

The Cheater's High: The Unexpected Affective Benefits of Unethical Behavior

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Many theories of moral behavior assume that unethical behavior triggers negative affect. In this article, we challenge this assumption and demonstrate that unethical behavior can trigger positive affect, which we term a "cheater's high." Across 6 studies, we find that even though individuals predict they will feel guilty and have increased levels of negative affect after engaging in unethical behavior (Studies 1a and 1b), individuals who cheat on different problem-solving tasks consistently experience more positive affect than those who do not (Studies 2–5). We find that this heightened positive affect does not depend on self-selection (Studies 3 and 4), and it is not due to the accrual of undeserved financial rewards (Study 4). Cheating is associated with feelings of self-satisfaction, and the boost in positive affect from cheating persists even when prospects for self-deception about unethical behavior are reduced (Study 5). Our results have important implications for models of ethical decision making, moral behavior, and self-regulatory theory.

Keywords: cheating, dishonesty, ethics, unethical behavior, affect

About morals, I know only that what is moral is what you feel good after and what is immoral is what you feel bad after.

—Ernest Hemingway, *Death in the Afternoon*

I was heady with happiness. Since I hadn't yet had my first taste of alcohol, I couldn't compare the feeling to a champagne high, but it was the most delightful sensation I'd ever experienced.

—Frank Abagnale, *Catch Me If You Can*

These two quotations offer contradictory perspectives on the emotional consequences of unethical behavior. Hemingway's perspective is the more commonly espoused: immoral behavior causes individuals to feel bad. However, Frank Abagnale, the swindler made famous in the movie *Catch Me If You Can*, presents an alternate view when describing his first successful scam: immoral behavior can elicit positive affect (Abagnale & Redding, 2000). A number of scholars have proposed models of ethical

decision making (Haidt, 2001; Kohlberg, 1969; Monin, Pizarro, & Beer, 2007; Pizarro, 2000; Rest, 1986; Tangney, Stuewig, & Mashek, 2007; Treviño, 1986), in part to explain the pervasiveness of unethical behavior (e.g., Callahan, 2004; Mazar, Amir, & Ariely, 2008; Mazar & Ariely, 2006; Murdock & Anderman, 2006). Many of these models adopt Hemingway's view, presuming that unethical behavior triggers negative feelings, such as guilt, shame, and anxiety (DePalma, Madey, & Bornschein, 1995; Eisenberg, 2000; Massi, 2005), and that the prospect of experiencing these negative feelings curbs unethical behavior (Baumeister, Vohs, DeWall, & Zhang, 2007; Wright, 1971).

Notably, none of the extant models of ethical decision making can account for Abagnale's experience of feeling "heady with happiness." In this article, we challenge the fundamental assumption that unethical behavior necessarily triggers negative affect. We propose that although many individuals believe that engaging in unethical behavior will result in increased negative affect, acting unethically can predictably trigger positive feelings. Across six experiments, we find support for our predictions.

The Role of Affect in Ethical Decision Making

Emotions are a critical component of any decision (Schwarz, 2000). This is particularly true of ethical decisions, which are often personal and highly self-relevant. Departing from early theorizing that viewed ethical decision making as a primarily cognitive process (Kohlberg, 1969; Rest, 1986; Treviño, 1986), a growing literature has begun to explore the role of affect in these choices

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(Haidt, 2001; Monin et al., 2007; Pizarro, 2000; Tangney et al., 2007). For instance, recent work in moral psychology shows that ethical decisions are frequently informed by one's feelings and intuitions (Greene & Haidt, 2002; Haidt, 2001). In fact, scholars and philosophers alike have long assumed a link between affect and ethical decision making (see Plato, Republic, 2:359a–360d, 10:612b; see also Doris, 2002, Chapter 8; Rawls, 1971).

Accounts of this link typically presume that immoral acts trigger negative affect (such as guilt, shame, and remorse) and that the anticipation of negative affect represents an expected cost that curbs unethical behavior (Bandura, 1990; Baumeister et al., 2007; McGraw, 1987; Schwarz, 2000; Wright, 1971). For example, recall studies about emotional reactions to past transgressions have asked participants to recall times they felt a specific negative emotion, such as guilt or shame (e.g., Baumeister, Stillwell, & Heatherton, 1995; Tracy & Robins, 2006). Similarly, prediction studies have found that when individuals expect to experience guilt following a particular behavior, they are less likely to engage in that behavior (Massi, 2005). These study designs are unlikely to detect positive affective reactions. The one study that solicited a broader set of emotional reactions asked participants to recall episodes of academic dishonesty (Whitley, 2001). In this study as well, participants reported that they had experienced more negative than positive affect.

However, the focus of these studies on recall and prediction limit the conclusions they can draw about the actual affective consequences of unethical behavior. Recalling affective experiences is difficult; individuals are notoriously inaccurate when recalling emotions (Thomas & Diener, 1990). In addition, individuals tend to both mispredict and misremember unethical behavior (Tenbrunsel, Diekmann, Wade-Benzoni, & Bazerman, 2010). As a result, participants' reports in these types of studies may reflect lay theories about affective reactions to unethical behavior or self-presentational concerns rather than their actual reactions at the time they engaged in the behavior. Similarly, the few laboratory studies that have directly tested the relationship between unethical behavior and affect have examined a very specific type of unethical behavior—acts that comply with an authority figure's request to cause direct harm to a salient victim (e.g., administering an electric shock to a confederate at the request of the experimenter). These studies consistently found increases in negative affect following this type of unethical behavior (Brock & Buss, 1964; Buss & Brock, 1963; Okel & Mosher, 1968; Ring, Wallston, & Corey, 1970). To our knowledge, only one study has examined the affective consequences of elicited unethical behavior that did not involve direct harm to a salient victim (Wallington, 1973), and this study found no significant effects of unethical behavior on participants' negative affect. The author did not measure positive affect.

The small set of field studies that have investigated affective consequences of unethical behavior has also focused on behavior that involves harm to salient victims (i.e., where it is clear to the perpetrator that they have directly hurt someone else by their actions). For instance, Evans, Ehlers, Mezey, and Clark (2007) found that out of 105 perpetrators of violent crimes, 46% reported that they were haunted by distressing memories, and 6% showed signs of Posttraumatic Stress Disorder (PTSD), a condition characterized in part by negative emotional responses. Byrne's (2003) work on trauma reactions in perpetrators of violent crimes suggests that certain types of crimes, including those that involve known

victims, are more likely to result in PTSD. Research on emotional consequences of ethical transgressions in the workplace has also focused on actions that cause direct harm to salient victims, such as workplace bullying, harassment, discrimination, injustice, and victimization (Giacalone & Promislo, 2010).

In summary, empirical work across laboratory and field studies have supported the prevalent assumption that unethical behavior triggers negative affect, but these studies have focused on acts that harm a salient victim, often at the directive of someone else. What role does harm play in unethical behavior? Certainly, perceptions of harm play a critical role in moral judgment. For example, Gray, Young, and Waytz's (2012) model of the moral dyad suggests that individuals' prototype of wrongdoing involves interpersonal harm. This means that the moral aspects of an act are more cognitively accessible when it involves interpersonal harm. However, restricting the definition of unethical behavior to acts that cause direct interpersonal harm would be problematic. Many acts of theft and dishonesty—including computer piracy, tax evasion, insurance fraud, workplace theft, and cheating in scholarly endeavors—do not cause (obvious) direct harm to a salient victim. Yet, they do contravene a moral principle, such as fairness or honesty, and are therefore widely recognized as unethical, even without an element of interpersonal harm.

Thus, building on traditions in both moral psychology (Uhlmann, Pizarro, Tannenbaum, & Ditto, 2009) and philosophy (Hare, 1981; Kant, 1785/1993), we define unethical behavior as acts that violate widely held moral principles (such as honesty or fairness).¹ This definition includes behaviors such as cheating, dishonesty, and stealing. Many behaviors that violate widely held principles lack a specific, identifiable victim but harm the broader community and constitute unethical behavior (Alicke, 2012; Pizarro, Tannenbaum, & Uhlmann, 2012). For instance, unethical actions may undermine a norm (Gray, Waytz, & Young, 2012) or violate abstract concepts such as "community" (Rozin, Lowery, Imada, & Haidt, 1999) or "purity" (Haidt, 2001).

Surprisingly, very little prior work has examined the affective consequences of voluntary unethical behavior without obvious harm or a salient victim. This is an important omission, not only because these types of unethical behavior are common (Callahan, 2004) and costly (Hollinger & Langton, 2007; U.S. Internal Revenue Service, 2010) but also because the affective consequences of these acts may be very different. Thus, in contrast to the traditional—and Hemingway's—perspectives, we propose that voluntary unethical acts without salient victims and obvious harm not only fail to elicit negative affect but may actually evoke *positive* affect, a phenomenon we term the "cheater's high." The idea that unethical behavior can trigger positive affect is consistent with many anecdotal accounts of dishonesty, theft, and fraud. These accounts include wealthy individuals who delight in shoplifting affordable goods (Seagrave, 2001), joy-riders who steal cars for the thrill (Katz, 1988), and fraudsters who revel in their misdeeds (Abagnale & Redding, 2000).

We note that the "cheater's high" is related to two streams of prior research. First, it is related to Ekman's (2001) concept of "duping delight," or the exhilaration caused by successfully de-

¹ Consistent with their etymological roots as synonyms, we also use we use the terms "immoral" and "unethical" interchangeably.

ceiving others, which to date, lacks an empirical demonstration (DePaulo et al., 2003). Second, it is related to research on “forbidden fruit,” which suggests that people find objects and experiences that are forbidden or taboo to be more attractive and alluring than those that are not forbidden (Alberts, Mulken, Smeets, & Thewissen, 2010; Fishbach, 2009; Mann & Ward, 2001; Pechmann & Shih, 1999). This work does not address the affective consequences of unethical behavior but does suggest a contributing factor: People may enjoy engaging in behaviors that are prohibited.

