

Cheating Under Pressure: A Self-Protection Model of Workplace Cheating Behavior

Marie S. Mitchell

University of Georgia

Michael D. Baer

Arizona State University

Maureen L. Ambrose

University of Central Florida

Robert Folger

University of Central Florida

Noel F. Palmer

University of Nebraska–Kearney

Please do not cite this paper without permission from the first author. This paper is currently under third review at the *Journal of Applied Psychology*.

Authors' note. Marie S. Mitchell, Department of Management, University of Georgia; Michael D. Baer, Department of Management, Arizona State University; Maureen L. Ambrose, Department of Management, University of Central Florida; Robert Folger, Department of Management, University of Central Florida; Noel F. Palmer, Department of Management, University of Nebraska–Kearney.

We would like to acknowledge the financial support provided by the Terry-Sanford research grant from the Terry College of Business at the University of Georgia, the Institutional Review Board's Layman Award from the University of Nebraska, the University of Nebraska – Kearney Research Services Council Mini-Grant, and the Gordon J. Barnett Memorial Foundation.

Correspondence should be addressed to Marie S. Mitchell, Department of Management, Terry College of Business, University of Georgia, 404 Brooks Hall, Athens, GA 30602; email:

mmitche@uga.edu.

Cheating Under Pressure: A Self-Protection Model of Workplace Cheating Behavior

Abstract

Workplace cheating behavior is unethical behavior that seeks to create an unfair advantage and enhance benefits for the actor. Although cheating is clearly unwanted behavior within organizations, organizations may unknowingly increase cheating as a byproduct of their pursuit of high performance. We theorize that as organizations place a strong emphasis on high levels of performance, they may also enhance employees' self-interested motives and need for self-protection. We suggest that demands for high performance may enhance the experience of performance pressure—the subjective experience that employees must raise their performance efforts or face significant consequences. Employees' perception of the need to raise performance paired with the potential for negative consequences is threatening and heightens self-protection needs. Driven by self-protection, employees become angered and self-concerned, which motivates cheating behavior. A multi-study approach was used to test our predictions. Study 1 developed and provided validity evidence of a measure of cheating behavior. Study 2 and Study 3 tested our predictions in time-separated field designs. Results from Study 2 demonstrated that anger mediates the effects of performance pressure on cheating behavior. Study 3 replicated the Study 2 findings, and extended them to show that a cognitive state of self-concern also mediates the effects of performance pressure on cheating behavior. Implications of our findings to theory and practice are provided.

Keywords: cheating behavior, performance pressure, anger, self-concern

Cheating Under Pressure: A Self-Protection Model of Workplace Cheating Behavior

More and more, employees are lying, scamming, and deceiving to advance their interests. These types of behaviors are called *workplace cheating behavior*—unethical acts that are intended to create an unfair advantage or help attain benefits that an employee would not otherwise be entitled to receive (Shu, Gino, & Bazerman, 2011). The upward trend in workplace cheating behavior is highlighted by many recent high-profile examples. For instance, Volkswagen was recently investigated because its employees tried to manipulate the market by tampering with 11 million vehicle emission systems (Thompson, 2016). Wells Fargo terminated 5,300 employees for opening phony accounts so they could hit sales targets and attain bonuses (Egan, 2016). Educators have been charged for wrongfully altering standardized test scores to try to exceed performance benchmarks (Brensilber, 2016). Beyond these specific examples, a study by Pricewaterhouse Coopers (2014) found that more than one in three organizations reported incidents of cheating. More than half of these organizations also indicated that cheating incidents had increased over the past couple of years.

The rise of workplace cheating behavior emphasizes employees' singular focus and calculus on their own interests. In many ways, this is not surprising. Scholars have long recognized that employees are naturally disposed to think and act in ways to optimize positive outcomes and reduce negative outcomes to advance their own interests (Homans, 1961). Within psychology, hedonic principles also demonstrate that people are inclined to enhance pleasurable outcomes and avoid painful ones (Higgins, 1997). Yet, the rise in cheating behavior within organizations suggests that employees are not only attempting to advance their interests at work, but that they do so with little consideration of how their actions impact others or the organization more generally. For these employees, self-interest manifests into a "full set of ex ante and ex post efforts to lie, cheat, steal, mislead, disguise, obfuscate, feign, distort, and confuse" (Williamson, 1984, p. 198). Aside from the moral implications of these behaviors, estimates suggest that workplace cheating costs organizations billions of dollars annually (Goman, 2013), cutting into

about 7% of annual revenue (Meyer, 2010). The rise of cheating behavior raises the question:

What are organizations doing that is enhancing employees' self-interest and cheating behavior?

Scholars have speculated that certain factors within work environments heighten self-interested tendencies that promote unethical behavior (Moore & Loewenstein, 2004; Murnighan, Cantelon, & Elyashiv, 2001; Treviño, den Nieuwenboer, & Kish-Gephart, 2014). For instance, Murnighan and colleagues (Murnighan et al., 2001; Wang & Murnighan, 2011) proposed that organizations may induce self-interested and unethical behavior by enhancing employees' need for self-protection. A focus on self-protection blinds employees from recognizing the moral implications of their actions. Human instincts toward self-preservation from pressures at work may explain the emergence and widespread existence of unethical acts. These arguments suggest that organizations may be inadvertently motivating workplace cheating. Given the financial drain associated with cheating behavior, a deeper understanding of its dynamics is needed.

Our work addresses this issue. Drawing on principles of self-interest and self-protection (e.g., Berkowitz & Harmon-Jones, 2004; Neuberg & Schaller, 2014; Wang & Murnighan, 2011), we develop and test a model of cheating behavior in which we theorize that employees cheat when there is a need to enhance and protect self-interests. Workplace cheating behavior attempts to obtain undeserved benefits by fabricating performance levels. Many organizations pressure employees to raise their performance to ever-increasing and, often, lofty levels (DeZoort, Harrison, & Taylor, 2006; Gutnick, Walter, Nijstad, & De Dreu, 2012). Employees feel the pressure to raise performance or face substantial consequences, such as probation or termination (Gutnick et al., 2012). By its nature, then, performance pressure threatens employees' well-being. Based on principles of self-interest and self-protection, we develop a theoretical model that proposes that perceptions of performance pressure will elicit a self-protective focus (through elicited anger and heightened self-concern—a cognitive state of self-interest), which then motivates cheating behavior as a way of addressing performance demands.

Our work contributes to the literature in several ways. First, we address recent calls to uncover factors *within* organizations that explain why cheating behavior occurs (Ashforth, Gioia,

Robinson, & Treviño, 2008; Moore & Gino, 2013; Treviño et al., 2014). Although research on cheating behavior is emerging (e.g., Barnes, Schaubroeck, Huth, & Ghumman, 2011; Gino & Pierce, 2009; Kouchaki, Smith-Crowe, Brief, & Sousa, 2013; Shu et al., 2011) and some research has shown that high performance goals motivate individuals to overstate their performance (e.g., Schweitzer, Ordóñez, & Douma, 2004; Welsh & Ordóñez, 2014), our study provides unique insights into how organizations enhance self-protective emotion and cognition that translate into cheating behavior. In doing so, we shed light on how organizations might actively influence cheating behavior. Second, our work also offers a needed clarification on the motivational effects of emotion on (un)ethical behavior. Emerging work (e.g., Zhong, 2011) has demonstrated that some emotions (e.g., disgust, guilt) heighten ethical values and behavior. Our work shows that certain emotions (i.e., anger) can motivate unethical behavior. Third, our research provides a generalized measure of cheating behavior for use in field research. Most of the studies on cheating in the organizational sciences have explored effects in lab settings or with students (e.g., Gino & Pierce, 2009; Kouchaki et al., 2013; Shu et al., 2011). Although this work has advanced the literature, theorists have argued that it is essential to examine cheating in the environment in which these behaviors occur to understand factors *within* organizations that make cheating more likely (Treviño et al., 2014). Finally, our work provides insight into the negative consequences of performance pressure. The presumed goal of performance pressure is to raise efforts that enhance the financial standing of an organization. Our work explains how performance pressure can motivate cheating behavior, which produces the illusion of high-quality performance. Indeed, the ultimate result is destructive behavior that produces financial, social, and psychological costs for organizations (Callahan, 2004). Because performance pressure motivates cheating behavior, our work shows that the strategy of pressuring employees to raise performance can be counterproductive.

We first provide an overview of our self-protection model of cheating behavior, which proposes that performance pressure elicits a need for self-protection that explains why cheating behavior occurs. Specifically, we theorize that performance pressure may elicit anger—a “hot”

self-protective emotion—which motivates cheating behavior. To test our predictions, we use a multi-study approach. Study 1 is a series of studies that develop and provide validity evidence for a measure of cheating behavior. Study 2 provides a test of our predictions that the self-protective nature of anger elicited from performance pressure will motivate cheating behavior. Lastly, Study 3 replicates the findings in Study 2 and extends our model by explaining that performance pressure also heightens a “cold” cognitive state of self-concern that, like anger, mediates the effects of performance pressure on cheating behavior.

Theoretical Overview of a Self-Protective Model of Workplace Cheating Behavior

Cheating behavior is unethical acts intended to create an unfair advantage for the actor (Shu et al., 2011). There are noteworthy aspects to this definition. First, cheating behavior is unethical behavior—actions that are illegal or are considered morally inappropriate by larger society (Jones, 1991). Because cheating is unethical behavior, it violates global beliefs and values about what is ethical, even if the behavior is consistent with the norms in some organizations (e.g., lying to customers; Donaldson & Dunfee, 1994; Treviño et al., 2014). Second, cheating behavior is self-interested behavior—self-serving acts that attempt to enhance benefits for the actor. Third, cheating behavior is intentional behavior. The behavior aims to create an unfair advantage by generating rewards or beneficial outcomes that the actor would not otherwise be entitled to receive. Cheating behavior, therefore, involves deliberate unethical acts, such as deception or trickery that are intended to enhance the person’s self-interests.

Fundamentally, the desire and motivation to maximize beneficial outcomes and reduce negative outcomes is not irresponsible or detrimental. Behaving self-interestedly helps to protect individuals from unfortunate and unforeseen situations and can reduce the strain associated with situational stressors (Johnson & Krueger, 2006; X. Zhou, Vohs, & Baumeister, 2009). That said, for individuals who engage in cheating behavior, the focus on self-enhancement and self-protection is pursued regardless of the consequences of the behavior to others. Thus, cheating behavior suggests a reckless focus on self-interest (Callahan, 2004; Wang & Murnighan, 2011).

An enhanced state of self-interest can motivate individuals to engage in unethical behavior. For instance, experimental research has shown that priming self-interest through references to money and wealth motivates unethical behavior (e.g., Gino & Pierce, 2009; Kouchaki et al., 2013), including cheating behavior specifically (Gino & Mogilner, 2014). Further, Tenbrunsel and Messick (1999) found that priming “business” decision-making instigates self-interest that translates into unethical behavior. Drawing from this body of work, Tenbrunsel and Messick (2004) proposed that situational cues within organizations likely instigate a focus on self-interest that promotes “ethical fading,” wherein employees are unable to recognize the ethical implications of their actions, thereby leading to unethical behavior.

Consistent with these arguments, scholars have proposed that unethical behavior is likely to occur if the work environment promotes self-interest and, particularly, employees’ need for self-protection (e.g., Murnighan et al., 2001; Wang & Murnighan, 2011). At the core of self-interest is a motivation to protect oneself from harm. Opportunistic behavior, like cheating behavior, shields the person from exploitation while also trying to enhance benefits. Individuals driven by self-interest acquire a “take advantage of the other person before they take advantage of you” mindset (Williamson, 1984). Threats to a person’s well-being further self-interested motives, eliciting an urgency toward self-preservation that is fundamental to human functioning (Schwartz, 1986).

