

Dishonest Deed, Clear Conscience: Self-Preservation through Moral Disengagement and Motivated Forgetting

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Self-Preservation through 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), we find that 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 behavior of others. In addition, increasing moral saliency by having participants read or sign an honor code significantly reduced or eliminated unethical behavior. While dishonest behavior motivated moral leniency and led to strategic forgetting of moral rules, honest behavior motivated moral stringency and diligent recollection of moral rules.

Keywords: dishonesty, ethics, ethics codes, moral disengagement, strategic forgetting, unethical behavior

Dishonest Deed, Clear Conscience:

Self-Preservation through Moral Disengagement and Motivated Forgetting

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 unethical behavior has captured the attention of psychologists. Bandura (1986; 1990), for example, argues that “moral disengagement,” a process by which cognitive mechanisms deactivate moral self-regulation, tends to result in dishonest behavior. Moral disengagement acts as a cognitive mediator between the moral principles individuals hold and their behavior when behavior is consistent with such principles. While this stream of research has provided interesting insights into the outcomes of moral disengagement (such as unethical decisions or behaviors), we focus on moral disengagement as a behavioral consequence rather than an independent predictor of behavior with the goal to explain how ordinary people routinely justify their immoral behavior.

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 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.

When actions and goals do not align, individuals feel distress due to cognitive dissonance, a state of psychological tension which 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 counter-attitudinal essay-writing task persists even one 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.

Bandura and others offer an explanation of how individuals justify their dishonest behavior (Bandura, 1990; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Detert, Trevino, & Sweitzer, 2008). Bandura and his colleagues suggest that individuals who behave dishonestly (e.g., they behave aggressively or cause harm to others) modify their beliefs about their bad actions through moral disengagement, thereby alleviating cognitive dissonance. Moral disengagement is thus used as the process of making detrimental conduct personally acceptable by persuading oneself that the questionable behavior is actually morally permissible (Bandura et al., 1996; Bandura, 1990). This 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.

Prior work has 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 et al., 1996; Bandura, Caprara, Barbaranelli, Pastorelli, & Regalia, 2001; 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; McAllister, Bandura, & Owen, 2006).

Our research takes a different approach and investigates moral disengagement as a *consequence* of unethical action. We are interested in whether the decision to act unethically can motivate real changes in both morality and memory through the process of 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 (1958) measured the attitudes of grade school children towards cheating after manipulating the level of temptation to cheat on a competitive task. His participants either faced 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 towards cheating, while those who resisted temptation became strict. Mills's measure of interest was severity of punishment towards cheaters. In his particular study, the disparity of participants'

¹ 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.

attitudes towards punishment could be explained by concern that attitudes students expressed might truly affect the outcome for those who cheated.

More recent work on the effects of moral disengagement has been done by Paharia and Deshpande (2009) who 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 their purchases, these consumers tend to morally disengage to justify the decision to buy a product produced through unethical manufacturing practices.

Our work extends these studies by considering more general contexts in which individuals evaluate ethical dilemmas (their own or another person's) and decide to behave either honestly or dishonestly. To better understand how people justify their own unethical behavior as well as the unethical behavior of others, we seek to investigate the relationship between unethical behavior and the moral disengagement that follows. We also examine if dishonest behavior leads to motivated forgetting of ethical standards.

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, over-attributing 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

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: 497) 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.” 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).

People face different incentives regarding moral disengagement depending on who the wrongdoer is. People are likely 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 that:

Hypothesis 1: The level of moral disengagement will be higher when one is considering one's own unethical behavior than when one is considering the behavior of another person.

Of course, not everyone behaves dishonestly or cheats to the maximum extent possible when given the opportunity to do so (e.g., Gino, Ayal, & Ariely, 2009; Gino & Pierce, 2009; Mazar, Amir, & Ariely, 2008). We suggest that whenever there is temptation to behave unethically, individual levels of moral disengagement depend on the action taken. Specifically, when facing a moral dilemma, if individuals decide to behave dishonestly, they subsequently will be motivated to morally disengage. However, if they do not behave dishonestly in response to the moral dilemma, they subsequently will make more stringent moral judgments of their own actions in order to view their good behavior more positively. Because behaving dishonestly leads to a violation of one's internal standards, and behaving honestly does not, moral disengagement is only necessary when one behaves dishonestly.