We explore the link between unethical behavior and affect in six experimental studies. We investigate the proposition that affective reactions to unethical behavior are different from what prior work has assumed and what individuals predict. Specifically, we challenge a fundamental assumption of the ethical decision making literature by considering the possibility that unethical behavior can trigger positive affective consequences. Our findings break new ground by demonstrating that theoretical models of ethical decision making should account for a broader range of affective consequences than they currently do.

Negative Affective Consequences of Predicted Unethical Behavior

The pervasiveness and frequency with which people engage in unethical behavior (Callahan, 2004) contrasts with the desire to maintain a positive self-concept both privately and publicly (Adler, 1930; Allport, 1955; Rogers, 1959). People are motivated to resolve this tension, even when doing so requires a degree of self-deception or pretense (Schlenker, Forsyth, Leary, & Miller, 1980; Tajfel, 1982). Moral values constitute a central aspect of an individual's positive self-image (Chaiken, Giner-Sorolla, & Chen, 1996), and consistent with the motivation to maintain a positive self-image, most people perceive themselves as honest and deserving and believe firmly in their own morality (Aquino & Reed, 2002; Greenwald, 1980; Sanitioso, Kunda, & Fong, 1990).

The misalignment between actions (e.g., one's unethical behavior) and internal desires (e.g., one's desire to be ethical) creates a psychological threat for individuals as well as a sense of dissonance (Festinger, 1957). Behavioral ethics scholars argue that when people face ethical dilemmas, they experience a tension between a person's “want” and “should” selves (Bazerman, Tenbrunsel, & Wade-Benzoni, 1998; Mead, Baumeister, Gino, Schweitzer, & Ariely, 2009; Tenbrunsel et al., 2010). The “want” self is defined by short-term goals, impulsivity, and “hot” decisions, whereas the “should” self involves long-term, rational, and “cold” decisions. Tenbrunsel et al. (2010) propose that the “should” self dominates the prediction phase (when people consider future decisions) and that the “want” self dominates the action phase. As a result, people overestimate their future ethicality.

This prediction is consistent with findings that ethical forecasts reflect one's hopes and ideals (Kivetz & Tyler, 2007; Newby-Clark, Ross, Buehler, Koehler, & Griffin, 2000) and undervalue both situational constraints (Diekmann, Tenbrunsel, & Galinsky, 2003) and one's motivations in the heat of the moment (Diekmann et al., 2003; Diekmann, Walker, Galinsky, & Tenbrunsel, 2012). As a result, predictions about one's ethical behavior tend to be overly optimistic. For example, people overestimate their future

altruistic actions in contexts such as donating time and money to charity (Epley & Dunning, 2000) and participating in a blood drive (Trope & Liberman, 2003).

In the same way that the “should” self miscalculates ethical behavior, we expect the “should” self to miscalculate that unethical behavior will evoke negative affect. We postulate that when people predict what their affective state will be after they act unethically, their “should” self and their desire to be moral will be salient. The discrepancy between their moral self-image and the immoral acts they imagine engaging in will result in projected dissonance. From this perspective, focusing on ideals and values, the “should” self will overestimate the psychic cost that they will bear and will underestimate their reactions to any psychological or material benefits that result from the unethical behavior. Thus, we hypothesize that when individuals predict their affective reactions to unethical behavior, they will predict that they will experience heightened negative affect (*Hypothesis 1*).

Positive Affective Consequences of Actual Unethical Behavior

Affective forecasts (e.g., how much we will enjoy a planned beach vacation) are commonly biased (Gilbert, Gill, & Wilson, 2002; Kurtz, Wilson, & Gilbert, 2007; Wilson & Gilbert, 2003), and we expect individuals to miscalculate how they will feel following unethical behavior. In the case of affective reactions to unethical behavior that lack a salient victim, we expect people to predict they will experience heightened negative affect after behaving unethically when in fact they will experience a boost in positive affect.

We expect the “should” self to guide predictions but the “want” self to guide ethical decisions (Tenbrunsel et al., 2010). People in a “want” state are tempted by something they acutely desire. They may feel a strong pull to engage in behavior that confers an immediate reward, even if the behavior is not consistent with their ideals and long-term goals. In a classic self-control situation, an individual in the “want” state might sabotage their weight loss plans by eating a rich dessert. In the moment, the immediate reward is more compelling than adherence to their long-term goal. In the context of ethics, someone who is tempted to engage in an unethical behavior, guided by the “want” self, will be more likely to focus on the immediate benefits they might accrue rather than the potential costs that they may incur later, such as diminished self-image or risk to their reputation (Loewenstein, 1996). If an individual is not attentive to long-term consequences, unethical acts may fail to induce negative affect in the moment in which an individual makes a decision.

In the “want” state, individuals may focus on the short-term benefits they derive from a behavior. As a result, in the “want” state unethical behavior may elicit positive affect. There are several reasons why individuals may derive psychological benefits from engaging in unethical behavior. First, unethical behavior often confers an advantage, such as affording access to additional, undeserved resources. Undeserved gains from unethical behavior may be encoded as windfalls, whether they represent financial gains (e.g., additional money), social gains (e.g., beating an opponent), or psychological gains (e.g., better grades). These windfalls are positive events that can trigger positive affect (Arkes et al., 1994; Meloy, Russo, & Miller, 2006).

Second, unethical behavior may confer psychological benefits derived from a sense of greater autonomy and influence. Engaging in unethical behavior allows actors to circumvent rules by which others are bound, giving cheaters an expanded range of options and greater control over their outcomes. For instance, deception enables individuals to take advantage of others by manipulating the information that others use to make decisions (Lewicki, 1983). As a result, unethical behavior may provide an enhanced sense of control, which can increase positive affect (Carver & Scheier, 1990).

Third, unethical behavior often involves the challenge of breaking rules and overcoming systems that are designed to constrain behavior. Convincing one's boss of a lie or finding a loophole in a tax code may represent an interesting and enjoyable challenge. In a study of cheating at work, a supermarket cashier who consistently embezzled from her register explained that the behavior made her job "more interesting; it gave her new targets and a sense of challenge" (Mars, 1982, p. 31). Many people enjoy engaging in effortful cognitive endeavors (Cacioppo, Petty, Feinstein, & Jarvis, 1996), and succeeding in challenging tasks can engender a sense of pride.

To date, the fields of behavioral ethics and criminology have paid scant attention to the possibility that unethical behavior triggers positive affect. In one exception using first-hand accounts, Katz (1988) describes the emotional seduction or "sneaky thrills" that individuals derive from crimes, such as joyriding in stolen cars, vandalism, and shoplifting affordable goods. Katz (1988) notes that in many first-hand descriptions of these events, the euphoria of successfully getting away with the crime overshadows any material gain from the behavior. Other criminology researchers also note that "getting away with it" can feel good (Matza & Sykes, 1961; Moore & Gullone, 1996; Scully & Marolla, 1985). The fact that one's behavior is forbidden may enhance this experience (Wood, Gove, Wilson, & Cochran, 1997). This explanation is consistent with Frank Abagnale's opening quote. We expect that unethical behavior that does not immediately cause interpersonal harm to create psychological benefits and increase positive affect (*Hypothesis 2*).

Overview of the Research

We tested our predictions in six experiments. We first conducted two studies that asked individuals to predict how they would feel if they acted unethically. In these two prediction studies (Studies 1a and 1b), participants imagined having the opportunity to behave unethically and deciding either to act honestly or dishonestly. In both studies, participants predicted they (or someone else) would experience negative affect after behaving unethically.

Next, we conducted four experiments that afforded participants the opportunity to cheat. Contrary to what people predicted, across these studies, engaging in unethical behavior (compared to ethical behavior) increased positive affect without an accompanying increase in negative affect. In Study 2, we identify a "cheaters high": individuals who over-reported their performance experienced a boost in positive affect and no boost in negative affect, compared to non-cheaters. Study 3 replicates the cheater's high using novel experimental methods to address self-selection issues. In Study 4, we disentangle the effects of cheating and monetary rewards to

find further support for our thesis, and in Study 5, we examine the underlying mechanism for the cheater's high. We find that after cheating, people feel more satisfied with their actions, even in the presence of explicit acknowledgment that the experimenters are aware that participants may have cheated.

Study 1: Affective Predictions

We conducted two studies to gauge affective forecasts following unethical behavior. In the first study, we asked participants to predict how they would feel after cheating in an experiment. In the second, we asked participants to predict how they would feel after lying on a timesheet to their employer. In both cases, we varied whether participants forecasted their own feelings or the feelings of someone else. We included this manipulation to test whether individuals predict different affective reactions for others than they predict for themselves. This manipulation also helps us determine whether individuals' affective predictions are influenced by self-presentational concerns.

Study 1a: Method

Participants and design. We recruited 290 participants on Mechanical Turk (hereinafter MTurk; $M_{age} = 29.29$, $SD = 8.91$; 65% male; 33% students) to complete an online survey for a payment of \$0.50. We dropped eight participants with duplicate IP addresses, and we report results for the remaining 282.²

We randomly assigned participants to one of four conditions in a 2 (*self vs. other*) \times 2 (*cheat vs. honest*) between-subjects design. In each condition, participants read a description of an experiment involving a task that allows participants the opportunity to cheat. Half the participants imagined themselves in the study (*self conditions*), and half imagined someone else in the study (*other conditions*).

Procedure. We told participants that we were interested in their predictions of how they or someone else might react to an experiment we were planning to run in the near future. We described the experiment to them, and told them that participants in this study would have the opportunity to act unethically. The instructions read,

In the study, we will give participants a simple math test to complete under time pressure. The test sheet consists of 20 matrices, each based on a set of 12 three-digit numbers. We will tell participants that they have 5 minutes to find two numbers per matrix that add up to 10. Each correctly solved pair pays them \$1. In addition to the test sheet, each participant will receive an envelope with 20 one-dollar bills. At the end of the study, participants will have to take money according to their performance and turn back the envelope to the experimenter with the unearned money. About 10–15 participants will participate in each session.