Although there are a variety of threats to employees’ well-being at work, performance pressure is one of the most salient; it is said to create a visceral reaction toward self-preservation and self-interest (Wang & Murnighan, 2011). Employees’ relationship with their organizations is considered an exchange relationship, wherein employees are required to contribute quality performance to the organization in exchange for benefits (e.g., pay, insurance, loyalty; Cropanzano & Mitchell, 2005). Demanding high levels of performance from employees motivates them to work harder and be more creative, which can be beneficial for organizations (Rousseau, 1997; Sitkin, See, Miller, Lawless, & Carton, 2011). Yet, as organizations increase demands to raise performance, employees may feel undue performance pressure, as they

recognize that enhancing their performance is needed to continue the exchange relationship. The fate of the employee's relationship with the organization, therefore, would hinge on employees elevating their performance (Bernierth, Walker, & Harris, 2015).

Performance Pressure and Cheating Behavior: The Role of Anger

Baumeister (1984) defined pressure as “any factor or combination of factors that increase the importance of performing well” (p. 610). Employees who experience performance pressure feel that their performance efforts will be scrutinized in a high-stakes manner (Gutnick et al., 2012). These employees believe that high performance is demanded and that performance will be linked to substantial consequences. Meeting demands should lead to gains, whereas not meeting demands may put the person's standing in the organization in danger.

Performance pressure can be a threatening experience for employees for several reasons. First, the demand to raise performance may highlight the inadequacies of current efforts (Sitkin et al., 2011). For instance, scholars have proposed that performance pressure is accompanied by a “negative evaluative orientation toward performance insufficiency, a belief that current performance is inadequate for achieving” what is demanded (Zhang, Jex, Peng, & Wang, in press, p. 3). Elevating performance requires employees' stretching their capabilities, which can be difficult if not impossible (Baumeister, 1984; Shalley & Perry-Smith, 2001). Second, employees understand that their efforts are linked to consequences (Baumeister, 1984; Gutnick et al., 2012). Not meeting work demands is understood to result in negative and harmful outcomes. Continued employment is generally contingent on performing on par with expectations and high performance pressure may raise concerns about performing at levels that are sufficient to maintain one's position. As characterized by Gutnick et al. (2012), performance pressure is “high demands and high stakes” (p. 190). Third, scholars have argued that an overriding need to belong and be accepted in social groups makes the potential for negative consequences (such as being devalued or being excluded) particularly threatening, thus making anger a likely response (Carver & Harmon-Jones, 2009; Leary, Twenge, & Quinlivan, 2006). Failure to meet performance standards may threaten the employees' standing in the organization and acceptance

by the group. In all, performance pressure can be threatening to employee well-being and is likely to heighten states associated with a need for self-protection.

In particular, we theorize that anger is a self-protective reaction to performance pressure. Anger is a “hot” negative emotion, marked by a visceral sense of hostility, annoyance, and irritation (Averill, 1982). Anger is a primal reaction to any situation that is aversive, threatening, incongruent, or harmful (Frijda, 1986, 1993; see Berkowitz & Harmon-Jones, 2004, for a review).¹ Anger is especially likely to be elicited from situations in which desires are disrupted or that suggest the potential for failure. As summarized by Frijda (1986), “anger implies nonacceptance of the present event as necessary or inevitable” (p. 199). Thus, a primary function of anger is to signal real or potential threats (situations that can harm the individual; Carver & Harmon-Jones, 2009).

For these reasons, scholars have described anger as a self-protective emotion that is the most likely response to threats (Berkowitz, 1962; Berkowitz & Harmon-Jones, 2004). In support of this proposal, substantial research demonstrates that threatening situations elicit anger (Berkowitz, 1962; Berkowitz & Harmon-Jones, 2004; Carver & Harmon-Jones, 2009). Anger allows individuals to cope with the threat, orienting them to address the situation in such a manner that outcomes better align with their self-interests (Berkowitz & Harmon-Jones, 2004). Further, a seminal tenet of appraisal theories of emotion is that anger is elicited (1) to alert the perceiver of threatening aspects of the situation and (2) to direct the perceiver to cope with the situation in an approach-oriented manner (Berkowitz & Harmon-Jones, 2004; Carver & Harmon-Jones, 2009; Frijda, 1986, 1993).

¹ Some scholars have argued that anger is elicited when blame for perceived threats are attributed to a particular source (e.g., Lazarus, 1991; Smith & Ellsworth, 1985), which might raise the issue of who or what is blamed for performance pressure. However, recent reviews of the empirical research testing these proposals have shown that anger can be elicited without an identified source to blame (Berkowitz & Harmon-Jones, 2004; Carver & Harmon-Jones, 2009). In fact, some of this work has demonstrated that blame may be a consequence rather than an antecedent of anger (Keltner, Ellsworth, & Edwards, 1993; Lerner & Tiedens, 2006; Quigley & Tedeschi, 1996). Beyond the focus of blame, findings have shown that anger is a primal reaction to any situation that is threatening (Frijda, 1986, 1993; see Berkowitz & Harmon-Jones, 2004, for a review).

Thus, anger serves as a jolt to the system, creating a powerful threat alert. Research within the organizational sciences has provided some support for these ideas. For instance, research has shown that various work demands that are considered threatening (e.g., role ambiguity, conflict, situational constraints; cf. Cavanaugh, Boswell, Roehling, & Boudreau, 2000) elicit anger from employees (Chen & Spector, 1991; Yang & Diefendorff, 2009). We argue performance pressure functions similarly. Consistent with appraisal theories of emotion, we theorize that performance pressure will elicit anger, thereby alerting employees of the threat and potential for harm and directing them to cope with the situation in an approach-oriented manner.

Hypothesis 1. Performance pressure will be positively related to anger.

From an evolutionary perspective, the purpose of anger is to enhance an individual's motivation to alleviate or remove perceived threats (Tracy, 2014). Anger directs psychological action (e.g., attention, motivation, behavioral intention) by fueling self-protection (Cottrell & Neuberg, 2005). Internal states become active, spurring the person into action and safeguarding the person from the threat (Cottrell & Neuberg, 2005). The natural behavioral tendency of anger is to aggressively protect the self in ways that maximize self-interests and shield the person from harm, even if doing so involves attacking others (Berkowitz & Harmon-Jones, 2004). In that vein, Loewenstein (2000) argued that the experience of anger is visceral, causing angered individuals to underestimate the impact of their behavior on others while still trying to maximize benefits for themselves.

Anger is the only self-protective emotion associated with active behavior to address perceived threats (Berkowitz & Harmon-Jones, 2004; Johnson & Glasford, 2014). Anger motivates a need to overcome obstacles and reverse inadequacies of the current situation (Carver, 2004; Carver & Harmon-Jones, 2009). As Carver (2004) concluded, anger sets in motion an aggressive orientation toward problem resolution. Consistent with these arguments, Harmon-Jones and colleagues (Harmon-Jones & Allen, 1998; Harmon-Jones & Sigelman, 2001) demonstrated that anger is related to the left anterior region of the brain, which is consumed by appetitive and aggressive motivation. Further, anger triggers an aggressive state toward self-

protection, facilitated by neural systems and hormones (Harmon-Jones & Sigelman, 2001). The self-protective state of anger overwhelms a consideration of others and heightens impetuosity toward self-gains (Berkowitz & Harmon-Jones, 2004; Gaspar & Schweitzer, 2013; Wang & Murnighan, 2011). For instance, research has shown that angered individuals are more likely to advance their self-interests by exploiting others (Welp, Spörrle, Grichnik, Michle, & Audretsch, 2012) and deceiving others to enhance their own outcomes (Schweitzer & Gibson, 2008).

We theorize that performance pressure creates an angered state of self-protection that is likely to manifest in cheating behavior. Cheating behavior seeks to enhance the person's interests, even at the expense of others. The potential threat from increased performance demands in the face of significant consequences elicits anger. The self-protective nature of anger should motivate employees to reduce the potential for negative consequences that is made salient by performance pressure. The motivation and orientation of anger should, therefore, motivate employees to cheat to address performance demands.

Hypothesis 2. Performance pressure will be positively and indirectly related to cheating behavior through anger.

Overview of the Present Research

We conducted three studies to test our predictions. Before testing our predictions, it was first necessary to create a measure of cheating behavior. The purpose of Study 1 was to develop a measure of cheating behavior. We first approached the study using an inductive, grounded theory approach (Glaser & Strauss, 1967) and content validation to develop items for the measure. We then used three separate samples to provide tests of convergent and discriminant validity. Study 2 provided a direct test of our predictions with a three-wave field study. Lastly, Study 3 provided a replication and extension of the findings in Study 2 with a three-wave field study.

Study 1: The Development of a Cheating Behavior Measure

We followed measurement development procedures recommended by Edwards (2003) and Hinkin (1998) to generate items for our cheating measure. Items were based on qualitative

data collected via a Gallup poll, and then separate field samples provided validity evidence of the workplace cheating behavior measure. Each step is described below.

Item Development

To enhance the generalizability of our measure to varied work settings and jobs, we collected data on critical incidents of workplace cheating from a Gallup poll of working adults. Gallup collects poll data from a randomly-selected nationwide sample of individuals. Respondents were asked to list examples of cheating behavior, defined as “*Behavior intended to create an unfair advantage (or generate rewards or benefits to which an individual would not otherwise be entitled) for the person engaging in the behavior.*” Of the 1,234 individuals polled by Gallup, 538 participants (a response rate of 43.6%) provided one to two examples or critical incidents of cheating behaviors. Respondents worked in diverse industries (e.g., accounting, education, engineering, finance, healthcare, information technology) and, on average, were 49.46 years old ($SD = 9.83$) and had worked in their organization for 11.59 years ($SD = 8.90$); 47.8% were managers and 53.5% were female.

Responses were coded using an iterative process, in which responses were assigned to relatively narrow themes (Glaser & Strauss, 1967). These themes were then compared to each other to identify overlap and commonalities. Coding revealed three primary types of behaviors represented in the examples provided by participants: (1) behavior where the actor misrepresents his/her own behavior to create an advantage (an unexplored construct, which we identified as “cheating behavior”), (2) behaviors where the actor undermines and sabotages others at work to create an advantage (a construct similar to social undermining; cf. Duffy, Ganster, & Pagon, 2002), and (3) behaviors that are harmful to the organization but where the intention of self-gain is unclear or absent (a construct similar to workplace deviance; cf. Robinson & Bennett, 1995). Fifty-five percent of the examples represented the first category of behavior (cheating behavior). Some examples from the critical incidents are: “Falsify statistics to look more productive,” “Inflate production numbers,” “Falsify time sheets,” “Made up an excuse for not completing work to avoid getting in trouble with the supervisor,” and “Listing more time on a project to look

productive to the supervisor.” About 31% of the examples fit into the second category of behavior (undermining for self-gain). Some examples are: “Took credit for work someone else did,” “Stole a coworker’s idea,” “Put another employee down to gain favor with management,” “Did not relay required information to a coworker to take them out of competition,” and “Lied about a coworker to the supervisor to make the employee look better in the eyes of the supervisor.” The remaining examples reflected the third category of behavior (general acts of deviance). Some examples were: “Surfing the web while at work,” “Talking on the phone all day,” “Taking company property,” “Used company credit cards for personal shopping,” “Excessive doing personal business,” and “Did a sloppy job.” Given that the second and third categories of behavior overlapped with existing constructs, such as social undermining (Duffy et al., 2002) and deviance (Robinson & Bennett, 1995), we focused on the first category of behavior as workplace cheating behavior.

