

Anxious, Threatened, and Also Unethical: How Anxiety Makes Individuals Feel Threatened and Commit Unethical Acts

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People often experience anxiety in the workplace. Across 6 studies, we show that anxiety, both induced and measured, can lead to self-interested unethical behavior. In Studies 1 and 2, we find that compared with individuals in a neutral state, anxious individuals are more willing (a) to participate in unethical actions in hypothetical scenarios and (b) to engage in more cheating to make money in situations that require truthful self-reports. In Studies 3 and 4, we explore the psychological mechanism underlying unethical behaviors when experiencing anxiety. We suggest and find that anxiety increases threat perception, which, in turn, results in self-interested unethical behaviors. Study 5 shows that, relative to participants in the neutral condition, anxious individuals find their own unethical actions to be less problematic than similar actions of others. In Study 6, data from subordinate–supervisor dyads demonstrate that experienced anxiety at work is positively related with experienced threat and unethical behavior. We discuss the theoretical and practical implications of our findings.

Keywords: ethics, emotions, anxiety, perceived threat, unethical behavior

Be it the dread of delivering a big presentation, nervousness about meeting a potential client, or apprehension about negotiating an important deal, workplaces are rife with situations that trigger anxiety. It is normal to feel anxious, and indeed, in small, manageable quantities, anxiety and worry can be a good thing in that they motivate people to stay focused on their goals and improve performance on tasks (e.g., Anderson, Revelle, & Lynch, 1989; Kase, 2008; Lupien, Maheu, Tu, Fiocco, & Schramek, 2007; Moran, Taylor, & Moser, 2012). Importantly, it may be the case that when employees are worried about their next meeting with their superior or anxious about taking on new challenges, they may also be making decisions that have ethical implications. So, what are the effects of feeling anxious on moral behavior? More specifically, how are a person's ethical judgments and behavior likely to be influenced by anxiety brought about by a prior or unrelated situation?

We suggest that people experiencing anxiety are likely to behave selfishly and possibly even engage in self-interested unethical acts in an effort to restore the threatened self. Specifically, we expect individuals experiencing anxiety to focus inward and acquire resources (e.g., money) as a means of mitigating feelings of anxiety. Furthermore, we argue that the relationship between experienced anxiety and unethical behaviors is mediated by per-

ceived threat. Prior research has demonstrated that anxiety not only facilitates the detection and processing of threat-related stimuli but also causes the self to feel threatened (Eysenck, Derakshan, Santos, & Calvo, 2007).

It has been argued that in threatening situations, the brain shifts into a state that facilitates the development of rapid defense mechanisms (Hermans et al., 2011). During such episodes, stress hormones such as noradrenaline are released that enable people to focus their energies to respond to the situation. In other words, people's cognitive resources are temporarily diverted to restore the self and to facilitate a quick response to the situation. In brief, self-protective impulses are unleashed by threatening experiences. We further argue that this self-protective mode causes people to focus narrowly on their own basic needs and self-interest, which can cause them to be less mindful of principles that guide ethical and moral reasoning, thus leading them to behave unethically. In their book, *Blind Spots*, Bazerman and Tenbrunsel (2011) highlight anxiety-provoking situations characterized by uncertainty, time pressure, and isolation as ethical sinkholes. They further identify that these are the places where “ethical fading”—our tendency to forget about our ethical values and the ethical implications of our actions—often occur.

Emotions and Unethical Behavior

A large body of work has demonstrated that emotions often play a crucial role in decision making (e.g., Damasio, 1994; Wilson & Schooler, 1991). Consistent with this notion, recent work has shown that emotions impact ethical judgments and behaviors (e.g., Gino & Pierce, 2009; Horberg, Oveis, & Keltner, 2011; Pizaro, Inbar, & Helion, 2011; Schweitzer & Gibson, 2008). Indeed, functional magnetic resonance imaging (fMRI) images reveal that

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emotional engagement has a bearing on people's moral judgments (Greene, Sommerville, Nystrom, Darley, & Cohen, 2001).

For example, envy evoked by wealth-based inequity could increase dishonesty even when the behavior poses a personal financial cost (Gino & Pierce, 2009). Moreover, anger has been shown to lead to more unethical behavior in some situations (Schweitzer & Gibson, 2008) and to moral outrage and a desire to punish selfish behavior in other situations (Hutcherson & Gross, 2011; Pillutla & Murnighan, 1996). Furthermore, extant research has focused on moral emotions such as disgust, guilt, shame, sympathy, and empathy (e.g., Eisenberg & Miller, 1987; Horberg et al., 2011; Hutcherson & Gross, 2011; Tangney & Dearing, 2002). For instance, incidental disgust induced by exposure to a bad smell or working in a disgusting room increases the severity of moral judgments (Schnall, Haidt, Clore, & Jordan, 2008).

Relying on prior work demonstrating the influence of incidental emotion on cognition and behavior (e.g., Clore & Huntsinger, 2007; Schwarz & Clore, 1983), we show that state anxiety influences moral judgments and behaviors. Given how anxiety is a ubiquitous feature of modern life and, in particular, organizational life (Jordan, Ashkanasy, & Hartel, 2002; Twenge, 2000), we examine how anxiety influences individuals' morally relevant behavior and judgment.

Anxiety and Unethical Behavior

State anxiety is a transitory emotion that most people are familiar with. We adopt Brooks and Schweitzer's (2011) definition of state anxiety as "a state of distress and/or physiological arousal in reaction to stimuli including novel situations and the potential for undesirable outcomes" (p. 44). Consistent with prior work (Brooks & Schweitzer, 2011; Gray, 1991), we presume anxiety to include stress, nervousness, and dread. For nearly everyone, anxiety is an unpleasant and aversive emotion (Smith & Ellsworth, 1985; but see Brooks, 2012) that motivates individuals to flee from anxiety-producing situations (Marks & Nesse, 1994). It signals the presence of a potential but often vague threat and elicits behavioral, psychological, and even physiological responses in individuals to reduce the aversive situation (Barlow, 1988; Eysenck, 1997; Eysenck et al., 2007; Mathews, 1990; Pacheco-Unguetti, Acosta, Callejas, & Lupiañez, 2010). Anxiety is an important biological attribute that forms part of a defense system in humans to aid the survival of the individual. As a response to any perceived threat, anxiety mobilizes psychobiological resources to defend, escape, or avoid danger (Rachman, 2004). Note that anxiety is different from another similarly valenced emotion—fear, which is an organism's response to an identifiable source of danger and is characterized by different physiology and neurobiology (Davis, 1998; Ekman, 1993; Öhman, 2000). Moreover, whereas fear is an intense reaction to an identifiable object (e.g., a rattlesnake), anxiety is a more diffuse state with vague apprehensions (e.g., feeling uneasy without knowing why; Ekman, 1993; Rachman, 2004).

Evolutionary biologists recognize anxiety as a potentially beneficial emotion that was shaped by natural selection. Specifically, the experience of anxiety can be viewed as a response pattern that evolved because of its tendency to offer selective advantages in some situations (Marks, 1987; Marks & Nesse, 1994; Plutchik & Kellerman, 1980). Over the course of evolution, such a response pattern comprising physiological and cognitive responses that we

commonly refer to as feelings of nervousness and apprehension became preprogrammed in us. In other words, anxiety-provoking situations often automatically trigger self-protective reaction patterns in us.

In our research, we limit our investigation to ethically relevant situations and experienced anxiety. We suggest that in the case of ethical decision making, the aforementioned cognitive, motivational, and behavioral forces play a role. First, anxiety signals the presence of a potential threat to self (e.g., Mathews, 1990). Moreover, anxiety facilitates the detection and processing of threat-related stimuli in general (Eysenck et al., 2007; Krusemark & Li, 2012). Indeed, empirical studies have provided convincing evidence for the presence of information-processing biases toward threats in individuals experiencing anxiety (e.g., Eysenck & Byrne, 1992; Fox, Russo, & Dutton, 2002; Mogg, Mathews, Bird, & MacGregor-Morris, 1990) such that more attention is directed to environmental threat cues. Anxiety makes people selectively attend to threatening information and interpret ambiguous events in a relatively threatening way. For example, Muris and colleagues (2000) reported that among children, high levels of anxiety were accompanied by higher ratings of threat, higher frequency of threatening interpretations, higher levels of negative feelings and cognitions, and an earlier detection of threat (Muris et al., 2000). Some researchers suggest that perceived threat causes attention to be allocated to detecting its source, and anxiety facilitates this detection. In an fMRI study reported by Bishop, Duncan, Brett, and Lawrence (2004), healthy participants high in state anxiety showed decreased activation of the lateral prefrontal cortex (associated with attentional control) and reduced control over threat-related stimuli compared with those low in state anxiety. In sum, research on anxiety has demonstrated that anxiety leads people to (a) identify real and imagined threats, (b) focus more cognitive resources on threatening versus neutral stimuli, (c) interpret ambiguous stimuli as possible threats, and (d) recall information related to threat more easily than neutral information.