Once the 5 minutes are up, we will give participants a collection slip on which they are asked to report the number of correctly identified pairs they've found. We will then instruct participants to first recycle their test sheet (using the recycling box in the room) and then fill out

² Following a reviewer's suggestion, we dropped online participants with duplicate IP addresses because we could not ensure that they did not complete the study twice. However, in every case, the results are unchanged when we leave in these participants.

their collection slips. Once they complete the collection slip, participants will pay themselves accordingly and take the unearned money in the envelope to the experimenter as they leave the room. That means that in this study participants can over-report their performance by reporting a score that is higher than their actual performance on the task, and thus make more money on the task.

Manipulation. In the *self-cheat* condition, we asked participants “Please imagine being a participant in this experiment. Imagine that you decided to over-report your performance, and you report having solved more matrices correctly than you actually did solve correctly. How likely would you be to experience each of the following emotions right after reporting the score?” In the *self-honest* condition, we asked participants to “Imagine that you decided to report your performance accurately, and you report having solved exactly the number of matrices correctly that you actually did solve correctly. How likely would you be to experience each of the following emotions right after reporting the score?” Procedures in the *other-cheat* and *other-honest* conditions were identical except that the questions related to someone else, for example, “Please imagine a participant in this experiment. Imagine that this person decided to over-report their performance . . .”

Measures. Participants completed the 20-item Positive and Negative Affectivity Schedule (PANAS; Watson, Clark, & Tellegen, 1988), which measures both positive and negative affect (PA: $\alpha = .88$, NA: $\alpha = .94$) using a 5-point scale (ranging from 1 = Very slightly or not at all to 5 = Extremely). Participants also answered demographic questions about their age and gender.

Pilot study. To verify that participants viewed the over-reporting we described in this scenario as unethical, we conducted a pilot test. We recruited a separate MTurk sample of 107 participants ($M_{age} = 30.40$, $SD = 9.13$; 51% male; 22% students) for a payment of \$0.25. (There were no duplicate IP addresses in this sample.) In this study, we asked participants to rate the ethicality of over-reporting one's performance in this same scenario. That is, participants read the same description as used in Study 1a, and they then rated the extent to which they thought over-reporting performance in this situation was morally wrong, unethical, and dishonest ($\alpha = .88$) on a 7-point scale (ranging from 1 = Not at all to 7 = Very much).

Participants rated over-reporting performance as very unethical. On the 7-point scale, the average combined rating was 5.87 ($SD = 1.32$); this average rating is significantly higher than 5, $t(106) = 6.77$, $p < .001$, but not significantly lower than 6, $t(106) = -1.05$, $p = .30$. These results demonstrate that participants perceive over-reporting in this domain as unethical.

Results and Discussion

Participants in Study 1a predicted that they and others would feel significantly lower levels of positive affect and higher levels of negative affect after cheating than after acting honestly. We conducted a univariate analysis of variance (ANOVA) using positive affect as the dependent measure and our two manipulations as between-subjects factors. Supporting our first hypothesis, participants predicted that cheating would evoke less positive affect ($M = 2.58$, $SD = 0.83$) than honesty ($M = 3.05$, $SD = 0.75$), $F(1, 278) = 24.33$, $p < .001$, $\omega^2 = 0.076$. Participants in the *self* condition reported lower levels of positive affect after cheating

than those in the *other* condition, $F(1, 278) = 14.84$, $p < .001$, $\omega^2 = 0.047$; however, the interaction with *cheat* versus *honest* was not significant, $F(1, 278) = 0.00$, $p = .99$.

The analogous univariate ANOVA for negative affect revealed that participants across *self* and *other* conditions predicted that cheating would evoke greater negative affect ($M = 2.84$, $SD = 0.93$) than would honest behavior ($M = 1.50$, $SD = 0.63$), $F(1, 278) = 198.73$, $p < .001$, $\omega^2 = 0.412$. We found no difference for participants in the *self* or *other* conditions, $F(1, 278) = 0.05$, $p = .821$, and the interaction between *self* versus *other* and *cheat* versus *honest* was not significant, $F(1, 278) = 0.99$, $p = .32$.

Study 1b: Method

Participants. One hundred and thirty-seven students (45% male; $M_{age} = 20.4$, $SD = 1.89$) completed a survey as part of a laboratory session in exchange for \$10.

Design and procedure. Participants read one of four versions of a scenario from a 2 (*self* vs. *other*) \times 2 (*cheat* vs. *honest*) between-subjects design. In the *self* condition, participants imagined they were Pat, a consultant at a large consulting company. In the *other* condition, participants imagined they were Pat's manager. In the vignette, Pat completes a time sheet that will determine whether or not Pat will earn a \$500 bonus. Pat is 5 hours short of the 500 billable hours required for the bonus. However, Pat could bill 5 hours spent on a training course to meet the goal without anyone finding out, although this is against company policy. In the *cheat* condition, participants read “Imagine that [you/Pat] billed 5 training hours. As a result, [you/Pat] reported 500 hours for the quarter and reached the target for the bonus.” In the *honest* condition, participants read, “Imagine that [you/Pat] did not bill any training hours. As a result, [you/Pat] reported 495 hours for the quarter and did not reach the target for the bonus.”

After reading the vignette, participants reported the extent to which they or Pat would feel positive and negative affect after reporting hours, using the PANAS (Watson et al., 1988, PA: $\alpha = .78$, NA: $\alpha = .89$).

Results and Discussion

We conducted a univariate ANOVA using positive affect as the dependent measure and *self* versus *other* and *cheat* versus *honest* as the two between-subjects factors. We found that participants predicted that cheating would lead to greater positive affect ($M = 2.61$, $SD = 0.70$) than honesty ($M = 2.31$, $SD = 0.71$), $F(1, 133) = 5.97$, $p = .016$, $\omega^2 = 0.035$. Participants in the *self* condition reported lower levels of positive affect after cheating than those in the *other* condition, $F(1, 133) = 7.99$, $p = .005$, $\omega^2 = 0.049$; however, the interaction with cheating condition was not significant, $F(1, 133) = 0.00$, $p = .99$.

We conducted a similar univariate ANOVA for negative affect. This ANOVA revealed that participants across *self* and *other* conditions predicted that negative affect would be greater after cheating ($M = 2.93$, $SD = 1.01$) than after honest behavior ($M = 2.12$, $SD = 0.58$), $F(1, 133) = 31.94$, $p < .001$, $\omega^2 = 0.184$. Participants in the *self* condition reported marginally lower negative affect than those in the *other* condition, $F(1, 133) = 3.19$, $p = .076$, but the interaction between *self* versus *other* and cheating condition was not significant, $F(1, 133) = 0.16$, $p = .69$.

Consistent with the results of Study 1a, results from this study demonstrate that participants expect to experience more negative affect after behaving unethically than after behaving honestly. Our findings regarding positive affect were mixed. In Study 1a, participants predicted lower positive affect for cheaters than for non-cheaters, but in Study 1b, participants predicted higher positive affect for cheaters. These results did not change depending on whether participants predicted their own affective state or the affective state of another person. The results of Study 1a are consistent with existing models of unethical behavior; results from Study 1b imply that participants expect cheating to evoke emotional ambivalence. Neither study predicts a “cheater’s high.” Participants did not predict that cheating, compared to acting honestly, increases positive affect without an accompanying increase in negative affect.

Criteria for Establishing the Cheater’s High

To document the cheater’s high, we conduct three sets of tests: (a) We compare changes in positive affect across time for both cheaters and non-cheaters. Specifically, we expect cheaters to experience higher levels of positive affect at Time 2 (post-cheating) than at Time 1 (baseline), and we expect non-cheaters not to experience a boost in positive affect. (b) We compare positive affect after the cheating opportunity between cheaters and non-cheaters. We expect cheaters to report higher positive affect than non-cheaters at Time 2, but not to differ from non-cheaters at Time 1. (c) We compare the difference between positive and negative affect for cheaters and non-cheaters across time. We expect this difference to vary across time; in the analyses, this means finding a significant three-way interaction of affect valence (positive and negative), cheating (yes and no), and time (1 and 2).³ In particular, we expect that at Time 1, the two-way interaction between affect valence and cheating will not be significant. At Time 2, we expect a significant simple two-way interaction between affect valence and cheating, with a significant difference in affective valence for cheaters (with positive affect higher than negative affect), and a non-significant or weaker difference between positive and negative affect for non-cheaters. We report results for each of these three criteria in the four studies that follow. Given the fact that our paradigms involve performing cognitive tasks and that performance may influence both cheating (McCabe & Treviño, 1997) and affect (Carver & Scheier, 1990), we include performance as a covariate in all the studies.

Study 2

In Study 2, we consider affective reactions to actual cheating. The experimental design affords participants an opportunity to cheat by overstating performance for an additional payment. This behavior involves dishonesty and taking unearned money, behavior that falls well within our definition of unethical behavior and was also rated as unethical in the pilot study reported with Study 1a. We use repeated measures analyses to disentangle the influence of positive affect on cheating from the effect of cheating on positive affect.⁴

Method

Participants. One-hundred seventy-nine individuals (40% male; $M_{\text{age}} = 25$, $SD = 8.80$) from a large Northeastern university participated in the study for a \$10 payment plus a bonus based on their performance.

Procedure. Participants worked in individual cubicles. They first completed an abbreviated 10-item version of the Positive and Negative Affectivity Schedule (PANAS; Watson et al., 1988). Specifically, we used the items *excited*, *enthusiastic*, *interested*, *strong*, and *determined* to measure positive affect ($\alpha = .86$) and *upset*, *hostile*, *ashamed*, *jittery*, and *scared* to measure negative affect ($\alpha = .75$).

