expense.
6. End results are more important than the means by which one pursues those results.

Appendix B

Academic Honor Code Used in Studies 3 and 4

Section 1: Statement of Purpose. The members of the University Community believe that the fundamental objective of the Institution is to provide the students with a high quality education while developing in them a sense of ethics and social responsibility.

We believe that any instance of dishonesty hurts the entire community. It is with this in mind that we have set forth a Student Honor Code at the University.

Section 2: Objectives. An Honor Code at the University aims to cultivate a community based on trust, academic integrity and honor. It specifically aims to accomplish the following:

- Ensure that students, faculty and administrators understand that the responsibility for upholding academic honesty at the University lies with them;
- Prevent any students from gaining an unfair advantage over other students through academic misconduct;
- Ensure that students understand that academic dishonesty is a violation of the profound trust of the entire academic community.

Section 3: Student Responsibilities. The immediate objective of an Honor Code is to prevent any students from gaining an unfair advantage over other students through academic misconduct.

- Academic misconduct is any act that does or could improperly distort student grades or other student academic records. Such acts include but need not be limited to the following:
- Possessing, using or exchanging improperly acquired written or verbal information in the preparation of any essay, laboratory report, examination, or other assignment included in an academic course;
- Substitution for, or unauthorized collaboration with, a student in the commission of academic requirements;
- Submission of material that is wholly or substantially identical to that created or published by another person or persons, without adequate credit notations indicating authorship (plagiarism);

- False claims of performance or work that has been submitted by the claimant.

While these acts constitute assured instances of academic misconduct, other acts of academic misconduct may be defined by the professor.

Students must sign the Honor Agreement affirming their commitment to uphold the Honor Code before becoming a part of the University community. The Honor Agreement may reappear on exams and other assignments to remind students of their responsibilities under the Academic Honor Code.

Section 4: Faculty Responsibilities. Faculty members are expected to create an environment where honesty flourishes. In creating this environment, faculty members are expected to do the following:

- Make known to their class as specifically as possible what constitutes appropriate academic conduct as well as what comprises academic misconduct. This includes but is not limited to the use of previously submitted work, collaborative work on homework, etc.
- Provide copies of old exams to the University library for students to review;
- Avoid the re-use of exams;
- Include a paragraph containing information about the University Academic Honor Code on the syllabus for each class they teach.

In addition to the expectations listed above, faculty have the authority to superimpose their own interpretations on some aspects of academic conduct including, but not limited to, the following:

- Old exams for use during open-book exams;
- Collaboration on out of class assignments;
- Use of previously submitted out of class assignments.

Appendix C

Questions About Academic Honor Code Used for the Memory Task Employed in Studies 3 and 4

1. Who is hurt by an instance of academic dishonesty?
2. Who is responsible for upholding academic honesty at the University?
3. *As described in the Honor Code*, when must students sign the Honor Agreement: (check all that apply):

(continued)

Appendix C (continued)

- before enrollment and becoming a member of the University community
- before every assignment submitted
- before exams in which the Honor Agreement reappears as a reminder
4. Which of the following constitutes academic misconduct, as described in the Honor Code: (check all that apply)
- exchanging verbal information about preparation of an essay
- completing out-of-class assignments with a group of classmates
- possessing another student's laboratory report
5. Acts of academic misconduct can be defined by: (check all that apply)
- faculty members
- fellow students in classes in which you are enrolled
- the University
6. Which of the following are *mandatory responsibilities* expected of all faculty: (check all that apply)
- provide old copies of exams for students to review
- refer to the Honor Code at the start of each written exam
- refer to the Honor Code within the syllabus for each class
7. Which of the following do faculty members have the *flexible option of authority* in defining what constitutes as academic misconduct: (check all that apply):
- establish guidelines about notes allowed for open-book exams
- re-use of old exams
- collaboration on out-of-class assignment

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Notes

- Bandura (1999) clarifies the distinction between moral disengagement and moral justification. People use moral justification to view an action as a means to a moral goal; thus, the action goes beyond being merely excusable—it actually becomes desirable on moral grounds. In contrast, moral disengagement does not necessarily make an action morally desirable; it simply repackages the action as morally permissible.
- Our adapted scale aimed to be theoretically consistent with Bandura's conceptualization of moral disengagement. We should note that Bandura's own scale does not systematically address each of the separate subfactors contained within moral disengagement, and the data from the research of Bandura and his colleagues are commonly analyzed by considering moral disengagement as a single factor construct. Statistically, by definition, it is easier for scales with more items to achieve greater reliability. Our scale consisting of only 6 items—compared to Bandura's 32-item scale—still proved to be highly reliable in pretests and across all four studies.
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References