People develop personal standards of moral behavior that serve a self-regulatory role by guiding good behavior and deterring bad behavior (Bandura, 1986). Indeed, 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 (Bandura, 1999). The key process people use to deactivate moral self-regulation is moral disengagement. If someone has behaved dishonestly, she may be able to avoid recognizing this violation of her ethical standards by morally disengaging. Thus, we hypothesize that:

Hypothesis 2: Individuals will exhibit greater moral disengagement after behaving unethically than after behaving ethically.

Together, these first two hypotheses suggest that moral disengagement is a motivated process and that the “switch” that turns moral disengagement on or off depends on both the actor and the nature of the behavior. These two components determine the gap between moral code and realized action. Hypothesis 2 suggests that moral disengagement should occur only for unethical behavior and that this effect should be amplified when considering one’s own behavior, as suggested by Hypothesis 1. Therefore, we predict an interaction between the actor and the nature of behavior:

Hypothesis 3: The effect of one’s own behavior versus another person’s behavior on moral disengagement will be greater when unethical action occurs than when it does not occur.

Recent research (Gino et al., 2009; Mazar et al., 2008) also suggests that people will behave dishonestly within a permissive environment far more often than we might expect. Combining this result with the above hypotheses suggests that simply being in a permissive environment (rather than a non-permissive environment) will result in greater moral disengagement, as there will be more dishonest people in the permissive environment who have a need to morally disengage in order to justify their actions. This reasoning leads us to the following hypothesis:

Hypothesis 4: 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, Amir, and Ariely (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 that:

Hypothesis 5a: 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 actively agree to ethical standards (e.g., by signing an honor code) than when they passively agree to them (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 that:

Hypothesis 5b: 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 a passive choice.

A convenient way to bolster one's self-image after behavior 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, Shafir, & Johnson, 2000). These problems are particularly relevant in the ethical domain, and our research directly tests for evidence of such motivated memory errors.

Hypothesis 6: Compared to a control condition, those who decide to act unethically will revise their recollection of 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 three hypotheses using hypothetical scenarios. Studies 3 and 4 use behavioral measures to test these three main hypotheses, in addition to Hypotheses 4, 5, and 6. 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

Methods

Participants

One-hundred thirty-six 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) x 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 (condition *Other* 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 (condition *Other* 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 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 = strongly disagree to +3 = 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 (Cronbach's alpha = 0.90).

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

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

² 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.

when self was the target ($M = -0.15$, $SD = 1.70$) than when a classmate was the target ($M = -1.35$, $SD = 1.11$), $F(1, 132) = 29.19$, $p < .001$, $\eta^2 = .18$. Supporting Hypothesis 2, moral disengagement was higher in the cheating condition ($M = -0.47$, $SD = 1.84$) than in the honest condition ($M = -1.04$, $SD = 1.13$), $F(1, 132) = 7.36$, $p = .008$, $\eta^2 = .05$.

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 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. That is, they became more morally stringent (low levels

of moral disengagement) when merely imagining the dishonesty of others, but became more morally lenient (high levels of moral disengagement) when merely imagining their own dishonesty.

Study 2

While 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 change in moral disengagement observed in Study 1.

Methods

Participants

Seventy-nine 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 under 30 minutes and was conducted by computer.

Design and Procedure

Study 2 employed one between-subjects factor: dishonest vs. honest behavior. Participants were first asked to answer a short questionnaire that included irrelevant questions and our measures of moral disengagement. The latter will be used as a baseline for the study. Next, participants completed an unrelated filler task for about 10 minutes. Finally, participants read one of the two versions of the scenarios used in Study 1 which described one's own behavior. Half of the participants were told to imagine they cheated, 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 thanked and dismissed.