Next, participants engaged in a timed anagram task. The task, adapted from Ruedy and Schweitzer (2011) involved unscrambling as many of 15 words as participants could in 4 min. Participants earned a \$1 bonus for every correctly unscrambled word. The page that listed the scrambled words was stapled to a packet of sheets and a manila folder. In the packet were two sheets of carbonless copy paper that, unbeknownst to participants, created an imprint of their writing. At the end of 4 min, the experimenter asked participants to tear the top sheet out of packet. The experimenter then collected the packets and folders. Participants were not able to see that the packets the experimenter collected contained a complete imprint of the words they had unscrambled.

Next, the experimenter handed out answer keys, and participants checked their work in complete privacy. This stage of the experiment afforded participants the opportunity to cheat; as they checked their answers, they could add answers to their answer sheet. The experimenter determined whether or not participants had cheated by comparing the imprint of the answers participants had written down in the first 4 min of the study with the answer sheets they ultimately submitted for payment after checking their work.

After, participants answered some brief questions about how difficult and enjoyable they found the task. Then they completed the same 10-item affect measure as before ($\alpha_{PA} = .90$, $\alpha_{NA} = .66$). Participants were also asked to provide any comments they had about the session so far. At the end of the session, participants were again asked to provide comments. No participants expressed suspicion that the purpose of the study was to study cheating behavior.

Results and Discussion

We excluded six participants for failing to complete the second affect measure. On average, participants correctly unscrambled 3.84 ($SD = 2.08$) of the 15 anagrams. Seventy-one (41.0%) participants cheated by writing in additional answers after the time to work on the task had ended. Participants who cheated added 2.48 answers on average ($SD = 1.98$).

Criterion 1. We expect cheaters, but not non-cheaters, to experience higher levels of positive affect at Time 2 (post-cheating) than they do at Time 1. That is, we expect a model with

³ We thank Linda Skitka, our associate editor, for guidance in developing these criteria.

⁴ We also conducted our analyses without controlling for performance, and our results for positive and negative affect are nearly identical.

positive affect as the dependent variable to reveal a two-way interaction between Time (1 vs. 2) and Cheating (yes, no). In addition, we expect simple effects tests to show a significant increase in positive affect across time periods for cheaters but not for non-cheaters. We tested this by conducting a mixed ANOVA with positive affect at Time 1 and 2 as the within-subjects factor, condition as the between-subjects factor, and actual performance on the matrix task as a covariate. Supporting the cheater's high, the two-way interaction was significant, $F(1, 170) = 5.18, p = .024, \omega^2 = .024$, suggesting that there were differences in the changes in positive affect across conditions (see Figure 1). Simple effects testing confirmed that those who cheated experienced an increase in positive affect, $F(1, 170) = 46.77, p < .001, \omega^2 = .175$. In this study, those who did not cheat also experienced an increase in positive affect across rounds, $F(1, 170) = 21.57, p < .001, \omega^2 = .106$. This was perhaps due to the fact that the performance bonuses were substantial, and even those who did not cheat earned additional money. However, the effect size for time in the cheating condition ($\omega^2 = .175$) was greater than the effect size for time in the no cheating condition ($\omega^2 = .106$), a result consistent with our prediction.

Criterion 2. We expect cheaters to report more positive affect than non-cheaters at Time 2 but not to differ from non-cheaters at Time 1. Simple effects testing showed that cheaters were directionally higher in positive affect than non-cheaters at Time 2, though this difference was not significant, $F(1, 170) = 2.76, p = .099, \omega^2 = .001$. Cheaters and non-cheaters did not differ in positive affect at Time 1, $F(1, 170) = 0.04, p = .84$.

Criterion 3. To test our third criterion, we conducted a mixed ANOVA with cheating (yes, no) as the between-subjects factor, affective valence (positive and negative) and Time (1 and 2) as within-subjects factors, and actual performance on the anagram

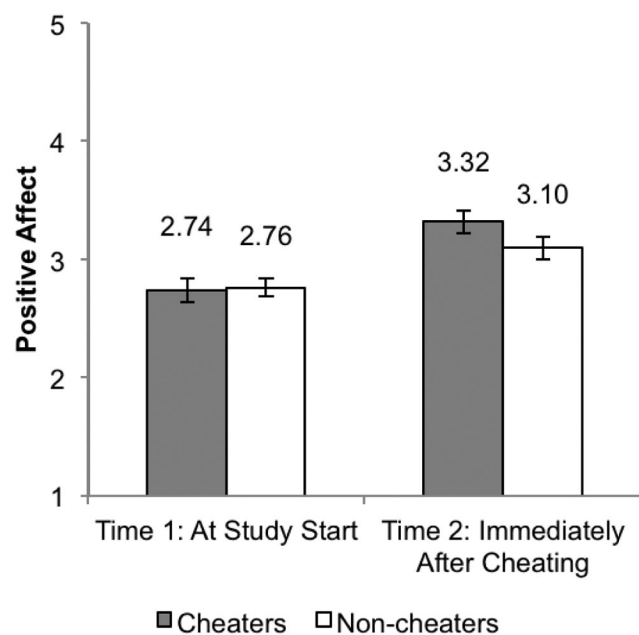


Figure 1. Study 2 means (± 1 SE) of positive affect before and after the cheating opportunity for cheating and honest participants. SE = standard error.

task as a covariate. The results revealed a significant three-way interaction between cheating, affect valence, and time, $F(1, 170) = 5.53, p = .020, \omega^2 = .025$. To explore the nature of this three-way interaction, we tested the simple interaction of Cheating \times Affective Valence separately at Time 1 and Time 2. At Time 1, the simple interaction was not significant, $F(1, 170) = 0.38, p = .54$. At Time 2, it approached marginal significance, $F(1, 170) = 2.29, p = .13$. Examining the simple effects at Time 2, the difference between positive and negative affect was significant for both cheaters ($M = 1.87, SE = 0.12$); $F(1, 170) = 261.93, p < .001, \omega^2 = .601$, and non-cheaters ($M = 1.65, SE = 0.10$); $F(1, 170) = 290.32, p < .001, \omega^2 = .626$, but the effect size was larger for cheaters than non-cheaters (albeit not significantly so).⁵

In this study, all participants experienced increases in both positive and negative affect during the course of the experiment. However, for those who decided to cheat, their boost in positive affect was larger than the increase experienced by non-cheaters. Traditional significance testing did not support all of the criteria of the cheater's high hypothesis in this study. However, all the results were nonetheless in the predicted direction, providing suggestive evidence for a cheater's high. The Study also has two additional limitations that we address in our following studies. First, cheating in this study was a self-selected behavior. This is broadly true of unethical behavior, but we seek to document the cheater's high in a paradigm with random assignment. Second, cheating in this study was associated with higher levels of payment. Though this is also a common feature of cheating behavior, we seek to replicate the cheater's high in a context that disentangles cheating from financial rewards.

Study 3: Ruling Out Self-Selection

An important challenge for scholars investigating unethical behavior is that unethical behavior is often self-selected: People decide whether to behave dishonestly or honestly. As a result, the cheater's high we observe in Study 2 could reflect self-selection. We address this concern in Study 3 with a novel experimental approach for studying ethical decision making. In this study, we pair each participant with a confederate and have them work together and share a joint reward. The confederate partners either do or do not over-report their joint performance. Thus, in this study, we investigate the "cheater's high" for participants randomly assigned to either a cheating or no-cheating condition. We also use a very different sample population in a different country.

Method

Participants. We recruited 47 participants (33% male; $M_{\text{age}} = 27, SD = 9.0$; 62.5% students) at a university in London, England. Participants earned £10 (\$15.50) for participating in the

⁵ One possible concern is that the negative affect items in the PANAS might not represent the types of negative affect associated cheating. To address this concern, we conducted a separate pilot study on Amazon MTurk with 103 participants (61% male, $M_{\text{age}} = 30, SD = 10.7$ years) who were paid \$.50. We asked each participant to identify affect items he or she thought someone would experience after cheating. Re-running our analyses for Studies 2, 3, 4, and 5 with the subset of negative affect items that a majority of participants identified as relevant (*guilty, ashamed, jittery, and nervous*), we found identical results to those we report.

study and had the chance to earn up to an additional £10 in bonus based on their performance.

Procedure. We randomly assigned participants to one of two conditions (cheating or no-cheating). In both conditions, participants completed a problem-solving task that included 20 matrices, each based on a set of 12 three-digit numbers (adapted from Mazar et al., 2008). We gave participants 5 min to find two numbers in each matrix that summed to 10; this duration was not sufficient for anyone to solve all 20 matrices ($M_{\text{solved}} = 5.0$, $SD = 3.2$, $\text{Max}_{\text{solved}} = 13.0$).

Participants always completed the matrix task in a room with a confederate. When the experimenter brought the confederate and the participant to the room, she left them with a timer set for 5 min and informed them that when the timer went off, they should switch sheets and grade each other's worksheet. We also informed participants that they would each earn a bonus based upon the total number of matrices they and their (confederate) partner scored on the task, £0.25 (\$0.39) for each correct answer, up to a total of £10. When the experimenter returned to the room, she first asked the participant to report the confederate's score. The confederate always answered five matrices correctly, and every participant accurately reported five. Then, the experimenter asked the confederate to report the participant's score.

In the no-cheating condition, the confederate accurately reported the participant's score. In the cheating condition, the confederate always added five to the total number of matrices that the participant had legitimately solved. This over-statement corresponded to an additional payment of £1.25 (\$1.94) that participants had not legitimately earned. None of the participants in the cheating condition corrected the confederate's over-reporting of their score, and none reported suspicion that the purpose of the study was to test their reactions to the confederate's behavior.

We collected affect measures (using the abbreviated PANAS; Mackinnon et al., 1999) upon participants' arrival (Time 1, $\alpha_{PA} = .81$; $\alpha_{NA} = .85$) and immediately after the cheating manipulation (Time 2, $\alpha_{PA} = .85$; $\alpha_{NA} = .77$).