Next, we generated items for a cheating behavior measure. The items were developed to represent general acts of cheating behavior that may be engaged in within different organizations and across various jobs in which the actor misrepresents his/her own behavior to create an advantage. Seven items were generated. Those items are shown in Table 1 along with factor loadings from three separate samples in which confirmatory factor analyses (CFA) were conducted and validity evidence was provided. To assess the content validity of our items, four experts rated the items based on whether each item accurately reflected the workplace cheating definition. The intraclass correlation coefficient (ICC) demonstrated high rater agreement for the cheating measures in terms of the item match to the definition of cheating ($ICC[2] = .96$).

Tests of Factor Structure and Convergent and Discriminant Validity

Next, we examined the factor structure and convergent and discriminant validity of our cheating behavior measure with three samples (Edwards, 2003; Hinkin, 1998). For all CFA model comparison results, data are available from the first author.

Sample 1. We used Sample 1 to provide construct validity evidence for our cheating behavior measure. For convergent validity evidence, we compared our measure to other forms of

negative work behaviors. For discriminant validity evidence, we compared our measure to positive affect and positive work behaviors. Data were collected from a sample of 268 working adults (a 53.6% response rate) from StudyResponse.com. Respondents worked in diverse industries (e.g., health-care, finance, consulting, education, information technology), and, on average, were 40.63 years old ($SD = 11.42$) and had worked in their organization for 6.93 years ($SD = 7.67$); 37.9% were managers and 50.2% were female.

As evidence of convergent validity, we expected cheating behavior to be positively related to other types of negative work behaviors. Because cheating behavior represents a form of negative work behavior, we believed it would be positively correlated with yet distinct from several different forms of dysfunctional interpersonal behavior constructs: interpersonal conflict (negative interactions among coworkers, ranging from disagreements to interpersonal assaults; with Spector's [1987] 4-item measure), intimidation impression management (attempts to appear hostile and powerful to others; with Bolino & Turnley's [1999] 5-item measure), and neglect (behaviors demonstrating reduced interest and effort at work; with Rusbult, Farrell, Rogers, & Mainous's [1988] 6-item measure). We predicted that cheating behavior would be related to but different from these negative interpersonal behaviors; although none of these are conceptualized as unethical behavior, they are costly to organizations. We also provide evidence of discriminant validity from constructs in which our cheating behavior measure should either not be correlated with or be negatively correlated with, such as positive affect and positive work behaviors. We, therefore, examined the distinctiveness of our measure from positive affect (the general tendency to be positive; with Watson, Clark, and Tellegen's [1988] 10-item measure), creative behavior (behaviors that produce something useful and novel to organizations; with J. Zhou & George's [2001] 4-item measure), voice (speaking up proactively; with Van Dyne & LePine's [1998] 6-item measure), and organizational citizenship behavior (extra role behaviors that benefit organizations; OCB; with Moorman & Blakely's [1995] 5-item loyal boosterism measure). The behaviors were rated on a 5-point scale (1 = *Never*, 5 = *Always*) and positive affect was rated in terms of the extent each feeling was experienced over the last six months on a 5-point scale (1 =

Very slightly or not at all, 5 = A lot). Descriptive statistics and coefficient alphas for all measures are shown in Table 2.

The results provide support for the convergent and discriminant validity of the cheating behavior measure to the other measures (see Table 2). Cheating behavior was positively related with the convergent validity constructs (r with interpersonal conflict = .24, $p < .01$; impression management = .32, $p < .01$; neglect = .62, $p < .01$) and negatively, if at all, to the discriminant validity constructs (r with positive affect = -.12, *ns*; creativity = -.04, *ns*; voice = -.10, *ns*; OCB = -.10, *ns*). CFAs provided discriminant validity evidence for the cheating behavior measure. The 8-factor model (which included cheating behavior, interpersonal conflict, intimidation, impression management, neglect, positive affect, creativity, voice, and citizenship behavior) fit the data well ($\chi^2 [1006] = 1966.59$, $p < .001$; CFI = .96; RMSEA = .06; SRMR = .06); alternative model tests demonstrated our 8-factor measurement model fit the data better than seven alternative 7-factor models, where we separately constrained the cheating behavior items to load with items of one of the seven other measures.

Sample 2. With Sample 2, we sought to distinguish cheating behavior from other forms of dysfunctional, self-interested, and unethical work behaviors. We expected cheating behavior to be positively related to yet distinct from antisocial work behavior (behavior that is harmful to organizations and its members; Robinson & O'Leary-Kelly, 1998), social undermining (behavior intended to hinder others' interpersonal relationships, work-related success, and reputation; Duffy, Ganster, Shaw, Johnson, & Pagon, 2006), self-promotional behavior (impression management behavior in which the person attempts to raise positive impressions of him/herself to others; Wayne & Ferris, 1990), and unethical pro-organizational behavior (UPB; unethical behavior intended to benefit the organization; Umphress, Bingham, & Mitchell, 2010). We argue that cheating should be distinct from the general types of destructive work behaviors (i.e., antisocial behavior, social undermining) as, although each of these behaviors are conceptualized as harmful, cheating has the specific aim of enhancing self-interests in an unethical manner. We argue that cheating differs from self-promotional behavior because cheating represents unethical

behavior, whereas self-promotion is not conceptualized as illegal or morally questionable behavior. Lastly, cheating should be distinguishable from UPB because cheating (unlike UPB) is conducted primarily for self-serving reasons and not to benefit the organization; cheating is illusionary performance, which does not benefit the organization.

A total of 320 full-time employees were recruited through Amazon's Mechanical Turk (MTurk), an online crowdsourcing panel. On average, respondents were 32.41 years old ($SD = 9.11$) and had worked in their organizations for 5.17 years ($SD = 4.76$); 35.6% were managers and 39.4% were female. We used Robinson and O'Leary-Kelly's (1998) 8-item antisocial work behavior measure, Duffy et al.'s (2006) 7-item social undermining measure, Wayne and Ferris's (1990) 12-item self-promotional behavior measure, and Umphress et al.'s (2010) 6-item UPB measure. The behaviors were rated on a 5-point scale (1 = *Never*, 5 = *Always*). Descriptive statistics and coefficient alphas for all measures are shown in Table 3.

The results provided support for convergent and discriminant validity of our cheating behavior measure (see Table 3). Cheating behavior significantly and positively related to antisocial behavior ($r = .45, p < .01$), social undermining ($r = .36, p < .01$), self-promotional behavior ($r = .50, p < .01$), and unethical pro-organizational behavior ($r = .35, p < .01$). CFAs demonstrated cheating behavior was distinct from the other variables. The 5-factor model (which included cheating behavior, antisocial work behavior, social undermining, self-promotional behavior, and unethical pro-organizational behavior) fit the data well ($\chi^2 [730] = 1936.00, p < .001$; CFI = .95; RMSEA = .08; SRMR = .07) and better than four alternative 4-factor models, where the cheating behavior items were constrained to load with items from the other measures.

Sample 3. With Sample 3, we sought to demonstrate the distinctiveness of our cheating behavior measure from other forms of self-serving behaviors, specifically impression management behavior (or "efforts by an actor to create, maintain, protect, or otherwise alter an image held by a target audience"; Bolino, Kacmar, Turnley, & Gilstrap, 2008, p. 1080) and political behaviors (or "social influence attempts directed at those who can provide rewards that will help promote or protect the self-interests of the actor"; Kacmar & Carlson, 1997, p. 629).

We argue that, although cheating behavior and these other behaviors have self-serving goals, cheating behavior differs because it is illegal and/or is considered morally inappropriate by larger society (it is unethical; Jones, 1991). Impression management and political behavior have not been conceptualized as unethical behavior in the literature, but simply as self-serving.

A total of 275 working business undergraduates from a large southeastern university were recruited for this study in exchange for class credit. Eligible participants needed to be at least 18 years old and work in an organization with coworkers. On average, respondents were 20.76 years old ($SD = 1.38$); 47.3% were female. We assessed impression management behaviors with Bolino and Turnley's (1999) 22-item measure using a 5-point scale (1 = *Never*, 5 = *Always*). This impression management measure includes 5 subscales: self-promotion, ingratiation, intimidation, exemplification, and supplication. We assessed POP with Kacmar and Carlson's (1997) 15-item measure using a 5-point scale (1 = *Strongly disagree*, 5 = *Strongly agree*). Descriptive statistics and coefficient alphas for all measures are shown in Table 4.

The results provided convergent and discriminant validity evidence for our measure (see Table 4). Cheating behavior was significantly and positively related to self-promotion ($r = .15, p < .05$), intimidation ($r = .27, p < .01$), exemplification ($r = .15, p < .05$), supplication ($r = .45, p < .01$), and POP ($r = .28, p < .01$). Cheating behavior was not related to ingratiation ($r = .05, ns$). CFAs showed cheating behavior was distinct from the other variables. The 7-factor model (which included cheating behavior, all five impression management subscales, and POP) fit the data well ($\chi^2 [881] = 1959.77, p < .001$; CFI = .93; RMSEA = .07; SRMR = .08) and better than six alternative 6-factor models, where we separately constrained the cheating behavior items to load with the items of the five impression management subscales and the POP measure.

Discussion

Across a set of three separate samples, we provided construct validity evidence for our measure of cheating behavior. The results across these samples demonstrate that cheating behavior is distinct from a variety of negative work behaviors (e.g., conflict, neglect, anti-social

behavior, undermining, unethical behavior, impression management). Thus, we moved forward with testing our predictions in Studies 2 and 3 with our new measure.

Study 2: Testing the Self-Protective Model of Workplace Cheating Behavior

Sample and Procedure

Participants were recruited for a three-wave field study from a subject pool recruited through online classified advertisements in 24 metropolitan areas across the US. We sent 1913 individuals an email that included the study requirements and a link to the first survey. Our email specified that eligible participants be at least 18 years old, work in an environment with coworkers, and work full-time. Five hundred and seventy-three people completed the Time 1 survey. One month later, the Time 2 survey was emailed; 441 participants completed the survey (a yield of 77%). One month later, the Time 3 survey was emailed; 417 participants completed the survey (a yield of 95%). Participants were mailed \$5 in cash for each survey that was completed (a total of \$15 for completing all surveys). Participants were employed in a variety of industries (e.g., education, finance, healthcare, insurance, manufacturing, retail service). On average, their age was 37.02 years ($SD = 10.96$) and they had worked in their organization for 5.91 years ($SD = 5.92$); 43% were in managerial positions and 59% were female.

The Time 1 survey included measures of performance pressure and demographics. The Time 2 survey included a measure of anger. The Time 3 survey included the measure of cheating behavior. Podsakoff, MacKenzie, Lee, and Podsakoff (2003) suggested that survey time lags should be long enough to avoid common method variance (CMV) reflected in consistency motifs and demand characteristics but short enough to avoid erosion effects. Each survey was separated in time by one month. Research has shown that a 1-month time lag significantly reduces CMV-related inflation (Ostroff, Kinicki, & Clark, 2002). A 1-month time lag has also been found to capture significant predicted effects and avoid erosion effects (Rindfleisch, Malter, Ganesan, & Moorman, 2008). Further, a 1-month time lag is consistent with published work examining the influence of perceptions on behavior (e.g., Christoforou & Ashforth, 2015).

Measures

Performance pressure. We developed a measure of performance pressure for this study, following measurement development procedures recommended by Edwards (2003) and Hinkin (1998). First, four items were developed based on the definition of performance pressure (e.g., “I feel tremendous pressure to produce results”; see Appendix Table 1 for a list of all the items). Second, data were collected from a separate sample of working adults to conduct an exploratory factor analysis (EFA), which revealed the items loaded on one factor. Third, data from two samples of working adults provided evidence of the measure’s convergent and discriminant validity. The Appendix includes a description of the validation process and tables presenting validity evidence (Appendix Tables 2 and 3). Given this evidence, we assessed performance pressure with our newly developed 4-item measure. Participants rated their agreement on a 5-point scale (1 = *Strongly disagree*, 5 = *Strongly agree*; $\alpha = .85$).