- Alicke, M. D. (1985). Global self-evaluation as determined by the desirability and controllability of trait adjectives. *Journal of Personality and Social Psychology*, *49*, 1621-1630.
- Aquino, K., & Reed, A. (2002). The self-importance of moral identity. *Journal of Personality and Social Psychology*, *83*, 1423-1440.
- Aquino, K., Reed, A., Thau, S., & Freeman, D. (2007). A grotesque and dark beauty: How moral identity and mechanisms of moral disengagement influence cognitive and emotional reactions to war. *Journal of Experimental Social Psychology*, *43*, 385-392.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1990). Selective activation and disengagement of moral control. *Journal of Social Issues*, *46*, 27-46.
- Bandura, A. (1999). Moral disengagement in the preparation of inhumanities. *Personal and Social Psychology Review*, *3*, 193-209.
- Bandura, A., Barbaranelli, C., Caprara, G., & Pastorelli, C. (1996). Mechanisms of moral disengagement in the exercise of moral agency. *Journal of Personality and Social Psychology*, *71*, 364-374.
- Bandura, A., Caprara, G. V., Barbaranelli, C., Pastorelli, C., & Regalia, C. (2001). Sociocognitive self-regulatory mechanisms governing transgressive behavior. *Journal of Personality and Social Psychology*, *80*, 125-135.
- Bandura, A., Underwood, B., & Fromson, M. E. (1975). Disinhibition of aggression through diffusion of responsibility and dehumanization of victims. *Journal of Research in Personality*, *9*, 253-269.