Results

We conducted a 2 (within-subjects: moral disengagement before and moral disengagement after reading the scenario) x 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-subject 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. The first goal was to establish the findings of our first two experiments using real behavior. Specifically, participants were given an actual opportunity to behave dishonestly by overstating their performance on a problem-solving task in order to earn more money. The second goal was to explore whether simply being in an environment that permits unethical behavior changes peoples' moral behavior and views—namely, whether permissive environments lead to greater moral disengagement than less permissive environments. The third goal was to test the effect of increasing moral awareness on unethical behavior and moral disengagement. Specifically, after participants either read or did not read an honor code, we observed whether awareness of honesty standards influenced dishonest behavior and moral disengagement.

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 et al., 1992; Mazar et al., 2008; McCabe & Trevino, 1993, 1997). For instance, Mazar, Omir, and Ariely (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.

Methods

Participants

One-hundred forty 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) x 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 ten dollars (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 four 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 four 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 four 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 post-experiment questionnaire that included 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. A 2 (possibility of cheating) x 2 (honor code) between-subjects ANOVA revealed a significant main effect for the possibility of cheating, $F(1, 136) = 23.41, p < .001, \eta^2 = .15$; as expected, participants reported higher performance when they had the opportunity to cheat ($M = 11.64, SD = 5.11$) than when they did not ($M = 7.91, SD = 4.08$). This analysis also revealed a main effect of reading the honor code, $F(1, 136) = 4.63, p < .05, \eta^2 = .03$; 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 ($M = 8.96, SD = 4.69$). 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 impact 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

We computed the average across the six scale items and used the resulting aggregate measure of moral disengagement in the analyses below (Cronbach's alpha = 0.91). Lower ratings for this aggregate measure of moral disengagement indicate higher moral standards and increased moral stringency, while higher ratings of moral disengagement indicate moral leniency. We used this aggregate measure as the dependent variable in a 2 (possibility of cheating) x 2 (honor code) between-subjects ANOVA. This analysis revealed a main effect for the possibility of cheating, $F(1, 136) = 52.32, p < .001, \eta^2 = .28$; as expected, 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 ($M = -1.27, SD = 1.03$). Presenting participants the opportunity to cheat made them more morally lenient. This analysis also revealed a main effect of honor code, $F(1, 136) = 4.63, p < .05, \eta^2 = .03$; participants' levels of moral disengagement were higher when they did not read the honor code before engaging in the problem-solving task ($M = 0.02, SD = 1.31$) than when they did ($M = -1.04, SD = 1.38$). 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 for the questions we used). As predicted, of those who read the honor code, participants in the shredder condition remembered fewer items of the honor code ($M = 2.44, SD = 1.08$) compared with 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 also tested whether moral disengagement mediated the effect of possibility of cheating on the number of items the honor code 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 non-significance 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% confidence intervals excluded zero (-.55, -.17). These results show that moral disengagement mediated the effect of possibility of cheating on the number of items the honor code participants correctly remembered.

Discussion

The results of Study 3 suggest that moral disengagement is influenced by the opportunity to cheat and by awareness of ethical standards. We show that simply being in an environment that allows cheating systematically increases moral disengagement. In line with prior research on unethical behavior, our results also show that giving participants the opportunity to cheat led to higher levels of dishonesty. More interestingly, asking participants to simply read an honor code reduced the level of dishonesty when participants had the opportunity to cheat, but did not completely eliminate cheating. Finally, we found that moral disengagement mediated the effect

of opportunity to cheat on memory of honor code content and thus explained why those who may have cheated exhibited motivated forgetting of the honor code.

Study 4

Study 4 had two main goals. The first goal was to distinguish those who cheated from those who did not cheat when presented with the opportunity. Doing so allowed us to measure the impact of the decision to cheat on subsequent levels of moral disengagement and memory. The second goal was to test whether signing an honor code (as opposed to just reading it) would lead to higher commitment to moral standards.

Because we are able to measure real changes in reported morality and memory, we have the opportunity to explore not just the consequences of bad behavior, but also the antecedents of good behavior.

Methods

Participants

One-hundred thirty-eight 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) x 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 with 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. The second change was the addition of a new condition for the honor code manipulation. In the sign-honor-code conditions, we asked participants to print their names and sign right 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.

Dependent Measures and Summary of Predictions

Table 4 depicts the conditions in Study 4 and the dependent variables of interest in each condition. We are interested in the differences in the following three variables between conditions.