It has been argued that in threatening situations, the brain shifts its cognitive resources to focus on generating rapid defense mechanisms (Hermans et al., 2011). This state is accompanied by the release of stress hormones that enable people's cognitive efforts to be channeled into responding to the situation (Staw, Sandelands, & Dutton, 1981), possibly to the detriment of ethical decision making. We argue that this proneness to fast action causes people to be mindful of only their own needs such that they tend to be relatively unmindful of principles that guide ethical and moral reasoning, thus leading them to behave unethically (Haidt, 2001; Shalvi, Eldar, & Bereby-Meyer, 2012). Additionally, past research suggests that unethical behavior can serve as a way to deal with the aversive situations experienced by perceived threat given that unethical acts may provide the individuals access to material resources and psychological buffers such as money (Zhou, Vohs, & Baumeister, 2009). In the next section, we discuss in detail why threat can lead to more self-interested unethical behavior.

In sum, we argue that experienced anxiety causes people to engage more in unethical behavior. We have argued that anxiety may lead to more unethical behavior because anxiety increases perceived threat and signals the presence of a potential threat to the self (e.g., Mathews, 1990). Thus, individuals are motivated to cope

with the perceived threat by behaving unethically, given the opportunity.

Hypothesis 1: Compared with people in a neutral state, people who feel anxious are more likely to engage in self-interested unethical behavior.

Threat Perception as the Underlying Mechanism

Gordon Allport (1937) has called ego-protection “nature’s eldest law” (p. 170). In Freud’s perspective, anxiety serves as a signal to the ego that its survival is at stake. In the face of perceived threat and anxiety, psychological defense processes (such as Freudian defense mechanisms; Freud, 1936) are evoked to regulate the emotional experience (Paulhus, Fridhandler, & Hayes, 1997). Threats are typically characterized by the salience of risk of loss (Chattopadhyay, Glick, & Huber, 2001). The threat-rigidity response model suggests that people can respond in maladaptive ways to threat, in order to reduce perceived uncertainty in the environment (Staw et al., 1981). Specifically, threat can bring about socially undesirable actions geared toward self-protection, such as claiming unfair share of resources and placing a premium on gaining personal advantage to the detriment of others.

Furthermore, to cope with threat, people rely on a variety of preprogrammed and automatically activated defense mechanisms to shield themselves from negative experiences and unpleasant feelings (i.e., anxiety), and to ultimately protect self-esteem (Allport, 1954). This is in keeping with appraisal theories of emotion, which suggest that emotions prime specific appraisals of a situation and facilitate action readiness (e.g., Frijda, 1986; Frijda, Kuipers, & Terschure, 1989; Lazarus, 1991; Scherer, Schorr, & Johnstone, 2001). For example, to reduce threat, people might engage in “defensive attribution” by taking credit for their successes and denying responsibility for failures to bolster and protect their ego or self-esteem (Miller, 1976). Additionally, past research has shown that perceived threat, particularly ego threat, can result in harmful behaviors characterized by aggression and violence (Baumeister, Smart, & Boden, 1996).

Relying on the evolutionary perspective, we examine broadly the link between perceived threat and self-interested unethical behavior. Extant research has explored some links between various subtypes of anxiety and immoral behavior. Research has shown that attachment anxiety marked by fears of rejection or abandonment and doubts about one’s value to other people engenders self-protective defenses and increases dishonesty (Gillath, Sesko, Shaver, & Chun, 2010). Likewise, anxiety about sexual performance has been identified as one of the leading causes of moral lapses in the form of male infidelity (Mark, Janssen, & Milhausen, 2011). Similarly, we propose that people may turn to unethical behaviors, provided the opportunity, as a way to cope with perceived threat activated by experienced anxiety. Offering support to our argument, research has shown that perceived threat leads people to focus more on extrinsic goals such as financial success, attractive appearance, and social popularity as opposed to intrinsic goals such as personal growth, intimacy, and community (Sheldon & Kasser, 2008). Furthermore, past research has demonstrated that feelings of threat can lead to an increased desire for money and other resources because distress can be assuaged by spending money on oneself (Zhou et al., 2009). Thus, individuals would

have a stronger desire to obtain money and resources when facing threatening situations, as collecting resources (e.g., food or money) is a basic survival practice.

A plethora of threats have been shown to be associated with dysfunctional outcomes, such as unprovoked aggression, defensiveness, and feelings of animosity and rivalry (Heatherton & Vohs, 2000; Kasser & Sheldon, 2000). For example, Kasser and Sheldon (2000) demonstrated that exposing participants to existential threat led to increased consumption of scarce community resources and a craving for affluent goods in the future. Likewise, Chang and Arkin (2002) found that threatening the self by making people feel insecure and uncertain led to increases in materialistic desires as a possible mechanism to assuage threat.

In line with previous work, we suggest that a motivational shift occurs in employees experiencing anxiety and threat such that they are more likely to behave in self-interested ways even if it implies using unethical means to acquire more resources. Note that ethical conundrums often involve the act of resolving an inner conflict—whether to behave ethically and thus maintain a positive self-image or behave unethically and advance one’s self-interest (e.g., Mead, Baumeister, Gino, Schweitzer, & Ariely, 2009). Not surprisingly, the ethical decision-making literature suggests that people are more likely to behave unethically when that behavior benefits them somehow (e.g., Loe, Ferrell, & Mansfield, 2000). Here, we focus our arguments on such self-interested unethical behavior (Tenbrunsel & Smith-Crowe, 2008) and suggest that the acquisition of resources (e.g., money) may help individuals maintain and boost self-esteem (Zhou et al., 2009) and overcome the threat as a result of experienced anxiety. Given the self-defensive nature of the behaviors under perceived threat, one’s unethical actions are more acceptable to oneself, thus allowing one to maintain a positive self-view without any damage to the moral self-image (Mazar, Amir, & Ariely, 2008).

Perceived threat engenders self-protective defenses that cause people to focus narrowly on their own needs, which interfere with adherence to moral principles and encourage unethical acts. Furthermore, it has been argued that psychological threat leads to mobilization toward action by causing people to concentrate on lower level construals such as concrete steps to acquire resources as opposed to upper level construals such as abstract thoughts about morality (White, McDonnell, & Dahl, 2011). This line of thought is supported by prior research that has demonstrated that psychological threat leads people to overlook prosocial goals in their quest to advance self-interest (Sheldon & Kasser, 2008). In fact, people become unmindful of principles that guide ethical and moral reasoning, thus leading them to behave unethically. Thus, the evolutionary perspective predicts that humans developed precautionary systems to automatically detect threat signals and adopt defensive action to address threat.

In sum, we argue that anxiety increases perceived threat by higher frequency of threat perception and an early detection of threat (e.g., Eysenck et al., 2007), which, in turn, may result in self-interested unethical behaviors, as threat makes one focus more on survival and become unmindful of moral principles and accumulate resources as a way of dealing with threat. The acquired resources (e.g., money) resulting from the unethical acts become means to overcome a threatened self. As such, we offer the following hypothesis:

Hypothesis 2: Perceived threat mediates the relationship between anxiety and unethical behaviors.