Anger. We assessed anger with two adjectives (“angry” and “hostile”) from the Positive and Negative Affect Schedule (Watson & Clark, 1994). Participants rated the extent to which they experienced these emotions when thinking about what was being asked of them at work (e.g., “performance levels you’re asked to reach”) on a 5-point scale (1 = *Very slightly or not at all*, 5 = *Extremely*; $\alpha = .91$).

Cheating behavior. With the measure developed in Study 1, participants rated the extent to which they engaged in the behaviors on a 5-point scale (1 = *Never*, 5 = *Always*; $\alpha = .91$).

Control variables. Research has shown that moral identity influences work environment perceptions and unethical behaviors (see Jennings, Mitchell, & Hannah, 2015). Consequently, we controlled for moral identity in the analyses with Aquino and Reed’s (2002) 5-item measure. Participants were asked to respond to statements about whether the listed characteristics (e.g., “caring,” “compassionate,” “kind”) were self-descriptive on a 5-point scale (1 = *Strongly disagree*, 5 = *Strongly agree*). We also investigated controlling for several other variables that might affect our hypothesized relationships (see Kish-Gephart, Harrison, & Treviño, 2010), including age, gender, and organizational tenure. Because these demographic variables did not

affect our hypothesized relationships, we followed suggested procedures and did not include them in our final analyses (T. Becker, 2005; Carlson & Wu, 2012).

Results

Descriptive statistics and correlations. Table 5 reports the descriptive statistics and zero-order correlations among the study variables. Coefficient alphas are reproduced on the diagonal in parentheses.

Measurement model testing. We conducted a CFA using Mplus 7.3 (Muthén & Muthén, 2010). All factors were modeled using item-level indicators. This model provided a good fit to the data: $\chi^2(129) = 289.21, p < .001$; CFI = .96; SRMR = .04; RMSEA = .06.

Hypotheses testing. We tested our hypothesized model with structural equation modeling (SEM) using Mplus 7.3. The latent factors for performance pressure, anger, and cheating behavior were modeled with item-level indicators. In addition to the hypothesized paths, we included a direct effect from performance pressure to cheating behavior, as it was needed to test mediation (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Even when those paths are not hypothesized nor significant, including them is needed to prevent spuriously inflating the indirect effects (Preacher & Hayes, 2008). This model demonstrated good fit to the data: $\chi^2(129) = 289.21, p < .01$; CFI = .96; SRMR = .04; RMSEA = .06. The path coefficients, standard errors, and R^2 values (where available) are shown in Figure 1. Supplementary analyses showed that our pattern of results was similar if moral identity was removed from the model.

Hypothesis 1 predicted that performance pressure would be positively related to anger. Hypothesis 2 predicted that performance pressure would have a positive indirect effect on cheating behavior through anger. Performance pressure was positively related to anger ($\beta = .22$). Anger had a significant relationship with cheating behavior ($\beta = .34$). We tested the indirect effect prediction using the product of coefficients approach (MacKinnon et al., 2002); mediation is demonstrated by a statistically significant product of the independent variable \rightarrow mediator and mediator \rightarrow outcome path coefficients. Since the product of path coefficients is typically not normally distributed, the significance of indirect effects was tested using a distribution of product

method, which corrects for non-normal product terms (MacKinnon, Lockwood, & Williams, 2004; Meeker & Escobar, 1994). The distribution of product method possesses more power and exhibits more accurate Type I error rates, as compared to traditional product of coefficient approaches such as the Sobel test (MacKinnon, Fritz, Williams, & Lockwood, 2007; MacKinnon et al., 2004; Tofighi & MacKinnon, 2011). Accordingly, we tested our indirect effect hypothesis using the RMediation package within R software (Tofighi & MacKinnon, 2011). Performance pressure had a significant indirect effect on cheating behavior through anger (indirect effect = .07; 95% CI = .04, .12). Thus, Hypotheses 1 and 2 were supported.

Discussion

The results of Study 2 provide support for our self-protective model of workplace cheating behavior. Organizations appear to motivate cheating behavior by pressuring employees to raise performance. Performance pressure is a threatening experience because it requires employees to raise performance or face negative consequences. The threat of performance pressure elicits anger—a “hot,” self-protective emotion—which, in turn, motivates employees to cheat to address performance demands. The results of Study 2 suggest that anger stemming from performance pressure creates a focus on self-interest that translates into cheating behavior.

Although there are many positive attributes to Study 2 (e.g., diverse sample of working adults, three-wave, time-separated survey design), our model test focuses on affective reactions and does not directly examine cognitions associated with threat and self-interest, such as a cognitive state of self-concern. The theory associated with self-interest and self-protection (Neuberg & Schaller, 2014) suggests that self-concern—the cognitive state of self-interest—may also promote threat-reducing behaviors. Thus, in Study 3, we extend our self-protective model by also considering the mediating effects of self-concern cognitions.

Moreover, although our Study 2 provided a test of our predictions controlling for the general tendency to be ethical (i.e., moral identity), we felt it necessary to also control for trait negativity bias that may influence destructive and unethical behavior. Research has demonstrated that neuroticism—the trait tendency to be anxious, fearful, frustrated, and hostile about one’s

work environment (Costa & McCrae, 1992)—significantly influences reactions to work stressors and general forms of deviant work behavior (see Alarcon, Eschleman, & Bowling, 2009; Berry, Ones, & Sackett, 2007). To provide a more rigorous replication and extension of Study 2, we added neuroticism as a control variable in the Study 3 model. Additionally, a limitation of Study 2 was our use of a 2-item measure of anger. Study 3 provided an opportunity for us to utilize a measure with more items, thus providing further evidence for our proposals.

Study 3: An Extension and Replication of the Self-Protective Model of Workplace Cheating Behavior

Traditionally, scholars have suggested that self-interest unfolds through a cognitive process (Deutsch, 1982; Homans, 1961). Individuals assess the environment to see how to maximize benefits and minimize costs. These self-interested calculations trigger a need for self-protection if cues in the environment suggest the perceiver may be harmed. When presented with threatening situations, individuals' concern for the self become heightened. Subsequently, these self-concern cognitions direct energies toward protecting and advancing the person's self-interests (Neuberg & Schaller, 2014). In that respect, "self-protection should place the cognitive system on alert," which translates into a self-concern "mindedness" (D. Becker et al., 2011, p. 2).

Performance pressure can instigate a cognitive state of self-concern. Employees who experience performance pressure believe there is a need to raise performance efforts and that punishments are probable if performance demands are not met. Part of this calculus considers current capabilities. A sense of pressure suggests that the person needs to raise or change capabilities to meet performance targets and avoid punishments. The aversion to harm naturally heightens self-interest and a focus on self-concern (De Dreu & McCusker, 1997; Sattler & Kerr, 1991). Hence, employees likely have a concentrated focus on what is good for them. This cognitive state of self-concern occurs to alert employees to the potential threat posed by performance pressure, thereby directing awareness, thoughts, and concerns to self-interests.

Hypothesis 3. Performance pressure will be positively related to self-concern.

A cognitive state of self-concern from performance pressure should steer employees toward behavior that maximizes benefits and minimizes harm (Deutsch, 1982; Homans, 1961). Employees with heightened self-concern have a tunneled, self-interested focus. Self-concerned employees will have little impulse control to consider others in their quest to maximize gains; they become oriented to take advantage of any opportunity that can produce benefits (Nagin, Rebitzer, Sanders, & Taylor, 2002). Consequently, self-concerned employees may engage in concerted self-interested efforts, even if those actions harm others. For instance, research has found that self-concerned individuals believe it is rational and smart to take advantage of situations that benefit themselves at the expense of others (Nagin et al., 2002). Further, research has found that situations in which there is a potential for harm heightens individuals' self-concern, which blunts their consideration for others (Van Lange & Kuhlman, 1994).

Aside from a general orientation to engage in self-serving behavior, a cognitive state of self-concern motivates unethical actions (Van Lange & Kuhlman, 1994). Driven by self-concern, individuals view unethical behavior as a rational means to enhance benefits and avoid losses. When faced with situations in which there is a probability for negative consequences (e.g., losing a game, being excluded socially), self-concerned individuals resort to unethical behavior to help them prevent the harm and demonstrate their value (Folmer & De Cremer, 2012; Van Dijk, De Cremer, & Handgraaf, 2004). Ultimately, they believe unethical acts are a necessary, strategic, and justified means to maximize interests and avoid losses.

We propose that a cognitive state of self-concern from performance pressure should motivate employees to cheat. The threat of performance pressure should direct attention to self-interest—reflected in a cognitive state of self-concern. These self-concerned employees would have a singular focus on enhancing their performance to obtain gains and avoid harmful outcomes for not addressing the performance demands. Self-concerned employees would, therefore, be willing to engage in unethical behavior – even if those actions harm others. Consistent with these arguments, theory and research has shown that self-concern can create a rationalization of unethical behavior, heightening beliefs that unethical behavior is an appropriate

way to avoid losses (Folmer & De Cremer, 2012; Van Dijk et al., 2004). For example, Folmer and De Cremer (2012) found that self-concerned individuals were likely to misrepresent their performance to avoid being taken advantage of by others. We, therefore, propose employees who are self-concerned as a result of performance pressure will engage in cheating behavior.

Hypothesis 4. Performance pressure will be positively and indirectly related to cheating behavior through self-concern.

Study 3 Method

Sample and Procedure

Participants were recruited for a three-wave field study from professional MBA and undergraduate courses at a southeastern university in the United States. To be eligible to participate in the study, participants had to be at least 18 years old, work in an environment with coworkers, and work full-time. Students received course credit if they met the eligibility requirements and participated in the study, or if they found a person who met the eligibility requirements to participate in the study. A total of 338 working adults registered for the study and completed the Time 1 survey. A total of 307 participants completed the Time 2 survey, and 304 participants completed the Time 3 survey. After listwise deletion of cases with missing data across the surveys, we had a sample size of 300 participants (an overall response rate of 88.8%) who, on average, were 34.80 years ($SD = 10.05$) of age and had worked in their organization for 5.45 years ($SD = 5.85$); 42% were in management positions and 51% were female.

The Time 1 survey contained the measures of performance pressure, our control variables (moral identity and neuroticism), and demographics. A month after the completion of the Time 1 survey, participants were emailed the Time 2 survey, which included the measures of anger and self-concern cognitions. Participants who completed the Time 2 survey were sent the Time 3 survey a month later. The Time 3 survey contained the measure of cheating behavior.

Measures

Performance pressure. We assessed performance pressure using the same measure from Study 1 ($\alpha = .85$).

Anger. To provide additional evidence for the stability of our results, we assessed anger using a different measure than in Study 2: Fredrickson, Tugade, Waugh, and Larkin's (2003) 3-item measure ("angry," "irritated," and "annoyed"). Participants rated the extent to which they experienced these emotions when thinking about what was being asked of them at work (e.g., "performance levels you're asked to reach") on a 5-point scale (1 = *Very slightly or not at all*, 5 = *Extremely*; $\alpha = .88$). Supplementary analyses show that the pattern of results is the same when using the anger measure from Study 2.

Self-concern. We assessed self-concern cognitions using a four-item measure adapted from De Dreu & Nauta's (2009) self-concern measure. The instructions indicated that the listed statements describe how you might have felt "about what is being asked of you at work (e.g., performance levels you're asked to reach)." Participants were then asked to respond to the listed statements, thinking about how they felt since they took the previous survey. The items were: "I am concerned about my own needs and interests," "I am concerned with protecting myself at work," "I am preoccupied with enhancing benefits for myself at work," and "I am concentrated on doing things at work that maximize my interests." Items were rated on a 5-point scale (1 = *Strongly disagree*, 5 = *Strongly agree*; $\alpha = .78$).

Cheating behavior. Cheating behavior was assessed using the measure from Study 1 and Study 2 ($\alpha = .85$).