Dishonest behavior. In Study 4, we can identify precisely those who cheated from those who did not. We predict that cheating will occur in the permissive environment, in which participants self-report their performance and then recycle the task worksheet. We also predict that reading the honor code will reduce cheating and that signing the honor code will reduce it even further.

Moral disengagement. We predict that a permissive environment (providing the opportunity cheat) will lead to increased moral disengagement as compared to a control environment wherein cheating was not possible. For those in the permissive environment, the recycle bin allows us to dissociate cheaters from non-cheaters, as everyone had the opportunity to be dishonest in self-reports of performance. We expect that honesty in the face of unethical

temptation will lead to low levels of moral disengagement (moral stringency) and that dishonesty will lead to high levels of moral disengagement (moral leniency). Finally, we expect that reading an honor code prior to the performance task will reduce moral disengagement and that signing it will further reduce it.

Remembering the honor code. We anticipate a “strategic forgetting” effect, such that those who cheat 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 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) x 3 (honor code) between-subjects ANOVA. This analysis revealed a significant main effect for the possibility of cheating, $F(1, 132) = 16.67$, $p < .001$, $\eta^2 = .11$; participants’ reported performance was higher when they had the opportunity to cheat ($M = 10.39$, $SD = 5.06$) than when they did not ($M = 7.52$, $SD = 3.38$). 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 3. As expected, exposure to the honor code did not affect reported performance when there was no opportunity to cheat (all ps for comparisons of each two conditions are insignificant). In contrast, when they had 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, while signing the same honor code reduced cheating to a level not statistically different from when cheating was not possible (i.e., cheating was eliminated).

As for participants' actual performance on the problem-solving task, it 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 ability and decision to cheat).

Study 4 allowed us to disaggregate the cheaters from the non-cheaters in the recycle conditions. The percentage of 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) over-reported their performance. This percentage was significantly lower in the read-honor-code condition, in which 32% of participants (7 out of 22) over-reported their performance. Finally, in the sign-honor-code condition, only one participant out of 22 over-reported 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 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 (Cronbach's alpha = .94). We used this aggregate measure as the dependent variable in a 2 (possibility of cheating) x 3 (honor code) between-subjects ANOVA. This analysis revealed a main effect for the possibility of cheating, $F(1, 132) = 5.48, p < .05, \eta^2 = .04$. 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 ($M = -1.45, SD = 1.07$). 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 over-reporting their performance to those who behaved honestly. Figure 4 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 only reached 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 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) X 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 5 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 non-significance when moral disengagement was included in the equation, and moral disengagement was a significant predictor of our dependent variable (see Table 6). To examine whether the indirect effect of the honor code 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, as the 95% confidence intervals excluded zero (-.94, -.61). 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 non-cheaters, 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 ethical standards by having them sign an honor code, cheating was in effect eliminated.

General Discussion

Our findings contribute to the literature examining the ways in which people can switch their ethicality on or off. We find that morality, to a certain extent, is derived from the situation one finds oneself in; our studies show that people respond to the permissiveness of their environments and seize the opportunity to behave unethically. On the one hand, the results of our studies provide further evidence of the pervasive dishonesty of ordinary people. On the other hand, they show 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 moral behavior do not lie completely within the individual; seemingly innocuous factors outside the individual can dramatically impact the decision to behave honestly or dishonestly. Many real-world decisions require self-regulation of ethical behavior—e.g., punching timecards, citing sources, preparing one's own resume when applying for jobs, filling out tax forms—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 permissible 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. In alignment with social cognitive theory, when a mismatch between action and goal occurs, people are motivated to either change the action or change the goal. We find that bad behavior motivates moral leniency and leads to the strategic forgetting of moral rules. Our data also suggests that good behavior in the presence of temptation (the opportunity to cheat) motivates moral stringency and diligent recollection of moral rules. A question that arises from this work is whether or not moral disengagement occurs when the perpetrator of unethical behavior is another person but the beneficiary remains oneself. 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.