Results and Discussion

One participant took their matrix task with them so we do not have a measure of their true performance. We report analyses for the remaining 46 participants. We expected participants in the cheating condition, compared to those in the no-cheating condition, to experience the cheater's high and report a boost in positive affect.

Criterion 1. We conducted a mixed ANOVA with positive affect at Time 1 and 2 as the within-subjects factor, condition as the between-subjects factor, and actual performance on the matrix task as a covariate. This analysis revealed a marginally significant two-way interaction, $F(1, 43) = 3.03$, $p = .089$, $\omega^2 = .042$, suggesting that there were differences in the changes in positive affect across conditions. Simple effects testing confirmed that those in the all-cheating condition experienced a significant increase in positive affect, $F(1, 43) = 4.26$, $p = .045$, $\omega^2 = .066$, and that those in the no-cheating condition did not, $F(1, 43) = 0.22$, $p = .64$ (see Figure 2).

Criterion 2. We next examine whether or not cheaters experience similar positive affect to non-cheaters at Time 1 but greater positive affect than non-cheaters at Time 2. In additional simple

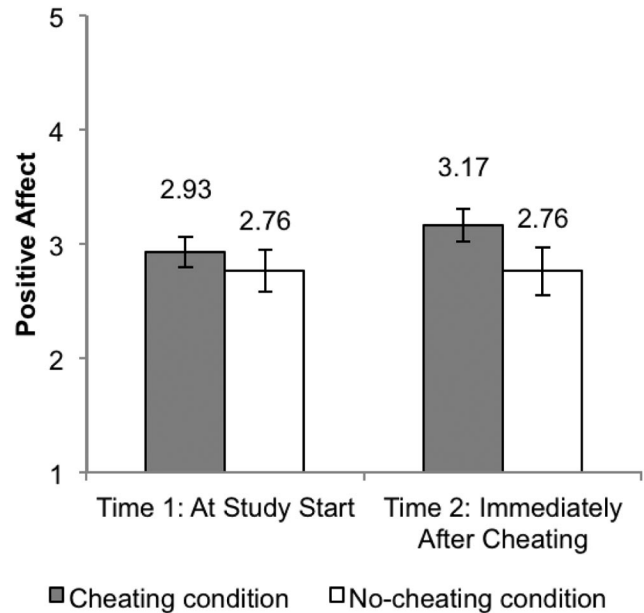


Figure 2. Study 3 means (± 1 SE) of positive affect pre- and post-study, by cheating condition.

effects testing, we find that cheaters experienced marginally higher positive affect than non-cheaters at Time 2, $F(1, 43) = 3.60$, $p = .064$, $\omega^2 = .053$, but not at Time 1, $F(1, 43) = 0.24$, $p = .63$.

Criterion 3. We conducted a mixed ANOVA with cheating as the between-subjects factor, affective valence, and Time as within-subjects factors, and actual performance on the matrix task as a covariate. The results revealed a marginally significant three-way interaction between cheating, affect valence, and time, $F(1, 43) = 2.95$, $p = .093$, $\omega^2 = .040$. At Time 1, the simple interaction of cheating and affective valence was not significant, $F(1, 43) = 0.01$, $p = .92$, as we expected. At Time 2, however, it approached marginal significance, $F(1, 43) = 2.54$, $p = .12$. Examining the simple effects at Time 2, the difference between positive and negative affect was significant for both cheaters ($M = 1.70$, $SE = 0.21$); $F(1, 43) = 68.99$, $p < .001$, $\omega^2 = .596$, and non-cheaters ($M = 1.22$, $SE = 0.21$); $F(1, 43) = 32.55$, $p < .001$, $\omega^2 = .407$, but again was (non-significantly) larger for cheaters than non-cheaters. As in Study 2, traditional significance testing did not support Criterion 3 of the cheater's high hypothesis, but the results were in the predicted direction.

In Study 3, we introduce a novel approach for studying unethical behavior with a method that randomly assigns participants to a cheating or no-cheating condition. By assigning participants to a cheating condition, results from Study 3 document a cheater's high that cannot be explained by self-selection. Although our approach in this study addresses the problem of self-selection, we acknowledge that this method introduces two issues that may influence our results. First, participants in the all-cheating condition may have felt morally superior to the confederate who misreported their score. This social comparison may have increased positive affect and amplified our effect. However, this design also may have created social pressure for participants to conform with the con-

federate. Succumbing to social pressure is an aversive experience (Brehm, 1966), which would have dampened our effects in the all-cheating condition. As a result, characteristics of the experimental design may have both amplified as well as dampened the cheater's high. We therefore sought to create an additional experimental paradigm that would allow us to address self-selection issues in a different way, as well as address concerns that unearned financial rewards are driving our result.

Study 4: Effects of Incentives

In Study 4, we disentangle the effects of financial rewards from the effects of cheating. In this study, participants have no financial incentives for cheating. We test whether or not participants experience a boost in positive affect after cheating even in the absence of financial incentives. Study 4 also addresses concerns about self-selection, using a different approach than the one we used in Study 3. In Study 4, we randomly assign participants to either an experimental condition, where cheating is possible, or a control condition, where cheating is not possible. This design allows us to compare participants who chose to cheat with participants who did not have the option to cheat. In this way, we can address the concern that choosing not to cheat might have consequences for positive affect and that this effect might account for the difference in positive affect between cheaters and non-cheaters. We also test whether a psychological sense of relief after not being caught for cheating may be driving the cheater's high.

Method

Participants and design. We recruited 161 students (69% male; $M_{\text{age}} = 20.65$, $SD = 2.41$) from a large Southeastern university and paid them \$8 for their participation, with no opportunity to win additional money depending on performance. Participants were randomly assigned to one of two conditions: a control condition and an experimental condition where they were given the opportunity to cheat.

Procedure. We told participants that the study included a variety of tasks that they would complete sequentially. The instructions informed participants that we were interested in examining different problem solving techniques and their link to personality. In addition, the instructions informed participants that we were also interested in studying emotions across short periods of time and that they would complete short surveys asking them about their feelings more than once throughout the study. We collected affect measures using the full PANAS (Watson et al., 1988) upon arrival (Time 1, $\alpha_{PA} = .89$; $\alpha_{NA} = .79$) and immediately after the cheating manipulation (Time 2, $\alpha_{PA} = .88$; $\alpha_{NA} = .87$).

In addition to the items measuring positive and negative affect, we also included an item measuring relief ("relieved") both at Time 1 and at Time 2. At Time 2, we also asked participants to indicate their agreement with three items measuring relief ("I feel as if a weight has been lifted off my shoulders," "I can breathe easily now," and "I feel like I have just experienced a release of tension," $\alpha = .91$). We included these relief measures to rule out an alternative explanation for the effects of cheating on positive affect we observed in Studies 2 and 3: that cheaters experience a sense of relief after not being caught for their unethical behavior.

Problem-solving task. After answering the short emotion questionnaire, participants received instructions for the problem-solving task. The task required them to answer 20 math and logic problems. Participants had 25 s to read each problem and choose one of five possible answers. A timer on the computer screen helped them keep track of time on each problem. Participants were also told that, "for each problem, when time is up, you will be automatically transferred to the next problem. If you select one of the answers before time is up in any given round, you will automatically be moved to the next problem. Note that wrong answers will not harm your score." After these instructions, participants were given an example so that they would become familiar with the task. Next, participants read the following instructions, "NOTE that this problem solving task is an INTELLIGENCE TEST that is designed to assess your cognitive abilities. High scores on this test correlate with overall intelligence and predict personal and professional success. The computer will record the number of problems you solve correctly and will show you your performance at the end of the task."

In the control condition, participants then moved to the first problem. In the experimental condition, they received the following additional piece of information before moving to the first problem: "During the problem solving task, some browsers will display the correct answer on the screen if you click on the button labeled 'CORRECT ANSWER.' Just disregard that button if you see it on the screen and solve the problems on your own."

After completing the problem-solving task, participants responded to the second set of affect measures, reported their level of relief and then answered a few demographic questions. They were then shown their overall score on the problem-solving task. Finally, they answered two questions assessing their level of suspicion. In particular, they indicated what they thought the study was about and reported any additional comments they had.

Results and Discussion

Suspicion. Analysis of participants' answers to the question assessing potential suspicion revealed that no participants thought the study was testing cheating or the link between cheating and emotions.

Proportion of cheating participants. In the experimental condition, 68% of participants (52 out of 77) cheated in at least one round. In Studies 2 and 3, we compared participants who cheated to participants who did not cheat. In this design, we compare participants who cheated in the experimental condition to participants in the control condition, which afforded no opportunity to cheat. We note, however, that the nature and significance of our results do not change if we conduct analyses comparing cheaters in our experimental condition to control participants and non-cheaters in our experimental condition (as part of the same group).

Criterion 1. We conducted a mixed ANOVA with positive affect at Time 1 and Time 2 as the within-subjects factor, and cheating versus control condition as the between-subjects factor. In this study, we did not control for task performance, because unlike Studies 2 and 3, participants in this study did not know how they performed on the problem-solving task until the end of the study. (However, our results do not change if we control for performance.) This analysis revealed a significant two-way interaction, $F(1, 134) = 7.73$, $p = .006$, $\omega^2 = .047$, suggesting that there were

differences in the changes in positive affect across conditions. Simple effects testing confirmed that those who cheated significantly increased in positive affect, $F(1, 134) = 8.92, p = .003, \omega^2 = .055$, whereas those in the no-cheating condition did not, $F(1, 134) = 0.49, p = .49$ (see Figure 3).

Criterion 2. We next examine whether or not cheaters report more positive affect than non-cheaters at Time 1 and Time 2. Consistent with the cheater's high, simple effects tests reveal that cheaters significantly differed from non-cheaters in positive affect at Time 2, $F(1, 134) = 9.51, p = .002, \omega^2 = .059$, but not at Time 1, $F(1, 134) = 0.17, p = .68$.