Control variables. Research has demonstrated that neuroticism is a strong correlate to deviant behavior, such as cheating behavior (Berry et al., 2007). To provide additional evidence that our hypothesized relationships were not driven by individual differences, we included neuroticism as a control variable. We used the measure from the Mini-IPIP (Donnellan, Oswald, Baird, and Lucas (2006), supplemented with two items from the IPIP. Sample items from the six-item measure are "I get upset easily," "I am relaxed most of the time (R)," and "I have frequent mood swings" ($\alpha = .75$). As in Study 2, we also included moral identity as a control ($\alpha = .69$).

Mirroring Study 2, we investigated controlling for demographics that might affect our hypothesized relationships (i.e., age, gender, and organizational tenure). Those controls did not

affect our hypothesized relationships and were omitted from our final analyses (T. Becker, 2005; Carlson & Wu, 2012). We also ran supplemental analyses with core self-evaluations (CSE) and conscientiousness—variables shown to moderate the effects of bottom-line mentality (a focus on financial performance for the organization) on social undermining (Greenbaum, Mawritz, & Eissa, 2012)—as controls alongside neuroticism and moral identity. Controlling for the direct and interactive effects of CSE and conscientiousness had no effect on our hypothesized relationships; and those interactions were not significant. Following suggested procedures, we did not include them in our final analyses (T. Becker, 2005; Carlson & Wu, 2012).

Results

Descriptive statistics and correlations. Table 6 reports the descriptive statistics and zero-order correlations among the study variables. Coefficient alphas are reproduced on the diagonal in parentheses.

Measurement model testing. We confirmed the factor structure of our model using Mplus 7.3. All factors were modeled with item-level indicators. The six-factor structure provided an adequate fit to the data: $\chi^2(362) = 563.66, p < .001$; CFI = .94; SRMR = .04; RMSEA = .05.

Hypotheses testing. Like in Study 2, our SEM utilized item-level indicators for all latent factors. We again included a direct effect from performance pressure to cheating behavior. Following suggested procedures, we allowed our two mediators—anger and self-concern—to covary. Artificially constraining that covariance to zero can result in model misspecification and introduce substantial bias in the standard errors and indirect effects (Preacher & Hayes, 2008). Our model provided an adequate fit to the data: $\chi^2(573) = 991.00, p < .001$; CFI = .90; SRMR = .06; RMSEA = .05. Path coefficients, standard errors, and R^2 values (where available) are shown in Figure 2. Supplementary analyses showed that the tests of our hypotheses were unchanged when the control variables—neuroticism and moral identity—were removed from the model.

Hypothesis 1 predicted that performance pressure would positively influence anger, and Hypothesis 2 predicted that performance pressure would positively and indirectly influence cheating behavior, through anger. Performance pressure was significantly and positively related

to anger ($\beta = .18$). Anger was significantly and positively related to cheating behavior ($\beta = .23$). Following Study 2, we analyzed the indirect effects with RMediation. The indirect effect from performance pressure to cheating behavior through anger was significant and positive (indirect effect = .04; 95% CI = .01, .09). Replicating Study 2, the results support Hypotheses 1 and 2.

Hypothesis 3 predicted that performance pressure would positively influence self-concern, and Hypothesis 4 predicted that performance pressure would positively and indirectly influence cheating behavior, through self-concern. Performance pressure was significantly and positively related to self-concern ($\beta = .22$). Self-concern was significantly and positively related to cheating behavior ($\beta = .18$). The indirect effect of performance pressure on cheating behavior through self-concern was significant and positive (indirect effect = .04; 95% CI = .01, .09). Thus, Hypotheses 3 and 4 were supported.

Discussion

The results of Study 3 replicate and extend the findings from Study 2 by demonstrating that cheating behavior can be driven by a sense of self-protection that stems from performance pressure. Anger and self-concern become heightened by the threat of performance pressure, thereby focusing efforts toward self-preservation. Anger creates an orientation to reduce the threat of performance pressure, motivating employees to cheat. A cognitive state of self-concern creates a calculus toward self-interest, orienting employees to maximize benefits and minimize threats by cheating. Cheating behavior seemingly offers angered and self-concerned employees a way to signal raised efforts, even though these actions are false representations of their performance.

General Discussion

The prevalence of cheating behavior within organizations has drawn attention to employees' motives to advance their self-interests through unethical means (Callahan, 2004). We have argued that it is important to investigate how organizations might intensify employees' self-interest in ways that would explain cheating behavior. Our investigation demonstrated that organizations create a context ripe for cheating behavior when employees feel pressured to raise

performance. Performance pressure signals to employees that performance demands are high and that not meeting those demands would likely yield negative consequences. Performance pressure, therefore, presents a threat to employees that elicits a need for self-protection. We demonstrated that performance pressure evoked anger and self-concern, which drove employees to protect their self-interests and address performance demands by cheating. Thus, performance pressure created a need for self-protection that motivated cheating behavior.

Theoretical Implications

Our study has several implications for theory. First, our work explains how organizations may unintentionally motivate cheating behavior. Scholars have pushed researchers to explore factors within organizations that motivate self-interested and unethical behavior (Moore & Gino, 2013; Treviño et al., 2014). We theorized that cheating behavior occurs if organizations heighten employees' need to protect their self-interests, which organizations do when they pressure employees to raise performance. Prior research has explored the nature of high performance goals on employees' unethical behavior (e.g., Schweitzer et al., 2004; Welsh & Ordóñez, 2014). This line of inquiry has shown that high performance goals compared to "do your best" goals motivated subjects in experiments to overstate their productivity (Schweitzer et al., 2004; Welsh & Ordóñez, 2014) because subjects found high performance demands daunting (Welsh & Ordóñez, 2014). We extend this line of inquiry, further unpacking the reasons why performance demands motivate unethical behavior. We argue that the demand for high performance goals sets in motion a self-protective orientation toward addressing performance concerns. Performance pressure represents an experience that is more than the demand for high performance—it is the subjective experience that employees are required to raise efforts toward high performance and that those efforts are linked to substantial consequences. The pressure is not only daunting, it is threatening because it makes salient the tenuous nature of employees' work standing. Thus, performance pressure elicits the need for self-protection, which is internalized through anger and concentrated in a cognitive state of self-concern. Threatened by the need to raise performance and avoid negative outcomes, employees cheat for self-preservation.

Our work highlighted two self-protective processes that explain why performance pressure influences cheating behavior. Performance pressure elicited “hot” and “cold” self-protective processes. As a “hot” reaction, employees experienced anger, which represented an active, emotional state to reduce the threat. As a “cold” reaction, employees experienced a cognitive state of self-concern, which created a tunneled focus on maximizing self-gains and minimizing harms. The anger and self-concern stemming from performance pressure motivated employees to reduce the threat by cheating. Cheating behavior allowed angered and self-concerned employees to signal that they had increased performance efforts, even though employees may not have legitimately increased their performance.

Further, research within the behavioral ethics literature has provided evidence for the benefits of emotions when considering unethical behavior (e.g., Zhong, 2011). Some emotions (e.g., disgust, guilt) have been found to offset self-interested ideals and reorient individuals toward the ethical implications of their behavior. Our research, however, suggests that not all emotional reactions are so ethically promotive; certain emotional states—such as anger—do not assist individuals in understanding the ethical implications of their intended behavior. Instead, emotions such as anger heighten self-interested tendencies, specifically the need for self-protection. Unlike prior work that has explored the nature of other-focused emotions that elicit ethical motives (e.g., disgust, guilt), self-protective emotions seem to motivate unethical behaviors aimed at protecting self-interests. Our research suggests that although certain emotions can heighten ethical values, other emotions serve as a signal to protect and enhance self-interests, which can motivate unethical behavior.

Our work also extends the behavioral ethics and workplace deviance literatures by identifying cheating behavior that occurs within organizations. The cheating behavior measure developed in this study will allow researchers to further explore the nature and consequences of cheating within organizations. Our research demonstrates that individuals engage in cheating behavior to advance their self-interests by falsely enhancing their own behavior and dishonestly minimizing their mistakes. Cheating behavior represents a type of destructive work behavior that

is distinct from other prominent deviance constructs (e.g., antisocial behavior, social undermining). Conceptually, cheating behavior represents a distinct form of destructive work behavior in that it focuses on the misrepresentation of employees' own behavior. Empirically, our validity evidence suggests that cheating behavior represents a new, distinct construct. Consequently, we provide a tool for more holistic explorations of cheating within organizations.

Lastly, our work has implications for the literature on performance pressure. Certain work pressures (e.g., time pressure) have been shown to benefit organizations (LePine, Podsakoff, & LePine, 2005). Our work, however, suggests that performance pressure can serve as a threat that motivates dysfunctional work behavior. In this regard, there are two important implications for the literature. First, it is possible that the positive relationship between pressure and performance in prior research has been inflated by misrepresentations of employees' efforts. In those incidents, actual performance may have been accompanied by illusory efforts. Faux "performance" that emerges from performance pressure does not reflect true performance and, instead, may create a financial drain on organizations. Second, our work highlights performance pressure as an influential source of work stress. Stress scholars have focused on other types of demands employees face while at work (e.g., time pressure, workload, responsibility, role ambiguity). Arguably, performance pressure is a distinct work demand. Performance pressure is not a simple assessment of how much time employees have to get their work done (i.e., time pressure). It also is not a simple assessment of work overload—that employees are being asked to take on more responsibility or tasks. Instead, performance pressure is the subjective experience that employees are required to raise performance to avoid undesirable consequences; it is the mix of expectations of high performance with consequences, representing a "combination of factors" that exert urgency to address demands (Baumeister, 1984, p. 610).

Limitations and Future Research Directions

We recognize limitations with our work that provide areas for future research. First, the nature of our study design (i.e., surveys) limits causal inferences. We took efforts to address the issue by collecting data for the predictor, mediators, and dependent variable each a month apart

in Study 2 and Study 3. We also believe the data were appropriately modeled, as our theoretical framework suggests performance pressure influences affective and cognitive processes, which influence workplace cheating. The inferences from our results are also strengthened through our replication and extension of our model in Study 3. Still, causality cannot be conclusively established from our data. Second, some have argued that collecting data from the same source can create the potential for CMV bias. This concern is mitigated by our research designs in Studies 2 and 3, which separated the collection of each wave of variables (i.e., independent variable, mediators, dependent variable) by one month. Research has demonstrated that time separation is as effective as source separation in reducing CMV (Doty & Glick, 1998).

Despite these limitations, our studies provide a foundation for future research. Our results point to performance pressure as a way organizations may unknowingly enhance self-interested tendencies toward self-protection, thereby enhancing employees' cheating. Researchers could consider other contextual cues that might affect employees' focus on the self and their motivation to cheat. For instance, performance pressure is only one type of workplace stressors that might create a self-focus. Researchers have found that certain job demands (e.g., role ambiguity, role conflict) evoke uncertainty (e.g., O'Driscoll & Beehr, 1994), which can elicit self-oriented emotions, such as anger, that may motivate unethical behavior. Further, Markus and Kitayama (1991) found that situational factors on the job, such as independence and autonomy, may heighten individuals' self-concern. It is possible that independent and autonomous employees are overly focused on their self-interests, which may motivate cheating behavior. Examining other aspects of the work environment that may motivate cheating would be useful.