Conclusion

Why do people engage in unethical behavior repeatedly over time? Scholars have recently 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 unethical actions and awareness of ethical standards on moral disengagement. Bandura (1986) argued 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 suggest that moral disengagement is not always a necessary condition leading to dishonesty, but that it may in fact result from unethical behavior. 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 the 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 unethical 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. We show that seemingly innocuous aspects of the environment can promote the decision to act ethically or unethically. Such decision then sets off subsequent changes in moral beliefs, which in turn predict future behavior. By linking the steps between 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 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):

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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Tables

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

Table 2

Descriptive statistics by condition for the variables measured in Study 3. Standard deviations are reported in parentheses.

		<i>Performance</i>	<i>Moral disengagement</i>	<i>Items of honor code remembered correctly</i>
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

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

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$. Adding moral disengagement increased variance explained significantly for our dependent variable from $R^2 = .20$ to $R^2 = .32$, $F(1, 68) = 11.77$, $p = .001$.

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 Scored performance	Moral Disengagement Memory task Self-reported performance	Moral Disengagement Memory task Self-reported performance
Sign Honor Code	Moral disengagement Memory task Scored performance	Moral Disengagement Memory task Self-reported performance	Moral Disengagement Memory task Self-reported performance

Table 5

Descriptive statistics by condition for the variables measured in Study 4. Standard deviations are reported in parentheses.

		<i>Reported performance</i>	<i>Actual performance</i>	<i>Moral disengagement</i>	<i>Items of honor code remembered correctly</i>
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)

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***

Notes. * $p < .05$, ** $p < .01$, *** $p < .001$. Adding moral disengagement increased variance explained significantly for our dependent variable from $R^2 = .11$ to $R^2 = .49$, $F(1, 87) = 65$, $p < .001$.

Figures Captions

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

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

Figure 3. Reported performance on the problem solving task by condition, Study 4.

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

Figure 5. Number of items correctly remembered by condition, Study 4.

Figure 1.

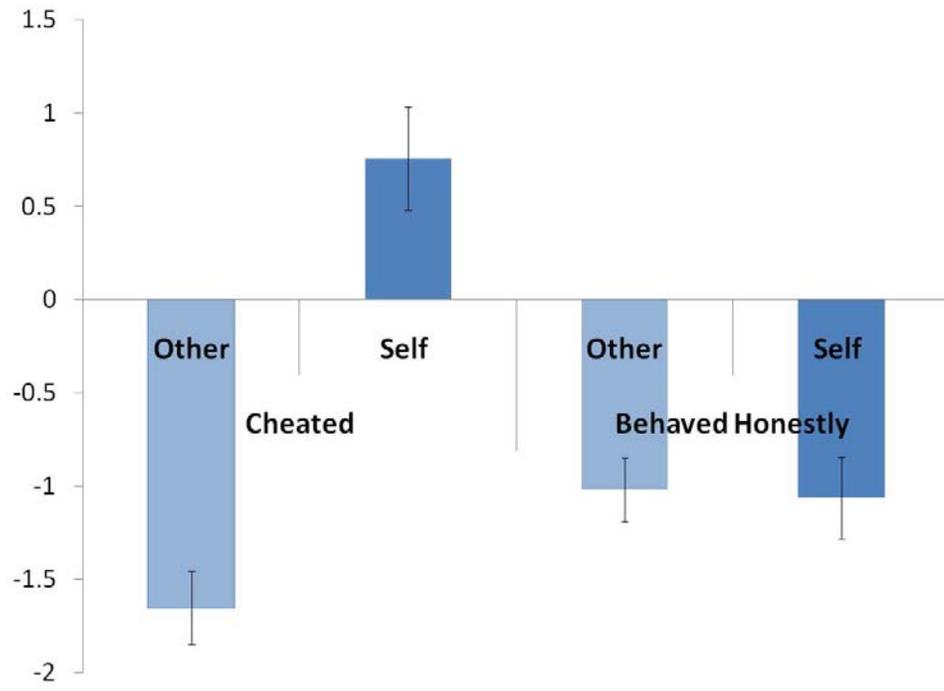


Figure 2.