Criterion 3. We conducted a mixed ANOVA with cheating as the between-subjects factor, and affective valence and time as within-subjects factors. The results revealed a significant three-way interaction between cheating, affect valence, and time, $F(1, 134) = 6.48, p = .012, \omega^2 = .039$. As we expect, the simple interaction of cheating and affective valence was not significant at Time 1, $F(1, 134) = 0.78, p = .38$. However, consistent with our predictions, it was significant at Time 2, $F(1, 134) = 11.69, p = .001, \omega^2 = .073$. Examining the simple effects at Time 2, the difference between positive and negative affect was significant for both cheaters ($M = 0.98, SE = 0.11$); $F(1, 134) = 75.36, p < .001, \omega^2 = .353$, and non-cheaters ($M = 0.49, SE = 0.09$); $F(1, 134) = 30.30, p < .001, \omega^2 = .177$, but was larger for cheaters than non-cheaters. This pattern of results is consistent with Criterion 3 of the cheater's high hypothesis.

Relief. We then conducted a mixed ANOVA with the single item measure of relief at Time 1 and Time 2 as the within-subjects factor, and cheating condition as the between-subjects factor. This analysis revealed no significant effects (all $ps > .22$). Next, we examined the three-item measure of relief we collected after participants had the opportunity to cheat. Participants who cheated in the experimental condition reported experiencing the same amount

of relief ($M = 2.78, SD = 0.95$) as did participants in the control condition who did not have the opportunity to cheat ($M = 2.65, SD = 1.02$), $t(134) = 0.75, p = .46$.

These findings provide further support for a link between cheating and positive affect. First, these results demonstrate that cheating triggers an emotional "high" independent of its associated financial rewards. Second, the use of the control condition as the comparison group demonstrates that the differences in affect are driven by a positive affect boost in cheaters, rather than by affective reactions for those who chose not to cheat when they have the opportunity. Third, these results indicate that the cheater's high is not driven by a sense of relief after not getting caught cheating.

Study 5: Getting Away With It

In Study 5, we investigate the underlying mechanism of the cheater's high. In this study, we consider the possibility that the cheater's high is driven by the thrill of getting away with unethical behavior. To test for this possibility, we explicitly acknowledge the potential for cheating in our study to some of our participants. In prior studies of unethical behavior, experimenters have not explicitly confronted cheaters with the acknowledgment that over-reporting performance in the experiment is possible and that it constitutes cheating. Schweitzer and Hsee (2002) and Shalvi, Dana, Handgraaf, and De Dreu (2011) identify available justifications as an essential antecedent to lying, and a number of other researchers suggest that individuals strive to preserve their moral self-concept while engaging in unethical behavior through self-deception or moral rationalization (Gino, Ayal, & Ariely, 2009; Mazar et al., 2008; Mead et al., 2009).

If our effects are driven by participants' self-deception or moral rationalizations, then confronting participants with the experimenter's recognition that over-reporting performance would constitute cheating should prevent the possibility of preserving a positive moral self-concept, increasing guilt and negative affect and dampening positive affect. If, however, the cheater's high is triggered by the thrill of getting away with unethical behavior, increases in positive affect should be amplified when participants are made aware that they did "get away with" cheating, engendering a feeling of self-satisfaction. In order to investigate this second explanation, we measured self-satisfaction as a potential mediator of the cheater's high.

Thrill is very different from relief, which we tested in Study 4. Relief is triggered by avoiding an aversive experience (Sweeny & Vohs, 2012) and reflects a shift from a state of high negative affect, defined as "subjective distress and unpleasurable engagement," to one of lower negative affect, defined as "a state of calmness and serenity" (Watson et al., 1988, p. 1063). In contrast, the thrill of the cheater's high is likely to be associated with approach-oriented emotions, such as the positive affect associated with "getting away with" cheating (Carver, 2001; Watson, Wiese, Vaidya, & Tellegen, 1999). For these reasons, we conceptualize the "thrill" of getting away with something as distinct from relief.

Method

Participants. Two hundred and five (46% male; $M_{\text{age}} = 34, SD = 11.6$) participants were recruited from MTurk to complete an online study. Participants earned \$0.50 for participating in the

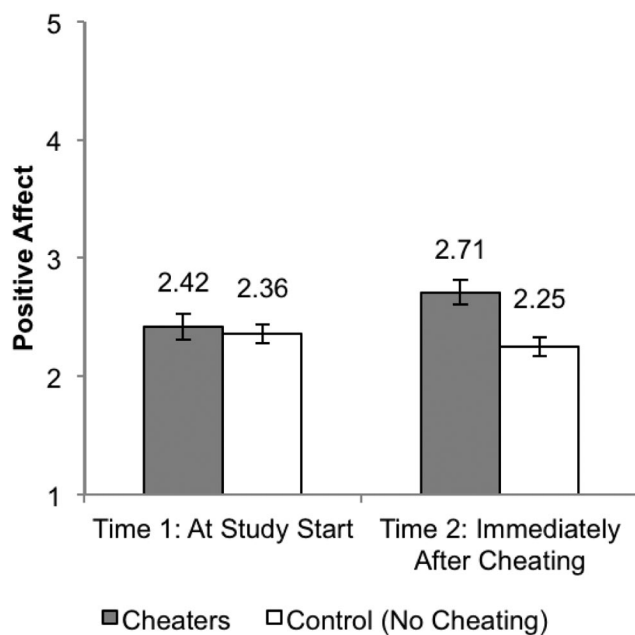


Figure 3. Study 4 means ($\pm 1 SE$) of positive affect pre- and post-study, by condition.

study and had the chance to earn up to an additional \$4.50 in bonuses based on their reported performance.

Design and procedure. The study was presented as a test of performance under time pressure. We randomly assigned participants to one of two conditions (“reality check” vs. control). Participants in both conditions completed the full PANAS (Watson et al., 1988, PA: $\alpha = .92$, NA: $\alpha = .89$) and then completed an anagram task (adapted from Wiltermuth, 2011), designed to detect cheating in an online environment. The anagram task presents participants with a list of nine jumbled words and instructions that read,

Each jumble has only one correct answer, and the jumbles *must be solved in order*. In other words, *if you successfully unscramble the first three word jumbles but not the fourth, you will earn a bonus only for the first three—even if you also successfully unscramble the fifth, sixth, and seventh word jumbles.*

Participants were asked to solve the jumbles in order, not proceeding to the next one unless the prior one had been solved. They were also instructed to “use only your own mind, and no other tools, to solve the jumbles” so that it would be clear that using online anagram unscramblers was not permitted.

The third jumble in the list was “UNAAGT,” for which the only solution is “TAGUAN,” a species of flying squirrel. Previous pretesting has confirmed that the likelihood of correctly identifying this solution is miniscule (Wiltermuth, 2011), and even the largest online web-based anagram solving programs do not return “TAGUAN” as an answer.

Participants had 10 min to solve as many of the jumbles as possible in the order in which they were presented. Next, they turned to a page on which they reported how many jumbles they correctly unscrambled, again being reminded that they should only report the number they had been able to *consecutively* solve. We interpret any answer of 3 or more to be indicative of cheating on the task.

Experimental manipulation. In this experiment, we manipulated whether participants were confronted with the experimenter’s explicit acknowledgment that participants could misrepresent their performance in the anagram task. After reporting their answers, all participants read the following:

Thank you for your participation in this series of tasks. You have one more task to complete before the end. Your data is important to us as we are trying to understand performance under time pressure.

In the “reality check” condition, participants also read:

We realize we cannot check your answers (i.e., whether you actually solved correctly the jumbles you told us you solved) and that you may have cheated on this task by inflating your performance. We hope you reported your answers honestly.

To emphasize the fact that their answers would not be reliable if they had misrepresented their true performance, we also asked participants in this condition, “To what extent can we rely on your answers?” Responses were provided on a 5-point scale ranging from 1 = “Not at all” to 5 = “Completely.”

Post-manipulation measures. After this manipulation, participants completed the PANAS again (PA: $\alpha = .93$, NA: $\alpha = .79$). To assess the extent to which cheating may provide a feeling of self-satisfaction, we also asked the extent to which participants

felt clever, capable, accomplished, satisfied, and superior (measured on the same 5-point scale as the PANAS, from “not at all” to “extremely”). We averaged the responses to these five items to create a measure of feeling clever or self-satisfied ($\alpha = .93$).

Results and Discussion

We excluded two participants for failing an attention filter that preceded our manipulation. This question listed a series of activities that people might enjoy on a daily basis, but the instructions for the questions required that they only check the activity “cooking” from a list of 14 activities. We excluded an additional four who participated using duplicate IP addresses, though the nature and significance of our results do not change if we include them. Fifty-two percent of participants reported they successfully unscrambled the third anagram (or more), reporting on average having solved 4.61 of the anagrams ($SD = 2.80$).

Self-rated reliability. Participants in the “reality check” condition were asked to rate the reliability of their results. Within this condition, cheaters rated their responses as less reliable ($M = 4.67$, $SD = 0.58$) than did honest participants ($M = 4.95$, $SD = 0.31$), $t(97) = 2.91$, $p = .004$.

If our effect is driven by the ability of individuals to deceive themselves about the nature of their actions, the “cheater’s high” should be moderated when participants are confronted with an explicit acknowledgment that the experimenters are aware that they could be cheating. However, if participants revel in the fact that they are cheating and “getting away with it,” as we predict, then our manipulation will not curtail the cheater’s high. In fact, it should highlight the fact that they have transgressed, boosting the effect and producing a greater increase in positive affect after cheating.