It would also be beneficial for scholars to consider the influence of performance pressure from a multi-level and multi-source perspective. Although our theoretical framework (cf. Baumeister, 1984) inspired us to focus on performance pressure at the individual-level, it may be informative to assess the extent to which performance pressure is an ambient work stressor—a shared perception among employees within workgroups, teams, or organizations. For instance, workgroups with shared perceptions of performance pressure may foster a highly self-interested

and self-protective climate (Victor & Cullen, 1988). If that is the case, it would be useful to examine which factors would combat the tendency for the workgroup to engage in cheating behavior. In a different line of inquiry, exploring a lack of within-group agreement in performance pressure may produce additional insights. Disagreement in perceptions of performance pressure may stem from employees within the workgroup holding differing levels of performance. It may also be external factors (e.g., financial difficulties) or individual differences (e.g., need for achievement, performance goal orientation) prompt some workgroup members to experience greater performance pressure than others. In all, future research examining the multi-level and multi-source nature of performance pressure may reveal valuable explanations on how organizations might minimize the negative consequences of performance pressure to employees and for organizations.

Exploring other situational and climate factors within the work environment that may influence cheating behavior would also be useful. For instance, MacLean's (2001) qualitative study examining why employees break rules in organizations found that the shared belief among employees that "the ends justify the means" influenced rule breaking behavior. MacLean (2001, p. 188) argued that "these shared understandings helped create a climate in which [unethical behavior] was viewed as an acceptable business practice, thus facilitating its spread in the organization." Other scholars have proposed that the larger work environment may foster the normalization of unethical behavior (Ashforth & Anand, 2003). Such an environment might motivate the widespread engagement of cheating behavior.

More importantly, it would be useful to identify ways organizations might combat the self-protective orientation prompted by performance pressure and, subsequently, cheating behavior. For instance, ethical role models may exert a needed influence in reducing cheating (i.e., ethical leadership; Brown & Treviño, 2006) whereas a lack of ethical role models or inconsistent role models may explain why cheating becomes likely (Greenbaum, Quade, & Bonner, 2015). Certainly, a manager who preaches ethicality yet is willing to do whatever it takes to meet performance demands would be less effective in reducing cheating behavior among

employees. In contrast, ethical leaders who “walk their talk” would exert a stronger force in reducing cheating behavior. Finally, theorists have argued that ethical organizational infrastructures and culture (formal and informal mechanisms; e.g., ethics codes, communications, monitoring systems) may foster ethical behavior and minimize unethical behavior (e.g., Tenbrunsel, Smith-Crowe, & Umphress, 2003). It is possible that these structures act as ethical cues that may reduce self-protective needs, making cheating behaviors less likely.

Lastly, future research should consider boundary conditions of performance pressure. Performance pressure may be particularly impactful if employees believe their performance is comparatively weaker than their coworkers’ performance. It is also possible that performance pressure may create a greater threat for certain employees, such as those with an external locus of control, a high level of neuroticism, or those who are unable to quit their jobs. Although we controlled for moral identity and neuroticism, it is possible that different trait and situational moderators enhance or weaken the effects of performance pressure on employees’ reactions. We hope scholars explore other potential drawbacks and benefits of performance pressure.

Managerial Implications

Cheating behavior has the potential to undermine organizations. Employees who cheat create manipulations to make themselves seem more productive and valuable to organizations. This value, however, is illusory. Cheating undercuts and misrepresents employees’ actual performance, and it can also be detrimental to organizations and its members (Goman, 2013; Meyer, 2010). Employees who lie about their work productivity may undermine effective workplace dynamics and coordinated efforts, making it so cheating impairs genuine performance among productive employees. Moreover, cheating behavior may motivate ethical and productive employees to leave the organization. In sum, cheating behavior may damage an organization’s infrastructure, and, in some cases, may lead to the ruin of an organization (e.g., Enron, WorldCom). Organizational decision makers, therefore, need to recognize work factors that heighten self-serving motives that are conducive to cheating behavior so that they can take progressive steps toward reducing cheating behavior.

Our work suggests that performance pressure motivates problematic and unethical behavior. Therefore, decision makers who demand high performance from employees should take caution. Performance pressure may be counterproductive if employees are cheating to address those demands. It may be unrealistic to reduce performance pressure, as organizations and managers continuously try to maintain competitive advantage and raise organizational productivity. Should managers demand high performance, they might carefully consider how performance demands are relayed. For instance, scholars (e.g., Treviño et al., 2014) have argued that to enhance ethical performance (as opposed to cheating behavior), performance expectations should be relayed in a manner that incorporates legal and ethical standards as the baseline for how performance should be attained. Additionally, the infrastructure within which employees navigate their performance should emphasize ethical practices (Tenbrunsel et al., 2003)

Conclusion

Our study demonstrates that cheating behavior occurs as a means to achieve desired ends, and that organizations may be unwitting instigators of this process. In particular, organizations motivate employees to cheat when they pressure employees to raise their performance. Our studies suggest that employees internalize performance pressure as a threat to their well-being. The perceived need to heighten performance in the face of substantial consequences creates a need for self-protection. Self-protection is reflected in the experience of anger and a heightened cognitive state of self-concern. Angered and self-concerned employees feel the need to cheat to protect themselves and address performance demands. Cheating behaviors represent illusory performance—these behaviors do not add true value to organizations. Decision makers should, therefore, take caution in how their approach in raising performance, as employees who experience performance pressure can be motivated to engage in workplace cheating behavior.

References

- Alarcon, G., Eschleman, K. J., & Bowling, N. A. (2009). Relationships between personality variables and burnout. *Work & Stress, 23*, 244–263. doi:/10.1080/02678370903282600
- Aquino, K., & Reed, A. (2002). The self-importance of moral identity. *Journal of Personality and Social Psychology, 83*, 1423–1440. doi: 10.1037/0022-3514.83.6.1423
- Ashford, S. (1986). Feedback-seeking in individual adaptation: A resource perspective. *Academy of Management Journal, 29*, 265–487. doi: 10.2307/256219
- Ashforth, B. E., & Anand, V. (2003). The normalization of corruption in organizations. *Research in Organizational Behavior, 25*, 1–52. doi: 10.1016/S0191-3085(03)25001-2
- Ashforth, B. E., Gioia, D. A., Robinson, S. L., & Treviño, L. T. (2008). Re-reviewing organizational corruption. *Academy of Management Review, 33*, 67–684. doi: 10.5465/AMR.2008.32465714
- Averill, J. R. (1982). *Anger and aggression*. NY: Springer-Verlag.
- Barnes, C. M., Schaubroeck, J., Huth, M., & Ghumman, S. (2011). Lack of sleep and unethical conduct. *Organizational Behavior and Human Decision Processes, 115*, 169–180. doi: 10.1016/j.obhdp.2011.01.009
- Baumeister, R. F. (1984). Choking under pressure. *Journal of Personality and Social Psychology, 46*, 610–620. doi: 10.1037/0022-3514.46.3.610
- Becker, D., Mortensen, C., Ackerman, J., Shapiro, J., Anderson, U., Sasaki, T. ... Kenrick, D. (2011). Signal detection on the battlefield: Priming self-protection vs. revenge-mindedness differentially modulates the detection of enemies and allies. *Plos One, 6*, 1–5. doi: 10.1371/journal.pone.0023929
- Becker, T. (2005). Potential problems in the statistical control of variables in organizational research. *Organizational Research Methods, 8*, 274–289. doi: 10.1177/1094428105278021
- Berkowitz, L. (1962). *Aggression: A social psychological analysis*. NY: McGraw-Hill.
- Berkowitz, L., & Harmon-Jones, E. (2004). Toward an understanding of the determinants of anger. *Emotion, 4*, 107–130. doi: 10.1037/1528-3542.4.2.107
- Bernerth, J. B., Walker, H. J., & Harris, S. G. (2015). Rethinking the benefits and pitfalls of leader-member exchange. *Human Relations, 69*, 661–684. doi: 10.1177/0018726715594214
- Berry, C. M., Ones, D. S., & Sackett, P. R. (2007). Interpersonal deviance, organizational deviance, and their common correlates: A review and meta-analysis. *Journal of Applied Psychology, 92*, 410–424. doi: 10.1037/0021-9010.92.2.410

- Bolino, M. C., Kacmar, K. M., Turnley, W. H., & Gilstrap, J. B. (2008). A multi-level review of impression management motives and behaviors. *Journal of Management, 34*, 1080–1109. doi: 10.1177/0149206308324325
- Bolino, M. C., & Turnley, W. H. (1999). Measuring impression management in organizations. *Organizational Research Methods, 2*, 187–206. doi: 10.1002/job.185
- Brensilber, J. (2016, March 3). Phila. Educators plead guilty to charges for cheating on standardized tests. *The Daily Pennsylvanian*. Retrieved from: <http://www.thedp.com/article/2016/03/philadelphia-teachers-standardized-test-cheating>
- Brown, M. E., & Treviño, L. K. (2006). Ethical leadership: A review and future directions. *Leadership Quarterly, 17*, 595–616. doi: 10.1016/j.leaqua.2006.10.004
- Button, S. B., Mathieu, J. E., & Zajac, D. M. (1996). Goal orientation in organizational research. *Organizational Behavior and Human Decision Processes, 67*, 26–48. doi: 10.1006/obhdp.1996.0063
- Callahan, D. (2004). *The cheating culture*. NY: Harcourt.
- Carlson, K. D., & Wu, J. (2012). The illusion of statistical control: Control variable practice in management research. *Organizational Research Methods, 15*, 413–435. doi: 10.1177/1094428111428817
- Carver, C. S. (2004). Negative affects deriving from the behavioral approach system. *Emotion, 4*, 3–22. doi: 10.1037/a0014494
- Carver, C. S., & Harmon-Jones, E. (2009). Anger is an approach-related affect: Evidence and implications. *Psychological Bulletin, 135*, 183–204. doi: 10.1037/a0013965
- Cavanaugh, M. A., Boswell, W. R., Roehling, M. V., Boudreau, J. W. (2000). An empirical examination of self-reported work stress among U.S. managers. *Journal of Applied Psychology, 85*, 65–74. doi: 10.1037/0021-9010.85.1.65
- Chen, P. Y., & Spector, P. E. (1991). Negative affectivity as the underlying cause of correlations between stressors and strains. *Journal of Applied Psychology, 76*, 398–407. doi: 10.1037/0021-9010.76.3.398
- Christoforou, P. S., & Ashforth, B. E. (2015). Revising the debate on the relationship between display rules and performance. *Journal of Applied Psychology, 100*, 249–261. doi: 10.1037/a0036871
- Costa, P., & McCrae, R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Odessa, FL: Psychological Assessment Resources.