Study 1

Study 1 was designed to test our hypothesis that experimentally induced anxiety increases the likelihood of individuals' engagement in described self-interested unethical behaviors. Moreover, this study was designed to test competing hypotheses about the relationship between experienced anxiety and morality. Some research suggests a competing hypothesis that anxiety might decrease the likelihood of unethical behavior. Across different decision-making domains, research shows that anxiety can make people likely to appraise the odds of negative outcomes as high (e.g., Berenbaum, Thompson, & Bredemeier, 2007; Bredemeier, Berenbaum, & Spielber, 2012; Maner & Schmidt, 2006; Raghunathan & Pham, 1999). Consequently, negative evaluations of future events often lead decision makers to have a preventive regulatory focus (Higgins, 1997) such that they view possible courses of future action with an eye toward minimizing potential distress and find risk-averse strategies more appealing (Raghunathan & Pham, 1999). To the extent that lying, stealing, cheating, and other unethical acts are viewed as risky because of the potential negative consequences in being caught, anxiety might result in more ethical behavior that presumably involves lower risk and uncertainty. Thus, the work on the relationship between uncertainty, risk taking, and ethics predicts that anxious individuals will be risk averse, have a preventative focus, and avoid unethical actions (e.g., Gino & Margolis, 2011; Jensen & Meckling, 1976).

In summary, although our anxiety-threat argument predicts that experienced anxiety increases instances of unethical behavior, there also exists an alternative hypothesis that individuals experiencing anxiety will engage in more ethical behaviors. The purpose of Study 1 thus was to examine the effects of felt anxiety on ethical decision making and to provide data to evaluate these competing hypotheses.

Method

Participants. Participants were 58 (37 male) students at a university in the United States who participated in exchange for course credit. Their mean age was 21.9 years ($SD = 5.1$).

Materials and procedure. Participants were randomly assigned to either the anxiety or neutral condition. Following Brooks and Schweitzer (2011), we induced anxiety by asking participants to listen to a music clip using headphones while completing a survey. In the anxiety condition, participants listened to the theme music from the movie *Psycho*. In the neutral condition, they listened to Handel's Water Music: Air. In both conditions, we used a 3-min segment, which was played on a continuous loop. Both of these clips have no vocal parts. Prior research has used the same music clips to manipulate anxiety and neutral emotions (e.g., Brooks & Schweitzer, 2011; Gino, Brooks, & Schweitzer, 2012).

To minimize suspicions, participants were informed that they would participate in a number of unrelated tasks, and the first study concerned evaluation of a music clip. Consistent with this cover story, participants later were asked to evaluate the music as part of a separate study. Participants were asked to wear headphones and listen to an audio clip throughout the survey. While listening to the

music, participants' likelihood to engage in unethical behavior was measured using a series of scenarios (Detert, Trevino, & Sweitzer, 2008). Participants were asked to read a total of 13 scenarios and for each scenario indicate "How likely is it that you would engage in the behavior described?" using a 7-point scale ranging from 1 (*not at all likely*) to 7 (*highly likely*). Participants were presented with eight ethically relevant scenarios and five neutral ones. A sample scenario was "You work as an office assistant for a department at a University. You're alone in the office making copies and realize you're out of copy paper at home. You therefore slip a ream of paper into your backpack." A measure of unethical intent was created by averaging responses to the eight ethically relevant scenarios ($\alpha = .78$).

Finally, participants were asked to rate their emotions while they were listening to either the anxiety or the neutral music clip. Similar to Brooks and Schweitzer (2011), we used the items nervous, anxious, worried, and apprehensive ($\alpha = .88$) to measure anxiety and items neutral, indifferent, unemotional, and calm ($\alpha = .81$) to measure neutral feelings. For all of the above items, participants reported how they felt right now by rating each item on a 5-point Likert scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*).

Results and Discussion

The manipulation of anxiety was successful. Participants in the anxiety condition reported more anxiety ($M = 2.42$, $SD = .93$) than did participants in the neutral condition ($M = 1.33$, $SD = .37$), $t(56) = -6.01$, $p < .001$. Additionally, participants in the neutral condition reported more neutral feelings ($M = 2.52$, $SD = 1.21$) than did participants in the anxiety condition ($M = 1.81$, $SD = .79$), $t(56) = 2.58$, $p = .013$.

In support of our hypothesis, there was a significant difference between the two conditions on the dependent variable. Participants in the anxiety condition indicated that they were more likely to engage in the described unethical behavior ($M = 3.43$, $SD = 1.22$) than those in the neutral condition ($M = 2.80$, $SD = 1.06$), $t(56) = -2.10$, $p = .041$. We found no significant difference between conditions on the control scenarios ($p = .25$). This study provides initial support for Hypothesis 1 that compared with people in a neutral state, people who experience anxiety are more likely to indicate that they would engage in a set of described unethical behaviors.

Study 2

The results of Study 1 offer tentative support for Hypothesis 1. However, a drawback of the study was that we relied on participants' reactions to hypothetical scenarios and their self-reports on whether they would be likely to engage in the unethical behaviors described. As such, our findings suffer from the shortcomings evidenced in behavioral forecasting studies in which people predict that they will behave in a certain way, but when actually put in such situations, their behavior is different from that predicted (e.g., Sandstrom & Dunn, 2011).

Therefore, the purpose of this study was to replicate the findings from Study 1 using a behavioral dependent variable. Specifically, our goal was to examine the effect of experimentally induced anxiety on ethical behavior involving monetary compensation. The

task that we used helped us to examine the effect of anxiety on situations that had morally ambiguous choices as well as clearly right or wrong choices. A second goal of this study was to investigate the generalizability of the influence of experienced anxiety by using a different manipulation of anxiety.

Method

Participants. Participants were 51 (36 male) students at a university in the United States who participated in exchange for course credit but also had an opportunity to earn money on the basis of their reported performance. Their mean age was 23.7 years ($SD = 4.2$).

Materials and procedure. Participants were randomly assigned to either the anxiety or the neutral condition. We induced anxiety or neutral feelings by asking participants to watch one of two video clips and then complete the dependent variable as part of a separate study. In the anxiety condition, we asked participants to watch a clip from the movie *Vertical Limit* (e.g., Brooks & Schweitzer, 2011; Gino et al., 2012) about a mountain-climbing accident. In the neutral condition, they were asked to watch a clip from the documentary *Planet Earth* about fish in the Great Barrier Reef. Prior research has used the same video clips to manipulate anxiety and neutral emotions (e.g., Brooks & Schweitzer, 2011; Gino et al., 2012).

As for the dependent variable, participants were asked to complete a visual perception task (adapted from Gino, Norton, & Ariely, 2010). During the visual perception task, participants were presented with a square divided by a diagonal line into two triangles. In each trial, participants were presented with a total of 20 dots scattered inside the square between the two triangles for 1 s, and then the dots disappeared. Then, participants were asked to identify which of the two triangles, the left or the right side, contained more dots. To motivate their efforts, they were paid on the basis of their clicks. Participants were informed that because it is easier for most people to estimate the number of dots on the left side, they would be paid 0.5¢ for each trial that they identified as having more dots on the left (left trial) and 5¢ for each trial that they identified as having more dots on the right (right trial). The payoff structure was such that participants could earn 10 times as much for every right trial (more dots on the right side). More importantly, participants had the opportunity to engage in unethical behavior (i.e., cheating) in this task because the program would pay on the basis of their clicks, regardless of the correct answer, and thus individuals had an opportunity to earn more money by always indicating that there were more dots on the right side.

To make sure that participants understood the task, they first were given 100 practice trials without pay. In each of the practice trials, they received feedback as to how much money they could have earned if they were playing for pay and their cumulative earnings up to that point. The practice trials were intended to help participants notice that the program would pay on the basis of their answer, regardless of the correct answer. After the practice rounds, participants played for 100 trials in which they had the opportunity to earn up to \$5 by always indicating more dots on the right side. The 100 trials consisted of 16 right trials in which the answer was clearly “more on the right,” 34 left trials in which the answer was clearly “more on the left,” and 50 ambiguous trials.

At the end, similar to Study 1, feelings of anxiety were measured with the four items nervous, anxious, worried, and apprehensive ($\alpha = .94$). Neutral feelings were measured by items neutral, indifferent, unemotional, and calm ($\alpha = .85$). Participants were asked to report how they felt during the video clip and rated each item on a 7-point Likert scale ranging from 1 (*very slightly or not at all*) to 7 (*extremely*).