Criterion 1. Since we have no way to accurately measure performance in this study, we could not include it as a covariate in these analyses. Consistent with the results from Studies 2, 3, and 4, a mixed ANOVA with positive affect at Time 1 and 2 as the within-subjects factor and condition and cheating as the between-subjects factors revealed a significant two-way interaction, $F(1, 195) = 39.00$, $p < .001$, $\omega^2 = .160$, indicating that there were differences in the changes in positive affect between cheaters and non-cheaters. Simple effects testing confirmed that cheaters experienced a significant increase in positive affect from Time 1 to Time 2, $F(1, 195) = 4.51$, $p = .035$, $\omega^2 = .017$, while non-cheaters experienced a significant decrease in positive affect, $F(1, 195) = 43.63$, $p < .001$, $\omega^2 = .176$ (see Figure 4).

Criterion 2. In addition, simple effects testing revealed that cheaters experienced significantly more positive affect than non-cheaters at Time 2, $F(1, 195) = 29.32$, $p < .001$, $\omega^2 = .125$, but not at Time 1, $F(1, 195) = 1.99$, $p = .16$.

Criterion 3. We conducted a mixed ANOVA with cheating (yes, no) and condition (reality check vs. not) as the between-subjects factors and affective valence and time as within-subjects factors. The results revealed a significant three-way interaction between cheating, affect valence, and time, $F(1, 195) = 47.93$, $p < .001$, $\omega^2 = .191$. At Time 1, the simple interaction of affect valence and cheating was not significant, $F(1, 195) = 0.55$, $p = .46$, but again, it was at Time 2, $F(1, 195) = 31.44$, $p < .001$, $\omega^2 = .133$. Examining the simple effects at Time 2, the difference between positive and negative affect was significant for both

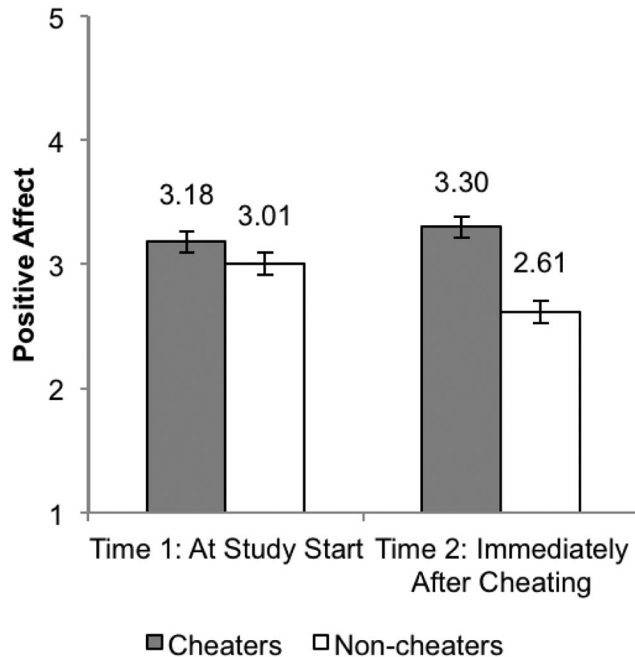


Figure 4. Study 5 means (± 1 SE) of cheaters' and non-cheaters' positive affect before and after the cheating opportunity.

cheaters ($M = 2.03$, $SE = 0.10$); $F(1, 195) = 419.57$, $p < .001$, $\omega^2 = .678$, and non-cheaters ($M = 1.23$, $SE = 0.10$); $F(1, 195) = 138.94$, $p < .001$, $\omega^2 = .409$, but again was larger for cheaters than non-cheaters. This pattern of results is also consistent with Criterion 3 of the cheater's high hypothesis.

Self-satisfaction. We next examined self-satisfaction. We conducted an ANOVA with self-satisfaction at Time 2 as the dependent variable and the two between-subjects factors (reality check vs. control; cheater vs. not). We identify a main effect of cheating on self-satisfaction at Time 2, $F(1, 195) = 105.71$, $p < .001$, $\omega^2 = .345$, such that those who cheated reported higher levels of self-satisfaction ($M = 3.81$, $SD = 1.25$) than those who did not ($M = 2.31$, $SD = 1.07$), controlling for condition. We found no interaction between cheating and condition, $F(1, 195) = 1.34$, $p = .25$. However, the main effect for condition approached statistical significance, $F(1, 195) = 3.38$, $p = .068$, $\omega^2 = .012$, and a post hoc contrast effect reveals that cheaters in the reality-check condition were *more* self-satisfied than cheaters in the control condition, $F(1, 195) = 4.71$, $p = .031$, $\omega^2 = .018$. This contrast suggests that the cheater's high may be triggered by the thrill of getting away with something rather than by self-deception or moral rationalization. In other words, for cheaters, greater awareness of their own cheating appears to increase self-satisfaction and fuel rather than curb the cheater's high (see Figure 5).

We tested whether self-satisfaction mediated the relationship between cheating and positive affect using Preacher and Hayes's (2008) bootstrapping technique. We ran a model with positive affect at Time 2 as the dependent variable, cheating (vs. honest) as the independent variable, and self-satisfaction as the mediator, including positive affect at Time 1 and condition (reality-check vs. control) as covariates. By including positive affect at Time 1 as a covariate, the dependent variable (positive affect at Time 2) rep-

resents the degree to which participants' positive affect changes from baseline. The mediation results indicate a positive indirect effect of cheating on positive affect at Time 2 through self-satisfaction, point estimate = .38; 95% CI = .25 to .53.

In this study, we reminded participants that over-reporting performance constitutes cheating. This manipulation failed to curb the cheater's high, evidence that the cheater's high does not depend on self-deception. Additionally, though the manipulation did not elicit significantly greater positive affect compared to cheaters in the control condition, it appears to have increased the self-satisfaction cheaters enjoyed, further evidence that awareness one is cheating may enhance, rather than dampen, the cheater's high. We also found that self-satisfaction mediates the relationship between cheating and positive affect. These findings suggest that the cheater's high reflects positive feelings that derive from having "gotten away" with something, rather than self-deception or the ability to rationalize unethical behavior.

General Discussion

Existing models of ethical decision making have assumed that unethical behavior triggers negative affect and that the negative affective consequences of engaging in unethical behavior promote ethical decision making. Our findings challenge these assumptions and demonstrate that some unethical behaviors not only fail to trigger *negative* affect but can in fact trigger *positive* affect.

In two studies, we find that people fail to forecast how they will feel after engaging in unethical behaviors. Individuals in one study predicted that they would feel higher levels of negative affect and lower levels of positive affect after engaging in unethical behavior, and individuals in another study predicted higher levels of both positive and negative affect, representing emotional ambivalence.

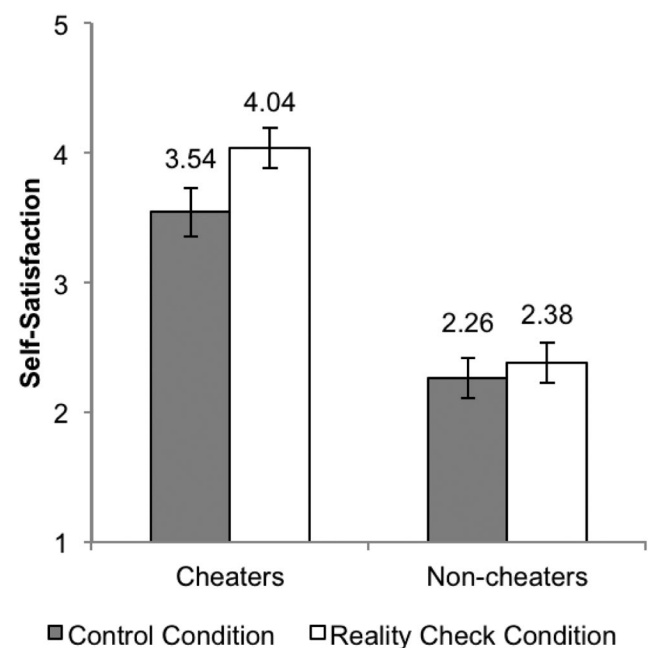


Figure 5. Study 5 means (± 1 SE) of cheaters' and non-cheaters' self-satisfaction after the cheating opportunity, by reality check condition.

In our studies with actual behavior, we demonstrate that these beliefs reflect an error in prediction. Interestingly, this misprediction persists even when individuals forecast how others will feel after engaging in unethical behavior, suggesting that this prediction is not motivated by self-presentational concerns.

Across four additional studies that afforded participants the opportunity to cheat in a setting with no obvious victim, we find that participants who cheated experienced more positive affect (and no more negative affect) than those who did not cheat. We term this effect the cheater's high. Across these studies, we investigate several alternative explanations for the cheater's high. Specifically, we consider and rule out self-selection (only individuals who choose to cheat experience the cheater's high), financial incentives (the cheater's high is driven by an undeserved financial windfall), and rationalization (the cheater's high is experienced by individuals who do not acknowledge their behavior as cheating). Instead, our findings suggest that the cheater's high reflects the thrill of having gotten away with cheating.

We note that we set a high evidentiary bar in testing for the cheater's high, examining whether data from four different studies satisfy each of the three criteria we identified. Our results for the first two criteria were supported across all four studies (excepting one test in Study 2 for which $p = .10$): Cheaters reported an increase in positive affect from Time 1 to Time 2 and reported higher positive affect than non-cheaters at Time 2. Results from Studies 4 and 5 supported Criterion 3, which required that the difference between positive and negative affect be greater for cheaters than for non-cheaters at Time 2, but not at Time 1. Results from Studies 2 and 3 were directional, but not significant ($p = .12$ and $p = .13$, respectively). It is possible that the relatively small sample size in Study 3 and specific characteristics of our procedure in Study 2 may have contributed to the lack of support for this third criterion. Overall, findings from our studies support our thesis that victimless cheating can cause people to feel good.