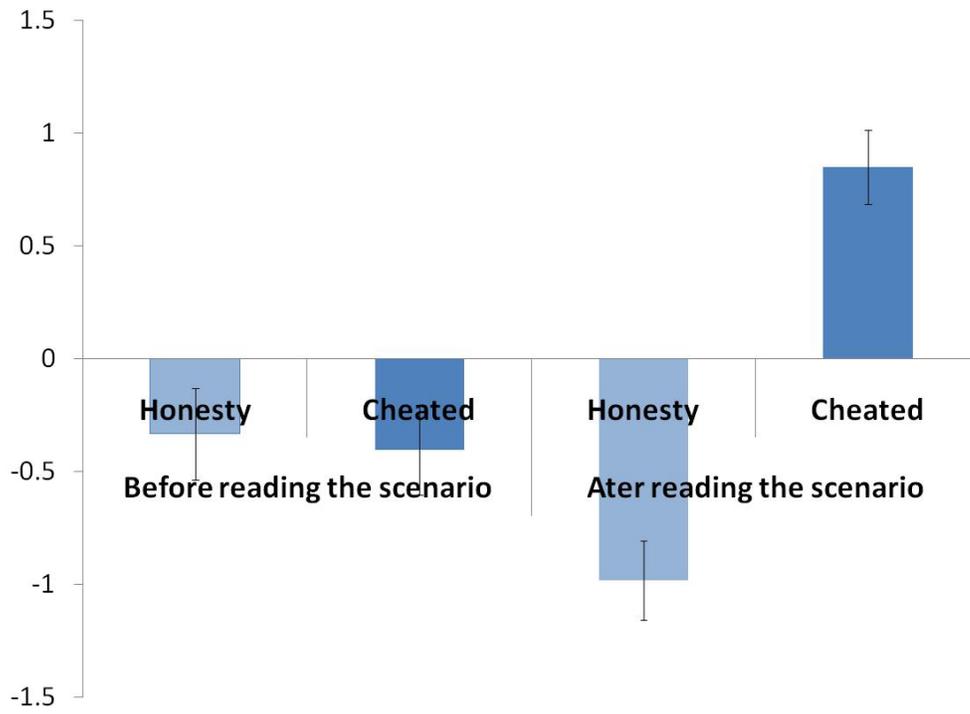


Figure 3.