Results and Discussion

The manipulation of anxiety was successful. Participants in the anxiety condition reported more anxiety ($M = 4.63$, $SD = 1.80$) than did participants in the neutral condition ($M = 1.99$, $SD = 1.37$), $t(49) = -5.88$, $p < .001$. Additionally, participants in the neutral condition reported more neutral feelings ($M = 3.75$, $SD = 1.69$) than did participants in the anxiety condition ($M = 2.78$, $SD = 1.70$), $t(49) = 2.04$, $p = .047$.

In support of our hypothesis, there was a significant difference between the two conditions on the number of times participants chose the right when there were clearly more dots in the left side (clear cheating). Participants in the incidental anxiety condition chose to indicate the right more frequently ($M = 19.42$, $SD = 6.03$) than did those in the neutral condition ($M = 15.00$, $SD = 3.96$), $t(49) = -3.11$, $p = .003$. In other words, participants behaved more dishonestly in the incidental anxiety condition than in the neutral condition.

We next ran the analysis using the number of time participants chose the right side on ambiguous trials as the dependent variable. Participants in the incidental anxiety condition chose the right side more frequently ($M = 29.77$, $SD = 7.81$) compared with participants in the neutral condition ($M = 25.48$, $SD = 3.91$), $t(49) = -2.49$, $p = .017$. Finally, we examined participants' choices of the right side in the right trials when there were clearly more dots on the right side. A t test revealed no significant effects between the incidental anxiety ($M = 13.08$, $SD = 2.17$) and neutral conditions ($M = 12.08$, $SD = 2.78$), $t(49) = -1.43$, $p = .16$.

The performance task used in this study helped to generalize the findings from Study 1 in two important ways. First, participants completed a behavioral task measuring their lying rather than reading scenarios. Second, the task consisted of different trials, morally ambiguous choices as well as clearly wrong choices. The difference in trials provided the opportunity to examine the impact of induced anxiety on both ambiguous and clear cheatings instances. Our findings showed that the anxiety manipulation increased unethical behaviors on both ambiguous and clear cheating instances.

Study 3

Whereas Studies 1 and 2 provide evidence for experienced anxiety as a driver of unethical behavior, our design neither allowed us to examine whether threat is an important mediator of this relationship nor allowed us to rule out alternative explanations for why experienced anxiety leads to unethical behavior.

A competing explanation for why experienced anxiety might facilitate unethical behavior is as follows. Research has shown that anxiety can impair information processing because people use their available cognitive resources to worry (e.g., Eysenck, 1982;

Eysenck et al., 2007; Sengupta & Johar, 2001). As such, one can argue that because individuals experiencing anxiety tend to exhibit reduced cognitive capacity for processing information and analyzing it using the relevant moral principles or rules applicable in a given situation, they might engage in more unethical behaviors. This argument is supported by recent research that shows that depletion of self-regulatory resources increases dishonest behaviors because depletion reduces people's moral awareness (Gino, Schweitzer, Mead, & Ariely, 2011; Kouchaki & Smith, 2014; Mead et al., 2009).

The purpose of Study 3 was to test these two competing explanations: perceived threat or impaired information processing. To this end, we administered an implicit measure of threat and measured impaired information processing.

Method

Participants. Participants were 63 (42 male) students at a university in the United States who participated in exchange for course credit but also had an opportunity to earn money on the basis of their reported performance. Their mean age was 24.6 years ($SD = 5.2$).

Materials and procedure. Participants were randomly assigned to either the anxiety or the neutral condition. We induced anxiety or neutral emotions by asking participants to listen to one of the two music clips used in Study 1 while completing the entire study. First we asked participants to complete an implicit threat task and a Stroop task. We counterbalanced the order in which the Stroop task and implicit threat measure were presented to participants.

To measure our proposed mediator, perceived threat, an implicit threat measure (DeMarree, Wheeler, & Petty, 2005; Liu, Vohs, & Smeesters, 2011) was used. In this task, participants were instructed that they would complete a subliminal language perception task in which words would appear on the computer screen for a fraction of a second, and their task was to select the word that was flashed from a list of four words. Participants were presented with six trials, half of which were target trials, in which one of the four response options was a threat-related word (e.g., *threat*). Scores on the implicit threat measure were computed by summing the number of threat-related words selected (a number between 0 and 3), with higher scores indicating stronger perceptions of threat.

We also used the Stroop task (Stroop, 1935), a color-word task, to assess information processing. In the Stroop task, color names were presented in different colors, and participants were asked, as soon as the word appeared on the screen, to indicate the color in which each word was printed while ignoring what the words actually said by pressing a key. Response times were measured, and the mean response time for both trials in which the two colors were the same (GREEN displayed in green, a congruent trial) and trials in which there was a mismatch between the color the word refers to and the color in which the word is displayed (e.g., GREEN displayed in red, an incongruent trial) was computed. We then computed the difference in the mean response time between incongruent and congruent trials and used it as an assessment of information processing (Gino et al., 2012).

Afterward, participants were directed to complete the visual perception task used in Study 2. Participants were presented with 100 trials (16 right trials, 34 left trials, and 50 ambiguous trials) in which they had the opportunity to earn up to \$5 by always indicating more dots on the right side. Once again, we measured participants' anxiety while listening to the music ($\alpha = .95$) and neutral feelings ($\alpha = .74$), each with four items asking them to report how they felt by rating each item on a 7-point Likert scale ranging from 1 (*very slightly or not at all*) to 7 (*extremely*).

Results and Discussion

The manipulation of anxiety was successful. Participants in the anxiety condition reported more anxiety ($M = 4.31$, $SD = 2.00$) than did participants in the neutral condition ($M = 1.58$, $SD = .86$), $t(61) = -6.93$, $p < .001$. Moreover, participants in the neutral condition reported more neutral feelings ($M = 3.48$, $SD = 1.52$) than did participants in the anxiety condition ($M = 2.68$, $SD = 1.41$), $t(61) = 2.17$, $p = .034$.

Consistent with Study 2, participants in the anxiety condition chose the right side more frequently when there were clearly more dots in the left side ($M = 23.87$, $SD = 7.91$) than did those in the neutral condition ($M = 19.84$, $SD = 6.17$), $t(61) = -2.60$, $p = .030$. In other words, participants acted more unethically in the anxiety condition than in the neutral condition. Additional analysis using the number of clicks on ambiguous trials as the dependent variable showed that participants similarly chose the right side significantly more often in the anxiety condition compared with the neutral condition ($p = .011$). We found no significant difference for trials that clearly showed more dots on the right ($p = .12$).

There was also a significant effect of the emotion condition on the implicit threat measure, $t(61) = -2.78$, $p = .007$, such that participants in the incidental anxiety condition selected more threat words ($M = 1.70$, $SD = .70$) than those in the neutral condition ($M = 1.18$, $SD = .77$).

We assessed information processing by examining the difference in mean response times between incongruent and congruent trials for each participant between the two conditions. Higher scores reflect slower information processing. Consistent with prior research (Eysenck et al., 2007), we found a marginally significant difference such that participants in the anxiety condition performed worse ($M = 2.47$ s, $SD = 2.26$) than those in the neutral condition ($M = 1.19$ s, $SD = 3.60$), $t(61) = -1.68$, $p = .099$.

In sum, these results indicate that the anxiety manipulation increased perceived threat and slowed down information processing. We next conducted mediation analyses to test whether feelings of threat and/or slower information processing mediate the effect of anxiety on unethical behaviors. First, to assess whether feelings of threat mediate the relationship between the emotions condition and clear cheating, we followed procedures recommended by Preacher and Hayes (2004). The results of the bootstrapping analysis (with 5,000 iterations) indicated that the anxiety condition had a statistically significant effect on implicit threat ($b = .52$, $SE = .19$, $p = .007$), which, in turn, significantly affected number of right clicks on the left trials ($b = 3.09$, $SE = 1.17$, $p = .010$). The effect of our emotion manipulation was reduced (from $b = 4.02$, $SE = 1.78$, $p = .027$ to $b = 2.42$, $SE = 1.80$, $p = .19$) when feelings of threat were included in the equation. The bootstrap analysis showed that

the 95% bias-corrected confidence interval for the size of the indirect effect excluded zero [.215, 3.796], suggesting that feelings of threat mediated the effect of emotion manipulation (anxious vs. neutral) on unethical behavior.¹

Next, we ran the mediation using the mean difference between incongruent and congruent trials (i.e., impaired information processing) as a mediator. The results of the bootstrapping analysis (with 5,000 iterations) indicated that the anxiety condition had an effect on information processing ($b = .12$, $SE = .08$, $p = .099$), which did not significantly affect number of right clicks on the left trials ($b = -1.77$, $SE = 3.84$, $p = .65$). The bootstrap analysis showed that the 95% bias-corrected confidence interval for the size of the indirect effect included zero [-1.382, .617], suggesting that impaired information processing did not mediate the effect of emotion manipulation on unethical behavior.