- Cottrell, C. A., & Neuberg, S. L. (2005). Different emotional reactions to different groups. *Journal of Personality and Social Psychology, 88*, 770–789. doi: 10.1037/0022-3514.88.5.770
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review of conceptual and definitional issues. *Journal of Management, 31*, 874–900. doi: 10.1177/0149206305279602
- De Dreu, C. K. W., & McCusker, C. (1997). Gain-loss frames and cooperation in two-person social dilemmas. *Journal of Personality and Social Psychology, 72*, 1093–1106. doi: 10.1037.0022-3514.72.5.1093
- De Dreu, C. K. W., & Nauta, A. (2009). Self-interest and other-orientation in organizational behavior. *Journal of Applied Psychology, 94*, 913–926. doi: 10.1037/a0014494
- Deutsch, M. (1982). Interdependence and psychological orientation. In V. Derlega & J. Gezelak (Eds.), *Cooperation and helping behavior* (pp. 15–42). NY: Cambridge University Press.
- DeZoort, T., Harrison, P., & Taylor, M. (2006). Accountability and auditors' materiality judgments: The effects of differential pressure strength on conservatism, variability, and effort. *Accounting, Organizations and Society, 31*, 373–390. doi: 10.1016/j.aos.2005.09.001
- Donaldson, T., & Dunfee, T. W. (1994). Toward a unified conception of business ethics. *Academy of Management Review, 19*, 252–284. doi: 10.5465/AMR.1994.9410210749
- Donnellan, M. B., Oswald, F. L., Baird, B. M., & Lucas, R. E. The Mini-IPIP scales. *Psychological Assessment, 18*, 192–203. doi: 10.1037/1040-3590.18.2.192
- Doty, D. H., & Glick, W. H. (1998). Common methods bias: Does common methods variance really bias results? *Organizational Research Methods, 1*, 374–406. doi: 10.1177/109442819814002
- Duffy, M. K., Ganster, D. C., & Pagon, M. (2002). Social undermining in the workplace. *Academy of Management Journal, 45*, 331–351. doi: 10.2307/3069350
- Duffy, M. K., Ganster, D. C., Shaw, J. D., Johnson, J. L., & Pagon, M. (2006). The social context of undermining behavior at work. *Organizational Behavior and Human Decision Processes, 101*, 105–126. doi: 10.1016/j.obhdp.2006.04.005
- Edwards, J. (2003). Construct validation in organizational behavior research. In J. Greenberg (Ed.), *Organizational behavior: The state of the science* (pp. 327–371). Mahwah, NJ: Erlbaum.
- Egan, M. (2016, September 9). 5,300 Wells Fargo employees fired over 2 million phony accounts. *CNN Money*. Retrieved from: <http://money.cnn.com/2016/09/08/investing/wells-fargo-created-phony-accounts-bank-fees/index.html?iid=EL>

- Folmer, C. P. R., & De Cremer, D. (2012). Bad for me or bad for us? Interpersonal orientations and the impact of losses on unethical behavior. *Personality and Social Psychology Bulletin, 38*, 760–771. doi: 10.1177/0146167211436252
- Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. R. (2003). What good are positive emotions in crises? *Journal of Personality and Social Psychology, 84*, 365–376. doi: 10.1037/0022-3514.84.2.365
- Frijda, N. H. (1986). *The emotions*. NY: Cambridge University Press.
- Frijda, N. H. (1993). The place of appraisal in emotion. *Cognition and Emotion, 7*, 357–387. doi: 10.1080/02699939308409193
- Gaspar, J. P., & Schweitzer, M. E. (2013). The emotion deception model. *Negotiation and Conflict Management Research, 6*, 160–179. doi: 10.1111/ncmr.12010
- Gino, F., & Mogilner, C. (2014). Time, money, and morality. *Psychological Science, 25*, 414–421. doi: 10.1177/0956797613506438
- Gino, F., & Pierce, L. (2009). The abundance effect: Unethical behavior in the presence of wealth. *Organizational Behavior and Human Decision Processes, 109*, 142–155. doi: 10.1016/j.obhdp.2009.03.003
- Glaser, B., & Strauss, F. (1967). *The discovery of grounded theory*. Chicago: Aldine Publishing.
- Goman, C. K. (2013, June 5). The high cost of workplace deception. *Troy Media*. Retrieved from <http://www.troymedia.com/2013/06/05/the-high-cost-of-workplace-deception/>
- Greenbaum, R. L., Mawritz, M. B., & Eissa, G. (2012). Bottom-line mentality as an antecedent of social undermining and the moderating roles of core self-evaluations and conscientiousness. *Journal of Applied Psychology, 97*, 343–359. doi: 10.1037/a0025217
- Greenbaum, R. L., Quade, M. J., & Bonner, J. (2015). Why do leaders practice amoral management? *Organizational Psychology Review, 5*, 1–24. doi: 10.1177/2041386614533587
- Gutnick, D., Walter, F., Nijstad, B., & De Dreu, C. (2012). Creative performance under pressure: An integrative conceptual framework. *Organizational Psychology Review, 2*, 189–207. doi: 10.1177/2041386612447626
- Harmon-Jones, E., & Allen, J. (1998). Anger and frontal brain activity: EEG asymmetry consistent with approach motivation despite negative affect valence. *Journal of Personality and Social Psychology, 74*, 1310–1316. doi: 10.1037/0022-3514.41.5.1310
- Harmon-Jones, E., & Sigelman, J. (2001). State anger and prefrontal brain activity. *Journal of Personality and Social Psychology, 80*, 797–803. doi: 10.1037/0022-3514.80.5.797

- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, *52*, 1280–1300. doi: 10.1037/0003-066X.52.12.1280
- Hinkin, T. (1998). A brief tutorial on the development of measures for use in survey questionnaires. *Organizational Research Methods*, *1*, 104–121. doi: 10.177/109442819800100106
- Homans, G. (1961). *Social behaviour: Its elementary forms*. London: Routledge & Kegan Paul.
- Jennings, P. L., Mitchell, M. S., & Hannah, S. T. (2015). The moral self: A review and integration of the literature. *Journal of Organizational Behavior*, *36*, S104–S168. doi: 10.1002/job.1919
- Johnson, B. M., & Glasford, D. E. (2014). A threat-emotion profile approach to explaining active versus passive harm in intergroup relations. *Social Psychology*, *45*, 399–407. doi: 10.1027/1864-9335/a000199
- Johnson, W., & Krueger, R. F. (2006). How money buys happiness. *Journal of Personality and Social Psychology*, *90*, 680–691. doi: 10.1037/0022-3514.90.4.680
- Jones, T. (1991). Ethical decision making by individuals in organizations: An issue-contingent model. *Academy of Management Review*, *16*, 366–395. doi: 10.5465/AMR.1991.4278958
- Kacmar, K. M., & Carlson, D. (1997). Further validation of the perceptions of politics scale (POPS). *Journal of Management*, *23*, 627–658. doi: 10.1016/S0149-2063(97)90019-2
- Keltner, D., Ellsworth, P. C., & Edwards, K. (1993). Beyond simple pessimism: Effects of sadness and anger on social perception. *Journal of Personality and Social Psychology*, *64*, 740–752. doi: 10.1037/0022-3514.64.5.740
- Kish-Gephart, J. J., Harrison, D. A., & Treviño, L. K. (2010). Bad apples, bad cases, and bad barrels: Meta-analytic evidence about sources of unethical decisions at work. *Journal of Applied Psychology*, *95*, 1–31. doi: 10.1037/a0017103
- Kouchaki, M., Smith-Crowe, K., Brief, A. P., & Sousa, C. (2013). Seeing green: Mere exposure to money triggers a business decision frame and unethical outcomes. *Organizational Behavior and Human Decision Processes*, *121*, 53–61. doi: 10.1016/j.obhdp.2012.12.002
- Lazarus, R. S. (1991). *Emotion and adaptation*. NY: Oxford University Press.
- Leary, M. R., Twenge, J. M., & Quinlivan, E. (2006). Interpersonal rejection as a determinant of anger and aggression. *Personality and Social Psychology Review*, *10*, 111–132. doi: 10.1207/s15327957pspr1002_2
- LePine, J. A., Podsakoff, N. P., & LePine, M. A. (2005). A meta-analytic test of the challenge stressor-hindrance stressor framework. *Academy of Management Journal*, *48*, 764–775. doi: 10.5464/AMJ.2005.18803921

- Lerner, J. S., & Tiedens, L. Z. (2006). Portrait of the angry decision maker: How appraisal tendencies shape anger's influence on cognition. *Journal of Behavioral Decision Making, 19*, 115–137. doi: 10.1002/bdm.515
- Loewenstein, G. (2000). Emotions in economic theory and economic behavior. *American Economic Review, 90*, 426–432. doi: 10.1257/aer.90.2.426
- MacKinnon, D., Fritz, M., Williams, J., & Lockwood, C. (2007). Distribution of the product confidence limits for the indirect effect: Program PRODCLIN. *Behavioral Research Methods, 39*, 384–389. doi: 10.3758.BF03193007
- MacKinnon, D., Lockwood, C., Hoffman, J., West, S., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods, 7*, 83–104. doi: 10.1037/1082-989X.7.1.83
- MacKinnon, D., Lockwood, C., & Williams, J. (2004). Confidence limits for the indirect effect. *Multivariate Behavioral Research, 39*, 99–128. doi: 10.1207/s15327906mbr3901_4
- MacLean, T. L. (2001). Thick as thieves: A social embeddedness model of rule breaking in organizations. *Business & Society, 40*, 167–196. doi: 10.1177/000765030104000203
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224–253. doi: 10.1037/0033-295X.98.2.224
- McClelland, D. (2005). Achievement motivation theory. In J. Miner (Ed.), *Organizational behavior: Essential theories of motivation and leadership* (pp. 46–60). NY: M. E. Sharpe.
- Meeker, W., & Escobar, L. (1994). An algorithm to compute the CDF of the product of two normal random variables. *Communications in Statistics-Simulation & Computation, 23*, 271–280. doi: 10.1080/03610919408813168
- Meyer, P. (2010). *Liespotting: Proven techniques to detect deception*. NY: St. Martin's Press.
- Moore, C., & Gino, F. (2013). Ethically adrift: How others pull our moral compass from true North, and how we can fix it. *Research in Organizational Behavior, 33*, 53–77. doi: 10.1016/j.riob.2013.08.001
- Moore, D., & Loewenstein, G. (2004). Self-interest, automaticity, and the psychology of conflict of interest. *Social Justice Research, 17*, 189–202. doi: 10.1023/B:SORE.0000027409.88372.b4
- Moorman, R., & Blakely, G. (1995). Individualism-collectivism as an individual difference predictor of organizational citizenship behavior. *Journal of Organizational Behavior, 16*, 127–142. doi: 10.1002/job.4030160204
- Murnighan, J. K., Cantelon, D. A., & Elyashiv, T. (2001). Bounded personal ethics and the tap dance of real estate agency. In J. Wagner, J. Bartunek, & K. Elsbach (Eds.), *Advances in qualitative organizational research* (Vol. 3, pp. 1–40). NY: Elsevier/JAI.

- Muthén, L. K., & Muthén, B. O. (2010). *Mplus 6.11*. Los Angeles, CA: Muthén & Muthén.
- Nagin, D. S., Rebitzer, J. B., Sanders, S., & Taylor, L. J. (2002). Monitoring, motivation, and management: The determinants of opportunistic behavior in a field experiment. *American Economic Review*, *92*, 850–873. doi: 10.1257/00028280260344498
- Neuberg, S., & Schaller, M. (2014). Evolutionary social cognition. In M. Mikulincer & P. Shaver (Eds.), *APA Handbook of Personality and Social Psychology* (pp. 3–45). DC: APA.
- O'Driscoll, M. P., & Beehr, T. A. (1994). Supervisor behaviors, role stressors, and uncertainty as predictors of personal outcomes for subordinates. *Journal of Organizational Behavior*, *15*, 141–155. doi: 10.1002/job.4030150204
- Ostroff, C., Kinicki, A. J., & Clark, M. A. (2002). Substantive and operational issues of response bias across levels of analysis. *Journal of Applied Psychology*, *87*, 355–368. doi: 10.1037/0021-9010.87.2.355
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method bias in behavioral research. *Journal of Applied Psychology*, *88*, 879–903. doi: 10.1037/0021-9010.88.5.879
- Preacher, K., & Hayes, A. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*, 879–891. doi: 10.3758/BRM.40.3.879
- PricewaterhouseCoopers LLP. (2014, February 25). *Global Economic Crime Survey*. Retrieved from <http://www.pwc.com/us/crimsurvey>
- Quigley, B. M., & Tedeschi, J. T. (1996). Mediating effects of blame attributions on feelings of anger. *Personality and Social Psychology Bulletin*, *22*, 1280–1288. doi: 10.1177/01461672962212008
- Reed, A., & Aquino, K. (2003). Moral identity and the expanding circle of moral regard toward out-groups. *Journal of Personality and Social Psychology*, *84*, 1270–1286. doi: 10.1037/0022-3514.84.6.1270
- Reynolds, S. (2006). Moral awareness and ethical predispositions. *Journal of Applied Psychology*, *91*, 233–243. doi: 10.1037/0021-9010.91.1.233
- Rindfleisch, A., Malter, A. J., Ganesan, S., & Moorman, C. (2008). Cross-sectional versus longitudinal survey research: Concepts, findings, and guidelines. *Journal of Marketing Research*, *45*, 261–279. doi: 10.1509/jmkr.45.3.261
- Robinson, S., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of Management Journal*, *38*, 555–572. doi: 10.2307/256693