- Baumeister, R. F. (1998). The self. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (pp. 680-740). New York, NY: McGraw-Hill.
- Baumeister, R. F., & Heatherton, T. F. (1996). Self-regulation failure: An overview. *Psychological Inquiry*, 7, 1-15.
- Baumeister, R. F., & Newman, L. S. (1994). Self-regulation of cognitive inference and decision processes. *Personality and Social Psychology Bulletin*, 20, 3-19.
- Baumhart, R. (1968). *An honest profit: What businessmen say about ethics in business*. New York, NY: Holt, Rinehart & Winston.
- Benney, K. S., & Henkel, L. A. (2006). The role of free choice in memory for past decisions. *Memory*, 14, 1001-1011.
- Cioffi, D., & Garner, R. (1996). On doing the decision: The effects of active versus passive choice on commitment and self-perception. *Personality and Social Psychology Bulletin*, 22, 133-147.
- Detert, J. R., Trevino, L. K., & Sweitzer, V. L. (2008). Moral disengagement in ethical decision making: A study of antecedents and outcomes. *Journal of Applied Psychology*, 93, 374-391.
- Dickerson, C. A., Thibodeau, R., Aronson, E., & Miller, D. (1992). Using cognitive dissonance to encourage water conservation. *Journal of Applied Social Psychology*, 22, 841-854.
- Elkin, R. A., & Leippe, M. R. (1986). Physiological arousal, dissonance, and attitude change: Evidence for a dissonance arousal link and a "don't remind me" effect. *Journal of Personality and Social Psychology*, 51, 55-65.
- Elliot, A. J., & Devine, P. G. (1994). On the motivational nature of cognitive dissonance: Dissonance as psychological discomfort. *Journal of Personality and Social Psychology*, 67, 382-394.
- Epley, N., & Caruso, E. M. (2004). Egocentric ethics. *Social Justice Research*, 17, 171-187.
- Epley, N., & Dunning, D. (2000). Feeling "holier than thou": Are self-serving assessments produced by errors in self- or social prediction? *Journal of Personality and Social Psychology*, 79, 861-875.
- Fazio, R. H., & Cooper, J. (1983). Arousal in the dissonance process. In J. T. Cacioppo & R. E. Petty (Eds.), *Social psychophysiology* (pp. 122-152). New York, NY: Guilford.
- Festinger, L. A. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Gabor, T. (1994). *Everybody does it: Crime by the public*. Toronto, Ontario, Canada: University of Toronto Press.
- Gino, F., Ayal, S., & Ariely, D. (2009). Contagion and differentiation in unethical behavior: The effect of one bad apple on the barrel. *Psychological Science*, 20, 393-398.
- Gino, F., & Pierce, L. (2009a). The abundance effect: Unethical behavior in the presence of wealth. *Organizational Behavior and Human Decision Processes*, 109, 142-155.
- Gino, F., & Pierce, L. (2009b). Dishonesty in the name of equity. *Psychological Science*, 20, 1153-1160.
- Henkel, L. A., & Mather, M. (2007). Memory attributions for choices: How beliefs shape our memories. *Journal of Memory and Language*, 57, 163-176.
- Jones, T. M. (1991). Ethical decision making by individuals in organizations: An issue-contingent model. *Academy of Management Review*, 16, 366-395.
- Jordan, A. H., & Monin, B. (2008). From sucker to saint: Moralization in response to self-threat. *Psychological Science*, 19, 683-689.
- Klass, E. T. (1978). Psychological effects of immoral actions: The experimental evidence. *Psychological Bulletin*, 85, 756-771.
- MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology*, 58, 593-614.
- Mather, M., & Johnson, M. K. (2000). Choice-supportive source monitoring: Do our decisions seem better to us as we age? *Psychology and Aging*, 15, 596-606.
- Mather, M., Shafir, E., & Johnson, M. K. (2000). Misremembrance of options past: Source monitoring and choice. *Psychological Science*, 11, 132-138.
- Mather, M., Shafir, E., & Johnson, M. K. (2003). Remembering chosen and assigned options. *Memory & Cognition*, 31, 422-433.
- Mazar, N., Amir, O., & Ariely, D. (2008). The dishonesty of honest people: A theory of self-concept maintenance. *Journal of Marketing Research*, 45, 633-644.
- McAlister, A. L., Bandura, B., & Owen, S. (2006). Moral disengagement in support for war: The impact of September 11. *Journal of Clinical and Social Psychology*, 25, 141-165.
- McCabe, D. L., & Trevino, L. K. (1993). Academic dishonesty: Honor codes and other contextual influences. *Journal of Higher Education*, 64, 522-538.
- McCabe, D. L., & Trevino, L. K. (1997). Individual and contextual influences on academic dishonesty: A multicampus investigation. *Research in Higher Education*, 38, 379-396.
- Mead, N., Baumeister, R. F., Gino, F., Schweitzer, M., & Ariely, D. (2009). Too tired to tell the truth: Self-control resource depletion and dishonesty. *Journal of Experimental Social Psychology*, 45, 594-597.
- Messick, D. M., & Bazerman, M. H. (1996). Ethical leadership and the psychology of decision making. *Sloan Management Review*, 37, 9-22.
- Messick, D. M., Bloom, S., Boldizar, J. P., & Samuelson, C. D. (1985). Why we are fairer than others. *Journal of Experimental Social Psychology*, 21, 480-500.
- Miller, D. T., & Ratner, R. K. (1998). The disparity between the actual and assumed power of self-interest. *Journal of Personality and Social Psychology*, 74, 53-62.
- Mills, J. (1958). Changes in moral attitudes following temptation. *Journal of Personality*, 26, 517-531.
- Monin, B., & Jordan, A. H. (2009). Dynamic moral identity: A social psychological perspective. In D. Narvaez & D. Lapsley (Eds.), *Moral self, identity and character: Prospects for a new field of study* (pp. 341-354). New York: Cambridge University Press.
- Paharia, N., & Deshpande, R. (2009). *Sweatshop labor is wrong . . . unless the shoes are really cute! Strategies of moral disengagement in consumer behavior*. Unpublished manuscript.
- Ratner, R. K., & Miller, D. T. (2001). The norm of self-interest and its effects on social action. *Journal of Personality and Social Psychology*, 81, 5-16.

- Ross, M., McFarland, C., Conway, M., & Zanna, M. P. (1983). The reciprocal relation between attitudes and behaviour recall: Committing people to newly formed attitudes. *Journal of Personality and Social Psychology, 45*, 257-267.
- Schweitzer, M. E., & Hsee, C. K. (2002). Stretching the truth: Elastic justification and motivated communication of uncertain information. *Journal of Risk and Uncertainty, 25*, 185-201.
- Senemeaud, C., & Somat, A. (2009). Dissonance arousal and persistence in attitude change. *Swiss Journal of Psychology, 68*, 25-31.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and non-experimental studies: New procedures and recommendations. *Psychological Methods, 7*, 422-445.
- Stine, R. (1989). An introduction to bootstrap methods. *Sociological Methods & Research, 18*, 243-291.
- Tenbrunsel, A. E., & Messick, D. M. (2004). Ethical fading: The role of self-deception in unethical behavior. *Social Justice Research, 17*, 223-236.
- Vollum, S., Buffington-Vollum, J., & Longmire, D. R. (2004). Moral disengagement and attitudes about violence toward non-human animals. *Society and Animals, 12*, 209-235.