Next, we ran a multiple mediation following procedures recommended by Preacher and Hayes (2008). The results of the bootstrapping analysis (with 5,000 iterations) with both variables simultaneously in the model indicated that implicit threat [.296, 4.020] and not slower information processing [-1.022, .372] mediated the effect of incidental anxiety on unethical acts. In brief, the results supported our underlying mechanism of perceived threat over impaired information processing.

Study 4

The previous study provided empirical support for our proposed mediator, perceived threat using an implicit threat measure. However, one could argue that the cognitive accessibility of threat-related words in the implicit task does not necessarily equate to an experience of threat. Therefore, in the next study, we use a self-report measure of threat to further examine whether self-reported perceived threat mediates the effect of anxiety on unethical behaviors. Additionally, in Study 4, we used a common workplace scenario to examine whether the results obtained in previous studies are closely related to ethical behavior at work.

Method

Participants. Ninety individuals (49 men) with a mean age of 29.3 years ($SD = 10.1$) participated in a short, paid online study on Amazon's Mechanical Turk (MTurk) website. This website has been shown to produce samples comparable to other methodologies (Buhrmester, Kwang, & Gosling, 2011; Paolacci, Chandler, & Ipeirotis, 2010). Past research has explicitly identified the utility of using Amazon's MTurk portal for subject recruitment and indicated that the internal and external validity of experiments performed using MTurk is sound compared with traditional subject pools (Berinsky, Huber, & Lenz, 2012).

Materials and procedure. Participants were randomly assigned to one of the conditions (emotion condition: anxiety vs. neutral). All participants read a scenario within which we manipulated anxiety by exposing them to either an anxiety-provoking or neutral piece of information.

The scenario put participants in the shoes of Sam, who had graduated from college and started to work recently for a well-known media firm. It was Sam's seventh week on the job and after 9 more weeks, the probationary period would be over; if all went well, Sam's position would become permanent. Next, participants

were told that as Sam, they had received an e-mail from their boss asking them to swing by his office later that day. Upon going to see their boss, his secretary had asked them to wait in the foyer. During their wait, their eye fell on a folder, and to pass time, they started reading through it. Next, depending on the assigned condition, they read a 150-word article that induced either anxiety or a neutral state.

In the anxiety-inducing condition, participants were informed about a study by the Institute of Pharmaceutical Sciences and Research that had revealed that many of the toothpaste manufacturers are adulterating toothpastes and toothpowders with a high quantity of nicotine. They further read that many brands of toothpastes surprisingly had nicotine in quantities comparable to cigarettes. In the neutral condition, they were informed about a small industries park built by the Industrial Infrastructure Development Corporation, which was expected to provide a boost to the industrial development of the district. They further read that the industrial park provided state-of-the-art infrastructure facilities and a ready-made and hassle-free manufacturing environment.

A pilot study with a separate group of participants ($n = 54$) confirmed that the anxiety-inducing article compared with the neutral article made people feel more anxious ($M_{anxiety} = 3.52$, $SD = 1.72$ vs. $M_{neutral} = 1.94$, $SD = 1.16$), $t(52) = 3.91$, $p < .001$, and less neutral ($M_{anxiety} = 3.23$, $SD = 1.50$ vs. $M_{neutral} = 4.41$, $SD = 1.52$), $t(52) = 2.85$, $p = .006$. Similar to previous studies, we measured participants' anxiety after reading one of the articles with four items nervous, anxious, worried, and apprehensive ($\alpha = .96$) and measured neutral feelings by items neutral, indifferent, unemotional, and calm ($\alpha = .71$) on a 7-point Likert scale ranging from 1 (*very slightly or not at all*) to 7 (*extremely*). We also asked participants to indicate their agreement with two statements designed to measure perceived threat on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*): "I feel threatened right now" and "The information in the article threatened me" ($\alpha = .92$). Those participants in the anxiety condition ($M = 3.50$, $SD = 1.63$) reported more feelings of threat compared with those in the neutral condition ($M = 1.42$, $SD = 1.52$), $t(52) = 6.04$, $p < .001$.

After reading one of the emotion induction articles, presumably while waiting for their boss, participants were informed that they were called by the boss into his office and asked to help him out with one of his projects. The boss gave them a packet that had all the materials for the project and asked them to write a report of the project so that he could share it with the chairman of the company. The scenario continued by telling participants that the boss asked them to include in their report the summary of a meeting with another company that never occurred (i.e., to fabricate a lie). They read that they knew that it was the wrong thing to do, but that they faced an ethical dilemma because they wanted to please their boss.

At the end of the scenario, all participants were asked to indicate how likely they were to include the fake meeting in the summary on a 7-point scale ranging from 1 (*very unlikely*) to 7 (*very likely*). Right after this question, participants indicated their agreement with two statements designed to measure perceived threat on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*): "I felt threatened while reading the article (during the time

¹ Both overall number of trials and ambiguous trials, when analyzed separately, showed the same pattern.

I was waiting for the boss to call me into his office)" and "The information in the folder threatened me" ($\alpha = .87$). After the demographic question, we asked participants to write down the names of the protagonist as well as the boss to see whether participants read the story carefully or not as an attention check.

Results and Discussion

Nine participants were excluded for not remembering the correct names from the story they read (three in the anxiety condition and six in the neutral condition). This left us with 81 participants for subsequent analyses.

Consistent with previous studies, there was a significant difference between the two conditions on individuals' likelihood to engage in unethical behavior by fabricating a lie and including the fake meeting in the report. Participants in the anxiety condition indicated that they were more likely to include the meeting ($M = 5.37$, $SD = 1.38$) than those in the neutral condition ($M = 4.66$, $SD = 1.73$), $t(79) = -2.07$, $p = .042$. Moreover, those in the anxiety condition also reported feeling more threatened ($M = 3.67$, $SD = 1.59$) than those in the neutral condition ($M = 2.80$, $SD = 1.59$), $t(79) = -2.80$, $p = .007$.

Next, we tested whether experienced threat mediated the relationship between the emotions condition and likelihood to engage in unethical acts. Similar to Study 3, we followed procedures recommended by Preacher and Hayes (2004). The results of the bootstrapping analysis (with 5,000 iterations) indicated that the anxiety condition had a statistically significant effect on experienced threat ($b = .44$, $SE = .16$, $p = .007$), which, in turn, significantly affected likelihood to engage in unethical acts ($b = .24$, $SE = .12$, $p = .048$). The effect of our emotion manipulation was reduced (from $b = .36$, $SE = .17$, $p = .042$ to $b = .25$, $SE = .18$, $p = .16$) when experienced threat was included in the equation. The bootstrap analysis showed that the 95% bias-corrected confidence interval for the size of the indirect effect excluded zero [.010, .283], suggesting that experienced threat mediated the effect of emotion manipulation (anxious vs. neutral) on unethical behavior.

In brief, the pattern of results was similar to that obtained in Study 3. Specifically, when we used a scenario study with rich organizational details, analyses revealed that participants' behavior was no different from the pattern obtained using laboratory tasks (i.e., visual perception task), thus strengthening the ecological and external validity of our findings.

Study 5

Studies 3 and 4 provided empirical support for our proposed mediator, perceived threat, such that experimentally induced anxiety increased perceived threat and increased unethical acts. In this study, we further provide support for our argument that when experiencing anxiety, the self-defensive nature of the behaviors under perceived threat causes people to focus narrowly on their own basic needs and self-interest, which can cause them to be less mindful of principles that guide ethical and moral reasoning. In other words, the narrow focus on self-protection and self-interest as a result of threat makes one's unethical actions to be considered more acceptable. This differential judgment of one's own behaviors under anxiety as a result of threat allows one to maintain a

positive self-view without any damage to the moral self-image and consequently engage in more unethical behaviors.