Theoretical Contributions

Existing models of ethical decision making presume that unethical behavior triggers negative feelings. Our findings not only challenge this assumption but also highlight the importance of incorporating emotion more broadly in ethical decision making research (e.g., Gaudine & Thorne, 2001; Schweitzer & Gibson, 2008; Warren & Smith-Crowe, 2008). In addition to considering the material benefits and risks related to unethical behavior, the psychic costs and benefits should be considered. The cheater's high we document may also help to explain puzzling findings, such as the pervasiveness of low stakes unethical behavior (Mazar et al., 2008). The emotional boost conferred by cheating may be one reason people are motivated to cheat even when the financial payoff is small.

Our results also contribute to research on the temporal nature of morality (Tenbrunsel et al., 2010). Though the "should" self is likely to inform predictions about feelings after engaging in unethical behavior, in the moment when people make ethical decisions, the "want" self may dominate the "should" self (Bazerman et al., 1998; Tenbrunsel et al., 2010). People may succumb to immediate temptation (Mead et al., 2009), allowing their self-interested impulses to prevail over their larger ideals (Loewenstein, 1996). In addition, individuals may enjoy a hedonic experi-

ence associated with meeting immediate urges (Loewenstein, 1996).

Our findings also speak to the literature on affective forecasting (Gilbert et al., 2002; Wilson & Gilbert, 2003). Participants in our studies mispredicted the affective consequences of unethical behavior. This finding adds to our understanding about how predicting the affective consequences of decisions may be more complicated than we intuitively believe (Barsade & Gibson, 2007; Loewenstein & Lerner, 2003; Schwarz, 2000). Future work should explore affective forecasts related to both unethical and ethical decision making.

Finally, our results deepen our understanding of the consequences of unethical behavior. Research on ethical behavior has largely focused on identifying predictors rather than outcomes (Tenbrunsel & Smith-Crowe, 2008). Our findings underscore the importance of examining consequences of unethical behavior in moral psychology.

Limitations

One limitation of our studies is our laboratory context. Our experimental designs afforded control over the opportunity to cheat and clear measurement, but we cannot be sure how participants conceptualized the opportunity to cheat in this context. One concern is that participants thought that cheating in our experimental setting was acceptable, and this may have diminished their negative affective responses. However, our data do not support this explanation. In the pilot study we ran to assess whether participants thought cheating in exactly this type of laboratory setting was unethical (reported with Study 1a), our results revealed that participants rated this behavior as very unethical. It is also possible that an experiment may allow participants to rationalize their cheating in a way that they would not do outside of an experiment. Given the pervasiveness of unethical behavior in everyday life, we believe that rationalizing unethical behavior is common both inside and outside the controlled setting of the laboratory. Taken together, we believe that even though our results come from a laboratory setting, our findings may have broad external validity.

A second limitation of our studies is that participants may have reported low negative affect because they believed that reporting high levels of negative affect would reveal that they had cheated, either to themselves or the experimenter. Two factors suggest this may not be the case. First, the opportunity to cheat was not explicit in any of the studies except for Study 5, and participants' post-experimental remarks across the studies did not reveal any suspicion that the experiment was studying cheating behavior. Second, in Study 5, cheaters in the explicit condition were told that cheating was possible. Cheaters in this condition reported no less negative affect than those in the control condition.

Third, our studies revealed that cheating led to some complicated effects in terms of negative affect. In Studies 2 and 4, negative affect increased for both cheaters and non-cheaters, and in Study 5, negative affect increased for non-cheaters. Our designs were unable to distinguish whether participants in these studies may have experienced an increase in negative affect due to some aspect of the experiment (e.g., stress from engaging in a timed task) or due to reactions to deciding to cheat or not to cheat. However, the increase in negative affect for control participants in Study 4 who had no opportunity to cheat suggests that aspects of

some of our tasks unrelated to cheating may have increased negative affect. In addition, the criterion for which we found the most equivocal empirical support was Criterion 3, the only one that implicated the role of positive and negative affect jointly as part of the cheater's high. These results suggest that future research should explore more fully how positive and negative affect are jointly affected by the decision to cheat, or indeed the decision not to cheat.

Additional Directions for Future Research

The cheater's high is likely to be moderated by contextual factors. Although cheating was pervasive in our studies, the effect sizes of the cheater's high varied across our studies. One possible explanation is that the context in which the studies took place enhanced or mitigated the high. The size of the cheater's high is larger in Studies 2 and 5 than it is in Studies 3 and 4. In Study 3, the effect may be confounded with social pressure, and in Study 4, the effect is not accompanied by a related boost in undesired rewards, both of which may have dampened the cheater's high. In contrast, Study 5 took place online, an inherently anonymous environment. Anonymity can amplify unethical behavior (Diener, 1976; Diener, Fraser, & Beaman, 1976; Zimbardo, 1970) and may have also increased the positive affect associated with cheating in this study. Certainly, conditions that amplify or dampen the cheater's high represent one important avenue for future work to explore.

If people derive psychological benefits from outsmarting others, overcoming challenges, and solving puzzles, some contexts may promote unethical behavior more than others. One such context is online security. In addition to potential material gains, hackers are often motivated by solving puzzles and earning bragging rights (Richmond, 2011, August 21). This is an especially vexing issue given that if outsmarting the system is likely part of the appeal, complex control systems designed to curb this unethical behavior may also promote it. Additionally, as online fraud becomes more sophisticated and requires the coordinated efforts of larger groups of people (Moore, Clayton, & Anderson, 2009), the experience of a cheater's high may involve social emotions as well. Future research should investigate how the cheater's high scales to groups. Quite possibly, when groups of people coordinate an effort to cheat the system, it could exacerbate the cheater's high by diffusing responsibility for negative outcomes and building a sense of camaraderie from cheating together.

Fortunately, our findings do not suggest that *all* unethical behavior will lead to positive affect. The cheater's high may be restricted to certain types of unethical behavior. The type of unethical behavior we examine involves actions that are clearly understood as unethical (as our pre-test findings show), but they do not involve direct harm to a salient victim. We only examined cheating by over-reporting one's performance. While this is an important type of unethical behavior—particularly given the rash of recent academic cheating scandals (Pérez-Peña, 2013; Yee, 2012)—unethical behavior that more clearly involves harming a salient other may be less likely to trigger a cheater's high.

Other contextual factors may also moderate the cheater's high. For example, the cheater's high may be mitigated by moral intensity (Jones, 1991), such as the magnitude of the consequences of unethical behavior and the social consensus regarding the ethical-

ity of the act. Similarly, individual differences may moderate the cheater's high. For instance, an individual's level of moral identity (Aquino & Reed, 2002) or prosocial orientation (Van Lange, 1999) might decrease the effect, whereas other attributes such as moral disengagement, Machiavellianism, and psychopathy (McIlwain et al., 2012; Moore, Detert, Treviño, Baker, & Mayer, 2012; Williams, Nathanson, & Paulhus, 2010) may exacerbate it.

Future work should also examine whether the positive affect people experience after cheating may motivate them to continue cheating in the future. A growing body of research in behavioral ethics has identified a number of psychological processes that allow individuals to easily "stumble into bad behavior" (Bazerman & Tenbrunsel, 2011). For instance, individuals are more likely to behave unethically when they have recently had an opportunity to assert what good people they are (Monin & Miller, 2001), when the offense is trivial enough that the transgressor can maintain a positive self-concept (Mazar et al., 2008), when people become acclimated to unethical behavior slowly (Gino & Bazerman, 2009), when they are motivated by goals (Schweitzer, Ordóñez, & Douma, 2004), when tension about committing the offense is misattributed to another source (Dienstbier, 1984; Dienstbier & Hunter, 1971), when the context is ambiguous (Schweitzer & Hsee, 2002), or when people can use others to help establish a justification for their behavior (Gino, Gu, & Zhong, 2009). Our results suggest that the positive affect boost that accompanies these (often unintended) behaviors may reinforce them, making future unethical behavior more likely. Future studies could examine whether initial unethical behavior promotes subsequent unethical behavior as a result of a cheater's high.

In our studies, we explored positive and negative affect. In future work, it would be interesting to explore specific emotions. For example, cheaters may experience guilt and anxiety or a mixture of emotions in anticipation of, during, and after cheating. In addition, individuals who recognize opportunities to cheat but refrain from cheating may also experience specific emotions. For instance, deciding not to cheat may result in regret or feeling like a "sucker." Though we were not able to disentangle these effects with the current designs, the emotional impact of being aware of and yet not taking an opportunity to cheat is an avenue that merits further exploration.

Finally, future work should also delve deeper into the temporal aspects of the cheater's high. Though our main focus here was on the positive affective consequences of unethical behavior, our studies provide some evidence that there may be emotional ambivalence associated with cheating (or, indeed, perhaps the decision to avoid cheating as well). One possibility is that participants feel different emotions in the moment of cheating to those that emerge when we measured them, a few minutes later. It would be worthwhile to explore more immediate measures of emotion, during the act itself, to see if the emotional reactions change.

It would also be interesting to investigate the long-term affective consequences of unethical behavior. In the short term, the "want" self, driven by impulsive behavior is less motivated to behave ethically (Tenbrunsel et al., 2010) and more likely to experience the cheater's high. As individuals transition to the "should" self, over time and perhaps through self-reflection, they may become more likely to attend to ethical considerations and feel differently about their actions. Perhaps prompting individuals to ruminate about their actions may increase the negative affect that individ-

uals experience from engaging in unethical behavior. This possibility is consistent with prior work that has linked unethical behavior and negative affect in recall studies (e.g., Baumeister et al., 1995; Tracy & Robins, 2006).

Conclusion

Across six experiments, we find that although people expect to experience negative affect after over-reporting their performance on cognitive tasks, they actually experience a boost in positive affect. These findings challenge existing models of ethical decision making and offer cause for concern. Many ethical decisions are made privately and are difficult to monitor. Individuals who recognize, perhaps from experience, that they can derive both material and psychological rewards from engaging in unethical behavior may be powerfully motivated to behave unethically. It is imperative that we develop our understanding of how emotions influence our moral behavior, how our moral behavior influences our emotions, and how people expect these relationships to work.

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