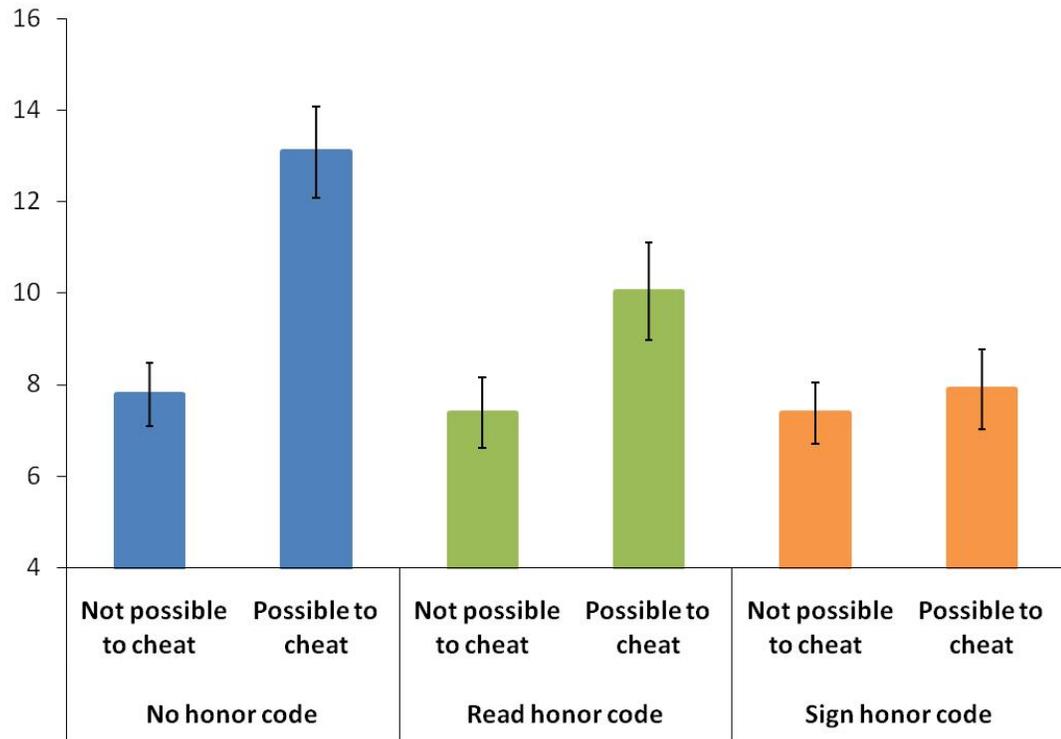


Figure 4.

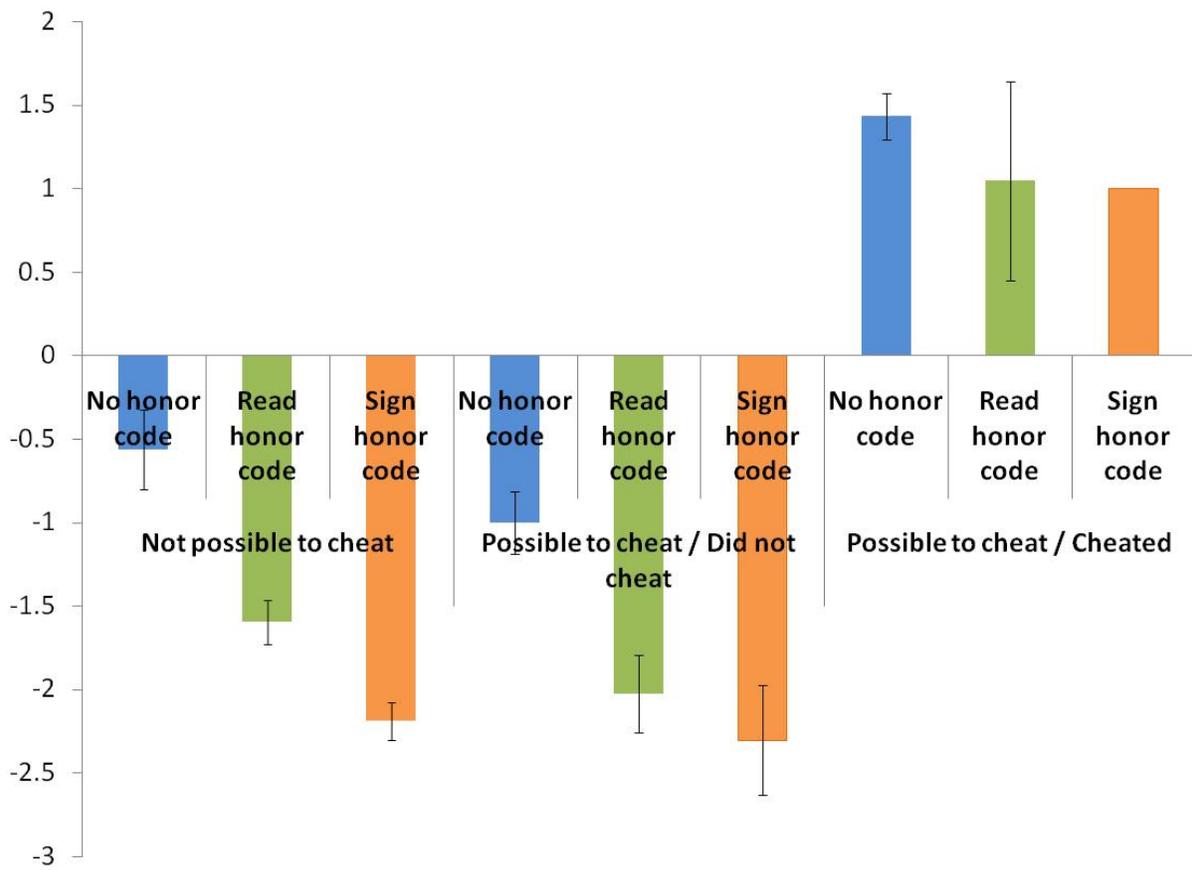


Figure 5.