To further provide support for our self-protective argument, we examined the difference in moral judgments of unethical actions conducted by self versus others as a result of experiencing anxiety and threat. Furthermore, the competing underlying mechanism of impaired information processing predicts no difference between judgments of unethical actions conducted by self versus others because it only indicates that information processing is, in general, slower. However, our proposed self-protective mechanism predicts that individuals experiencing anxiety judge their own unethical behaviors as more acceptable and less wrong as a response to perceived threat. Unlike the information-processing perspective, we do not expect individuals to perceive others' unethical behaviors as more acceptable. This prediction further provides support for our self-defensive argument.

Hypothesis 3: Anxiety (compared with neutral condition) leads individuals to perceive their own self-interested unethical actions as less wrong and more acceptable but does not alter the evaluation of others' self-interested unethical actions.

Thus, Study 5 was designed to test Hypothesis 3 that experimentally induced anxiety compared with neutral feelings leads individuals to perceive their own unethical actions as less wrong but does not alter the evaluation of others' unethical actions. This would provide further support of our underlying mechanism of threat, which allows for a diverse range of self-defensive behaviors that may cause an individual to judge her or his own unethical actions more leniently than the unethical actions of others.

Method

Participants. One hundred fifty-seven individuals (80 men) with a mean age of 29.1 years ($SD = 8.8$) participated in a short, paid online study on Amazon's MTurk website.

Materials and procedure. Participants were randomly assigned to one of four conditions of a 2 (emotion condition: anxiety vs. neutral) \times 2 (actor of the immoral action: self vs. someone else) between-participant design. Every participant rated one self-interested unethical action.

For emotion induction, participants were asked to provide a detailed written account of a personal experience (adapted from Gino et al., 2012) and, depending on the condition, were asked to describe one thing that they had done or a situation they were part of that made them feel anxious, or describe a typical afternoon (neutral condition). After the writing task, participants were asked to read a scenario (adapted from Barkan, Ayal, Gino, & Ariely, 2012) and then answer a few questions. We used a first- versus a third-person perspective-taking manipulation. In the first-person condition, participants were asked to read a scenario in which they themselves engaged in an unethical behavior. In the third-person condition, they read about another person's same unethical behavior.

You (Steve) have an important interview tomorrow, which will determine whether or not you (he) will be able to get a really good job as an analyst. You (Steve) are suitable for the job but you (Steve) are worried about the interview being demanding. You (Steve) are the type of person who does not perform at your (his) best under stress.

The questions for the interview will be chosen at random from a list that is kept in an online document which is password protected. You (Steve) are the last person to leave the room after an introductory luncheon for all the job candidates. As you (he) are about to leave, you (he) notice that a company representative has left on the table a folder with information about tomorrow's interview. You (Steve) have the opportunity to write down the password and use it to prepare for the interview. Nobody would ever learn about this. You (Steve) decide to open the folder and copy the password on your (his) notebook before leaving.

After reading the scenario, participants indicated on 7-point scale ranging from 1 (*Not at all*) to 7 (*Very much*) the extent to which they thought the described behavior was (a) wrong and (b) unethical ($\alpha = .88$).

At the end, for the manipulation check, we measured anxiety (nervous, anxious, worried, and apprehensive; $\alpha = .81$) and neutral feelings (neutral, indifferent, unemotional, and calm; $\alpha = .70$) by asking participants to think of the experience/situation they described earlier and indicate how they felt on a 7-point Likert scale ranging from 1 (*not at all*) to 7 (*extremely*).

Results and Discussion

Our manipulation of anxiety was successful. Participants in the anxiety condition reported more anxiety ($M = 4.06$, $SD = 1.56$) than did participants in the neutral condition ($M = 3.03$, $SD = 1.49$), $t(155) = -4.24$, $p < .001$. Neutral feelings were higher among participants in the neutral condition ($M = 4.47$, $SD = 1.82$) than in the anxiety condition ($M = 3.84$, $SD = 1.62$), $t(155) = 2.28$, $p = .024$.

A 2 (emotion condition: anxiety vs. neutral) \times 2 (actor of the immoral action: self vs. someone else) analysis of variance demonstrated that the overall model was significant, $F(3, 153) = 3.23$, $p = .024$. The main effect of the actor of the immoral action (self vs. other), $F(1, 153) = 3.04$, $p = .083$, was marginally significant such that those participants judging their own transgression saw the behavior as less questionable (wrong and unethical) ($M = 5.16$, $SD = 1.56$) compared with those judging someone else's behavior ($M = 5.53$, $SD = 1.32$).

The predicted interaction effect between the perspective of the reader by the emotion condition was significant, $F(1, 153) = 5.66$, $p = .019$. To interpret these effects, we conducted multiple planned comparisons. As hypothesized, results showed that within the self condition, participants in the anxiety condition perceived the described self-interested unethical behavior as less wrong and unethical ($M = 4.72$, $SD = 1.74$) than those in the neutral condition ($M = 5.55$, $SD = 1.27$), $F(1, 75) = 5.74$, $p = .019$. For the third-person perspective, the emotion condition did not significantly influence the moral judgments of the described unethical behavior ($M_{anxiety} = 5.66$, $SD = 1.21$ vs. $M_{neutral} = 5.40$, $SD = 1.42$), $F(1, 78) = .79$, $p = .39$.

Study 6

Thus far, we presented experimental studies demonstrating that experimentally induced anxiety increases unethical behaviors. In Study 6, we examine whether employees' self-reports of experienced anxiety at work are positively related with their experienced threat at work and their supervisors' ratings of the employees' unethical be-

havior. In this study, we collected data from subordinate-supervisor dyads to eliminate common method bias and be able to establish the link between experienced anxiety, feelings of threat, and unethical behaviors at work. Given that our dependent variable measured incidents of unethical behaviors over time by an employee in her or his employing organization as reported by their supervisor, we used a trait-oriented measure of anxiety in this study to be able to explore the link between experienced anxiety at work and unethical behavior.

Method

Participants. Data were collected from surveys administered to both employees and their supervisors from a paid online participant pool, StudyResponse.com (a number of prior studies have used this website; Barnes, Schaubroeck, Huth, & Ghumman, 2011; Reynolds & Ceranic, 2007). The website has identified a pool of individuals and their immediate supervisors who consented to be contacted to participate in research studies. Per our request, StudyResponse contacted a random sample of 80 participants and their immediate supervisors to participate. We obtained complete data from 74 subordinate-supervisor pairs after deleting those cases with missing data from either the subordinate or the supervisor. The sample was drawn from a variety of organizations. Regarding demographic characteristics, 64% of the employee respondents were male, and the average age of the employee respondents was 39.9 years ($SD = 11.2$). The employee respondents had an average organizational tenure of 8.7 years ($SD = 7.4$) and an average department tenure of 7.4 years ($SD = 6.2$). They had an average of 16 years of work experience ($SD = 11.2$). Seventy-two percent of the supervisor respondents were male, and the average age of supervisor respondents was 42.4 years ($SD = 9.5$). The supervisors had been with the organization, on average, for 11.2 years ($SD = 7.1$) and in their position, on average, for 8.8 years ($SD = 6.4$). They had an average of 18.6 years of work experience ($SD = 10.7$).

The supervisor survey contained scales measuring their assessment of the subordinate's engagement in unethical behavior, job performance, and demographic questions. The subordinate survey contained a measure of experienced anxiety in job and perceived threat. Additionally, subordinates also completed questions measuring their personality traits (i.e., extraversion and neuroticism) because these traits have been shown to be related to a propensity to experience state anxiety (e.g., Matthews & Deary, 1998; Rodell & Judge, 2009; Uliaszek et al., 2010). Moreover, subordinates responded to questions regarding their position and demographic questions.

Measures.

Experienced anxiety at work. To measure anxiety at work, similar to Rodell and Judge (2009), we used two items, nervous and anxious, to measure anxiety ($\alpha = .78$). Participants were asked to indicate to what extent they experience the aforementioned states at work, in general, on a 5-point scale (from 1 = *very slightly or not at all* to 5 = *extremely*).

Perceived threat at work. To measure threat, we adapted items from Morrison, Fast, and Ybarra (2009), asking participants to respond to four questions about the extent to which they perceive any kind of threat to their status, ability to access resources, ability to exert power, and ability to achieve goals at work on a 7-point scale (1 = *not at all*, 7 = *very much*). The responses to the four questions were averaged to form a perceived threat composite ($\alpha = .78$).

Unethical behaviors. The supervisors rated their subordinates' unethical behavior (adopted from Akaah, 1992; Trevino & Weaver, 2001) using eight items measuring unethical behaviors at work ($\alpha = .98$). They indicated how likely their subordinates engaged in ethically questionable behaviors at work (e.g., "Falsifying records and reports"; "Lying to clients, employees, or the public"; and "Misreporting actual time or hours worked") on a 7-point scale (1 = *never*, 7 = *always*).

Control variables. To accurately assess the relationship between felt anxiety at work and unethical behaviors, we included some control variables. We collected supervisors' ratings of subordinate performance to be able to demonstrate that experienced anxiety contributes to supervisor's ratings of unethical behaviors above and beyond supervisor's ratings of subordinate performance. To this end, supervisors completed a job performance measure that included seven items from Williams and Anderson's (1991) Task Performance scale ($\alpha = .79$), which included items such as "adequately completes assigned duties" and "meets formal performance requirements of the job," which were measured using a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*).

The personality traits of extraversion and neuroticism have been linked to anxiety experienced at work (Rodell & Judge, 2009; Uliaszek et al., 2010). Thus, we decided to control for differences in these traits using a scale developed by Saucier (1994) on which participants were provided with a list of adjectives for each trait and were instructed to use a 9-point scale (from 1 = *extremely inaccurate* to 9 = *extremely accurate*) to rate themselves ($\alpha = .80$ for extraversion and $\alpha = .84$ for neuroticism). Next, to help rule out any halo effects, we included a measure of prosocial motivation given the argument by Grant and Wade-Benzoni (2009) that anxiety influences "hot" self-protective motivation and withdrawal behaviors (e.g., absenteeism) and is unrelated to "cool" prosocial motivation. Therefore, to rule out the spuriousness of any obtained negative relationship between anxiety and unethical behavior, we included in our survey a variable that has been argued to be unrelated to anxiety, namely, prosocial motivation at work. Thus, respondents filled out the Prosocial Motivation scale developed by Grant (2008). The scale opened with the question, "Why are you motivated to do your work?" and then allowed respondents to rate their prosocial motivation on a 7-point scale (1 = *not at all*, 7 = *very much*). The Prosocial Motivation scale was composed of four items, including "Because I want to help others through my work" and "Because I care about benefiting others through my work" ($\alpha = .93$).

Additionally, following the meta-analysis by Kish-Gephart, Harrison, and Treviño (2010) demonstrating the link between individual demographic variables of gender (coded 1 for male), age, and education level with unethical behavior, we included them as control variables. Educational level was measured on a 7-point scale (1 = *less than high school*, 7 = *doctorate*).

Results

Descriptive statistics and correlations among the study variables are presented in Table 1.² Consistent with our predictions, employees' report of anxiety at work was positively correlated with unethical behaviors; that is, individuals who reported higher levels of anxiety were reported to have engaged in more unethical be-

haviors by their supervisors ($r = .59, p < .001$). Note that these correlations are cross-source and not inflated by common method or same-source variance. Although these zero-order correlations are meaningful and provide preliminary support for our hypothesis, to test our hypothesis, we conducted a multiple regression analysis predicting unethical behaviors while including performance ratings, personality traits of extraversion and neuroticism, and demographic variables (see Table 2 for results). Importantly, Hypothesis 1 was supported, as experienced anxiety was negatively related to unethical behaviors ($\beta = .28, p = .013$). Next, to rule out the spuriousness of our findings, we conducted an additional regression analysis with anxiety as the predictor variable and prosocial motivation at work as the criterion variable. Importantly, we failed to find any significant association between the two ($\beta = -.16, p = .18$), suggesting that the previously documented relationship between anxiety at work and unethical behaviors is likely not as a consequence of any halo effect, and is non-spurious.³

Additionally, the results of the bootstrapping analysis (with 5,000 iterations; Preacher & Hayes, 2004) indicated that felt anxiety had a statistically significant effect on perceived threat ($b = 1.01, SE = .17, p < .001$), which, in turn, significantly affected unethical behaviors ($b = .22, SE = .11, p = .044$). The effect of anxiety was reduced (from $b = 1.00, SE = .16, p < .001$ to $b = .78, SE = .19, p < .001$) when feelings of threat were included in the equation. The bootstrap analysis showed that the 95% bias-corrected confidence interval for the size of the indirect effect excluded zero [.025, .518], suggesting that perceived threat partially mediated the relationship between anxiety at work and unethical behaviors, supporting Hypothesis 2.

The findings of our field study support the anxiety-unethical behavior link in organizations. Of course, our work is not devoid of the shortcomings that are typically associated with correlational studies (such as omitted variable bias). Moreover, we used a trait-oriented measure in this final study. However, when taken in conjunction with the findings from the other five experimental studies, they demonstrate the robustness of the anxiety-unethical behavior link.

General Discussion

Past research has identified the importance of emotions on individuals' decisions and behaviors. In the present investigation, we focused on the effect of anxiety in the domain of ethical behavior. We proposed that experienced anxiety increases self-interested unethical acts. More importantly, we tested in the present work the underlying psychological process and examined the role of perceived threat triggered by anxiety in increasing unethical behaviors. Thus, we suggest that to the extent that anxious people experience threat, they will be more likely to engage in unethical acts.

² Even though the anxiety, threat, and neuroticism variables are highly positively correlated with one another and this pattern suggests that the three factors are related, a factor analysis showed they qualify to be distinct and tap into relatively distinct constructs.

³ We are grateful to the action editor, Sharon Parker, for suggesting we conduct this analysis to help rule out halo effects, and to demonstrate that anxiety at work predicts unethical behavior but not other behaviors, such as prosocial motivation at work.

Table 1
Descriptive Statistics and Correlations for Study 6

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Unethical behaviors	2.07	1.55	—								
2. Anxiety	1.98	0.90	.59***	—							
3. Threat	3.04	1.61	.49***	.57***	—						
4. Performance	4.23	0.61	-.65***	-.43***	-.38**	—					
5. Extraversion	5.92	1.38	-.32**	-.31**	-.33**	.38**	—				
6. Neuroticism	3.89	1.42	.55***	.62***	.70***	-.47***	-.53***	—			
7. Prosocial motivation	5.31	1.28	-.20	-.16	-.01	.43***	.44***	-.28*	—		
8. Age	39.91	11.22	-.33**	-.45***	-.37**	.22†	.07	-.42***	-.08	—	
9. Gender	0.64	0.49	.20	.30*	.22†	-.07	-.09	.28*	-.02	-.33**	—
10. Education	4.73	0.94	.13	.11	.08	.09	.02	.11	.18	-.49***	.23*

Note. *N* = 74. Gender coded as 0 for females and 1 for males. Education was coded on a 7-point scale (1 = less than high school, 7 = doctorate).
† *p* < .10. * *p* < .05. ** *p* < .01. *** *p* < .001.

Theoretical Implications

First and foremost, our research contributes to the body of work on employees' emotional experiences and reactions in the workplace and, in particular, their ability to cope with negative emotions and situations such as stress, job insecurity, and anxiety. In past research, various outcomes have been investigated, such as decreased performance, increased job-related tensions, and lower commitment, which are all associated with perceived negative emotional experiences at work (e.g., Ashford, Lee, & Bobko, 1989; Jordan et al., 2002). Of importance, this work suggests that in the presence of job-related tension and stress, employees are more likely to engage in negative defensive coping behaviors (Catalano, Rook, & Dooley, 1986; Rodell, & Judge, 2009). We contribute to the literature by identifying unethical behaviors as likely consequences of anxiety and tension in the workplace. Our work is among the first in which the far-reaching effects of defensive coping behaviors of experienced anxiety at work have been investigated.

Our findings also extend the behavioral ethics literature by helping to explain how emotions such as anxiety may lead to more unethical behavior. Our work makes several important contribu-

tions to this body of work. First, not only did we find the link between felt anxiety and unethical behavior, but we also examined the underlying mechanism, and ruled out a plausible alternative mechanism. Second, there has been extensive research on the role of emotions such as disgust and anger on moral judgments and decision making. Our work is among the first to suggest that experienced anxiety, among other emotions, is also an important affective factor that influences whether people choose to engage in unethical behavior.

Our findings provide the first empirical demonstration of the influence of anxiety on ethical behavior and, thus, extend previous theories on anxiety. More generally, these findings contribute to an understanding of whether specific emotions differ from one another in influencing cognition and behavior, and also examine the nature of these differences. Research on anxiety has shown some of the negative consequences of felt anxiety. For instance, anxiety has been shown to lead to worse outcomes in negotiation (Brooks & Schweitzer, 2011) and in tasks that require the use of creativity (Baas, De Dreu, & Nijstad, 2008). Anxiety also has been shown to have detrimental effects on health (Lupien et al., 2007). For instance, anxiety is correlated with higher levels of cortisol in the blood (Kurina, Schneider, & Waite, 2004) and has been linked to diseases such as diabetes and hypertension (Lin et al., 2008). Going beyond these findings, our results illuminate one additional negative effect of incidental anxiety: how it triggers feelings of threat, which in turn may increase unethical behaviors.

However, it is important to acknowledge that experienced anxiety may alter moral behavior differently depending on the source of anxiety. In all our experimental studies, anxiety was triggered by irrelevant factors such as listening to an anxiety-inducing clip rather than some aspects of the task itself. Anxiety is generally experienced in response to situations in which a person is uncertain about an impending outcome of a personally relevant event, especially when the outcome is potentially harmful and there is no means to control it. From an affect-as-information perspective (e.g., Schwarz, 1990), individuals who are experiencing anxiety as part of the task in hand are likely to appraise the odds of negative outcomes as high (e.g., Maner & Schmidt, 2006) and thus be particularly mindful of ensuing distress. Such negative evaluations may lead people experiencing anxiety to be risk averse and to avoid unethical actions. Compared with individuals in a neutral state, one could expect individuals experiencing evaluation anxiety

Table 2
Results of Regression With Experienced Anxiety at Work as the Predictor (Study 6)

Variable	DV: Unethical behaviors	
	Model 1	Model 2
Predictor variable		
Anxiety at work		.28*
Controls		
Performance	-.57***	-.52***
Extraversion	.01	.01
Neuroticism	.28*	.17
Prosocial motivation	.10	.09
Age	-.01	.06
Gender	.06	.03
Education	.12	.13
Adjusted <i>R</i> ²	.49***	.53***

Note. All coefficients are standardized regression coefficients. DV = dependent variable.
* *p* < .05. *** *p* < .001.

to be less likely to engage in unethical behavior. However, there is some research to suggest that anxiety resulting from concerns such as reaching a goal could lead to more unethical behavior (Schweitzer, Ordóñez, & Douma, 2004; Steininger, Johnson, & Kirts, 1964). It remains an empirical question whether evaluation anxiety increases unethical behaviors or not.

Practical Implications

Our work clearly has implications for organizational managers and policy makers. According to the World Health Organization, the United States is the most anxious nation on the planet, with 31% reporting having experienced feels of apprehension, nervousness, and anxiety (Kelly, 2012). Our work suggests that it is important to alter organizational culture in order to curb anxiety levels among employees as well as upper level management. For example, companies such as Google have incorporated playful furniture and play stations in their work environment, emphasizing that playfulness and failure are part and parcel of experimentation and innovation. Such subtle cues along with flextime may help to ameliorate anxiety levels among employees. Second, sponsoring gym memberships for employees may nudge them into getting adequate physical exercise, which is a proven way to keep stress in check as well as lower blood pressure (Bhui & Fletcher, 2000; Dunn, Trivedi, & O'Neal, 2001). Likewise, several organizations such as Johnson & Johnson have been known to permit employees to bring yoga mats to the workplace and do yoga during the lunch hour. Meditation and deep breathing are known to calm frayed nerves (e.g., Kabat-Zinn et al., 1992), and encouraging yoga and similar exercises may not only boost the general well-being of employees but also improve the ethical climate of the organization. Third, sleep deprivation has been known to result in higher levels of stress and anxiety in the waking hours (e.g., Goel, Rao, Durmer, & Dinges, 2009). Setting realistic expectations for employees so that they have a manageable workload and do not need to work extra hours in the night or over the weekend can ensure that anxiety levels can be kept at a minimum. Lastly, an oft-cited source of anxiety for employees is work–family imbalance. Offering on-site daycare services may help alleviate employees' stress. Thus, by altering corporate culture to reduce anxiety, organizations may benefit not only from having a healthier workforce but also an ethical workforce.

Limitations and Future Directions

We used three laboratory experiments, two online studies, and an organizational study to shed light on the moral consequences and psychological mechanism of experienced anxiety. It is noteworthy that we were able to replicate our finding in a variety of settings. However, the conclusions that are drawn from these results should take into account the limitations of each of our methods. On the one hand, though the use of laboratory studies potentially limits the generalizability of our findings, they gave us the chance to isolate the effects of incidental anxiety on behaviors in the absence of the myriad of confounds present in studies of real-world behavior. On the other hand, a limited number of variables were measured in the survey study. Future research should continue to investigate the anxiety–unethical behavior effect using different methodological approaches.

Moreover, in our laboratory studies, we focused on effects of state anxiety on ethical behavior; yet, in our Study 6, we used a measure of trait anxiety as we asked participants to indicate how often they experience nervousness and anxiety at work. In sum, our general pattern of results demonstrates the link between experienced anxiety, either as a state or as a trait measure, on increases on unethical behavior. The present research also raises other interesting questions that may be addressed in future research. First, even though we used multiple inductions of anxiety, as well as examined the impact of anxiety on moral intentions, moral behaviors, and moral judgments, it remains for future work to test the effects in a wide variety of ethical situations. It is also important to understand the situational factors that are likely to moderate the relationship between incidental anxiety and ethical behavior. For instance, in our lab studies, participants were anonymous with no obvious risk of being caught, and with no shared past or possible future interactions with the experimenter. It is plausible that in instances in which there is a chance of being caught or when people have long-standing relationships with others, felt anxiety may operate differently. Also important would be to isolate the various subtypes of anxiety such as social anxiety and performance anxiety (Rachman, 2004) and study their individual effects on ethical decision making.

In studying unethical behavior, one important issue that needs to be disentangled is whether the observed behavior was a consequence of conscious or unconscious processes. Our results suggest that individuals may have been unaware of the impact of the emotional states on their subsequent moral behavior. In fact, we used an implicit measure of threat and did not solely rely on their explicit self-reports. However, as our data demonstrated, it is possible that people were aware of their feeling of threat but not necessarily aware of the link between their feelings and their subsequent behaviors. An important agenda for future research would be to study when and how emotions influence both conscious and unconscious processes.

Though our experiments demonstrated that experimentally induced anxiety leads to more unethical behavior, it is also possible that anxiety sometimes may act as a motivator of ethical behavior. For example, anxiety as a result of anticipation of interaction with a superior may increase the instances of ethical behavior. Future work should identify and examine the various manifestations of anxiety. For instance, it is possible that when the stakes are high for an individual, a higher level of anxiety may lead people to engage in more unethical behavior.

Although we demonstrated that feelings of threat induced by anxiety as opposed to impaired information processing is the mechanism behind our results, other underlying mechanisms may play a role. Further studies are needed to understand other possible cognitive and affective processes in addition to our proposed implicit perceived threat. Moreover, in this article, we examined the link between anxiety and perceived threat and how this link affects unethical acts. We did not study the psychological processes leading perceived threat to impact moral behaviors. Our arguments on the link between threat and unethical behavior are speculative and need further investigation.

Additionally, future work can enrich our understanding via an examination of individual-difference variables that may play a role. For example, emotional intelligence (Mayer & Salovey, 1997; Yip & Côté, 2013) might moderate the effect of incidental

anxiety on unethical behavior by assisting individuals in understanding that such anxiety is irrelevant and ought to be discounted when making current decisions.

Conclusion

The findings in this article tell us something new and fundamental about people's behavior when they are under the influence of experienced anxiety. Our findings demonstrate that compared with people in a neutral state, those who experience anxiety tend to behave unethically when the situation permits. This unethical behavior is mediated by perceived threat.

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