- Robinson, S., & O'Leary-Kelly, A. (1998). Monkey see, monkey do: The influence of work groups on the antisocial behavior of employees. *Academy of Management Journal*, *41*, 658–672. doi: 10.2309/256963
- Rousseau, D. M. (1997). Organizational behavior in the new organizational era. *Annual Review of Psychology*, *37*, 1141–1166. doi: 10.1146/annurev.psych.48.1.515
- Rusbult, C., Farrell, D., Rogers, G., & Mainous, A. G., III. (1988). Impact of exchange variables on exit, voice, loyalty, and neglect. *Academy of Management Journal*, *31*, 599–627. doi: 10.2307/256461
- Sattler, D. N., & Kerr, N. L. (1991). Might versus morality explored: Motivational and cognitive bases for social motives. *Journal of Personality and Social Psychology*, *60*, 756–765. doi: 10.1037/0022-3514.60.5.756
- Shalley, C. E., & Perry-Smith, J. E. (2001). Effects of social-psychological factors on creative performance. *Organizational Behavior and Human Decision Processes*, *84*, 1–22. doi: 10.1006/obhdp.2000.2918
- Schwartz, B. (1986). *The battle for human nature*. NY: Norton.
- Schweitzer, M. E., & Gibson, D. E. (2008). Fairness, feelings, and ethical decision making. *Journal of Business Ethics*, *77*, 287–301. doi: 10.1007/s10551-007-9350-3
- Schweitzer, M. E., Ordóñez, L., & Douma, B. (2004). Goal setting as a motivator of unethical behavior. *Academy of Management Journal*, *47*, 422–432. doi: 10.2307/20159591
- Shu, L. L., Gino, F., & Bazerman, M. H. (2011). Dishonest deed, clear conscience: When cheating leads to moral disengagement and motivated forgetting. *Personality and Social Psychology Bulletin*, *37*, 330–349. doi: 10.1177/0146167211398138
- Sims, H., Szilagyi, A., & McKemey, D. (1976). Antecedents of work-related expectancies. *Academy of Management Journal*, *19*, 547–559. doi: 10.2307/255790
- Sitkin, S. B., See, K. E., Miller, C. C., Lawless, M. W., & Carton, A. M. (2011). The paradox of stretch goals. *Academy of Management Review*, *36*, 544–566. doi: 10.5465/amr.2008.0038
- Smith, C. A., & Ellsworth, P. C. (1985). Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology*, *48*: 813–838. doi: 10.1037/0022-3514.48.4.813
- Spector, P. E. (1987). Interactive effects of perceived control and job stressors on affective reactions and health outcomes for clerical workers. *Work and Stress*, *1*, 155–162. doi: 10.1080/02678378708258497
- Tenbrunsel, A., & Messick, D. M. (1999). Sanctioning systems, decision frames, and cooperation. *Administrative Science Quarterly*, *44*, 684–707. doi: 10.2307/2667052

- Tenbrunsel, A., & Messick, D. M. (2004). Ethical fading: The role of self-deception in unethical behavior. *Social Justice Research, 17*, 223–235. doi: 10.1023/B:SORE.0000027411.35832.53
- Tenbrunsel, A., Smith-Crowe, K., & Umphress, E. (2003). Building houses on rocks: The role of the ethical infrastructure in organizations. *Social Justice Research, 16*, 285–307. doi: 10.1023/A:1025992813613
- Thompson, M. (2016, June 20). Prosecutors probe Volkswagen's former CEO over diesel scandal. *CNN Money*. Retrieved from: <http://money.cnn.com/2016/06/20/news/companies/volkswagen-diesel-scandal-martin-winterkorn/index.html>
- Tofighi, D., & MacKinnon, D. (2011). RMediation: An R package for mediation analysis confidence intervals. *Behavior Research Methods, 43*, 692–700. doi: 10.3758/s13428-011-0076-x
- Tracy, J. L. (2014). An evolutionary approach to understanding distinct emotions. *Emotion Review, 6*, 308–312. doi: 10.1177/17540739145334478
- Treviño, L. K., den Nieuwenboer, N. A., & Kish-Gephart, J. J. (2014). (Un)ethical behavior in organizations. *Annual Review of Psychology, 65*, 635–660. doi: 10.1146/annurev-psych-113011-143745
- Umphress, E. E., Bingham, J., & Mitchell, M. S. (2010). Unethical behavior in the name of the company. *Journal of Applied Psychology, 95*, 769–780. doi: 10.1037/a0019214
- Van Dijk, E., De Cremer, D., & Handgraaf, M. (2004). Social value orientations and the strategic use of fairness in ultimatum bargaining. *Journal of Experimental Social Psychology, 40*, 697–707. doi: 10.1016/j.jesp.2004.03.002
- Van Lange, P., Kuhlman, D. M. (1994). Social value orientations and impressions of partner's honesty and intelligence: A test of the might versus morality effect. *Journal of Personality and Social Psychology, 67*, 126–141. doi: 10.1037/0022-3514.67.1.126
- Van Dyne, L., & LePine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management Journal, 41*, 108–119. doi: 10.2307/256902
- Victor, B., & Cullen, J. B. (1988). The organizational bases of ethical work climates. *Administrative Science Quarterly, 33*, 101–125.
- Wang, L., & Murnighan, J. K. (2011). On greed. *Academy of Management Annals, 5*, 279–316. doi: 10.1080/19416520.2011.588822
- Watson, D., & Clark, L. A. (1994). *The PANAS-X: Manual for the positive and negative affect schedule – expanded form*. Unpublished manuscript, University of Iowa.

- Watson, D., Clark, L., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology, 54*, 1063–1070. doi: 10.1037/0022-3514.54.6.1063
- Wayne, S., & Ferris, G. (1990). Influence tactics, affect, and exchange quality in supervisor-subordinate interactions. *Journal of Applied Psychology, 75*, 487–499. doi: 10.1037/0021-9010.75.5.487
- Weiss, H. M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. *Research in Organizational Behavior, 18*, 1–74.
- Welsh, D. T., & Ordóñez, L. D. (2014). The dark side of consecutive high performance goals: Linking goal setting, depletion, and unethical behavior. *Organizational Behavior and Human Decision Processes, 123*, 79–89. doi: 10.1016/j.obhdp.2013.07.006
- Welpel, I. M., Spörrle, M., Grichnik, D., Michle, T., & Audretsch, D. B. (2011). Emotions and opportunities. *Entrepreneurship, Theory, & Practice, 36*, 69–96. doi: 10.1111/j.1540-6520.2011.00481.x
- Williamson, O. E. (1984). The economics of governance: Framework and implications. *Journal of Institutional and Theoretical Economics, 140*, 195–223.
- Yang, J., & Diefendorff, J. M. (2009). The relations of daily counterproductive workplace behavior with emotions, situational antecedents, and personality moderators: A diary study in Hong Kong. *Personnel Psychology, 62*, 259–295. doi: 10.1111/j.1744-6570.2009.01138.x
- Zhang, W., Jex, S. M., Peng, Y., & Wang, D. (In press). Exploring the effect of job autonomy on engagement and creativity. *Journal of Business Psychology*. doi: 10.1007/s10869-016-6753-x
- Zhong, C. (2011). The ethical dangers of deliberative decision making. *Administrative Science Quarterly, 56*, 1–25. doi: 10.2189/asqu.2011.56.1.001
- Zhou, J., & George, J. M. (2001). When job dissatisfaction leads to creativity: Encouraging the expression of voice. *Academy of Management Journal, 44*, 682–696. doi: 10.2307/3069410
- Zhou, X., Vohs, K. D., & Baumeister, R. F. (2009). The symbolic power of money: Reminders of money alter social distress and physical pain. *Psychological Science, 20*, 700–70. doi: 10.1111/j.1467-9280.2009.02353.x

Table 1*Cheating Behavior Items and Factor Loadings*

Items	Factor Loadings		
	Sample 1	Sample 2	Sample 3
Misrepresented work activity to make it look as though you have been productive.	.67	.75	.74
Made it look like you were working when you were not.	.60	.75	.73
Made up work activity to look better.	.70	.69	.69
Exaggerated work hours to look more productive.	.58	.60	.61
Came in late and didn't report it.	.60	.42	.58
Made up an excuse to avoid being in trouble for not completing work.	.59	.53	.62
Lied about the reason you were absent.	.53	.41	.52

Note. Sample 1, $n = 268$; Sample 2, $n = 320$; Sample 3, $n = 275$.

All factor loadings were significant at $p < .01$, two-tailed.

Table 2*Correlations and Descriptive Statistics for Study 1, Sample 1*

Variable	Mean	S.D.	1	2	3	4	5	6	7	8
1. Cheating behavior	1.62	0.65	(.88)							
2. Interpersonal conflict	1.63	0.70	.24**	(.84)						
3. Impression management—intimidation	1.57	0.78	.32**	.45**	(.87)					
4. Neglect	1.76	0.65	.62**	.31**	.28**	(.86)				
5. Positive affect	3.48	0.86	-.12	-.05	.04	-.25**	(.94)			
6. Creative behavior	3.72	0.87	-.04	-.06	.04	-.13*	.41**	(.92)		
7. Voice	3.36	0.84	-.10	-.03	.10	-.15*	.46**	.65**	(.93)	
8. Organizational citizenship behavior	3.26	1.05	-.10	-.06	.00	-.30**	.44**	.42**	.55**	(.95)

Note. $n = 268$. Coefficient alphas are on the diagonal.

* $p < .05$.

** $p < .01$.

Table 3*Correlations and Descriptive Statistics for Study 1, Sample 2*

Variable	Mean	S.D.	1	2	3	4	5
1. Cheating behavior	1.89	.65	(.83)				
2. Antisocial work behavior	1.50	.50	.45**	(.83)			
3. Social undermining	1.64	.61	.36**	.74**	(.83)		
4. Self-promotional behavior	2.26	.49	.50**	.42**	.42**	(.75)	
5. Unethical pro-organizational behavior	1.45	.63	.35**	.54**	.47**	.44**	(.88)

Note. $n = 320$. Coefficient alphas are on the diagonal.

* $p < .05$.

** $p < .01$.

Table 4*Correlations and Descriptive Statistics for Study 1, Sample 3*

Variable	Mean	S.D.	1	2	3	4	5	6	7
1. Cheating behavior	1.84	0.69	(.86)						
2. Impression management—self-promotion	3.02	0.90	.15*	(.91)					
3. Impression management—ingratiation	3.45	0.76	.05	.39**	(.88)				
4. Impression management—intimidation	1.67	0.77	.27**	.28**	.11	(.91)			
5. Impression management—exemplification	2.62	0.85	.15*	.39**	.39**	.42**	(.79)		
6. Impression management—supplication	1.70	0.77	.45**	.22**	.06	.53**	.29**	(.93)	
7. Perceptions of politics	2.59	0.50	.28**	.05	.04	.30**	.23**	.31**	(.77)

Note. $n = 275$. Coefficient alphas are on the diagonal.

* $p < .05$.

** $p < .01$.

Table 5*Correlations and Descriptive Statistics for Study 2*

Variable	Mean	S.D.	1	2	3	4
1. Performance pressure	3.55	0.88	(.85)			
2. Anger	1.78	1.12	.18**	(.91)		
3. Cheating behavior	1.87	0.81	.11*	.35**	(.91)	
4. Moral identity	4.25	0.66	.01	-.25**	-.15*	(.72)

Note. $n = 417$. Coefficient alphas are on the diagonal.

* $p < .05$.

** $p < .01$.

Table 6*Correlations and Descriptive Statistics for Study 3*

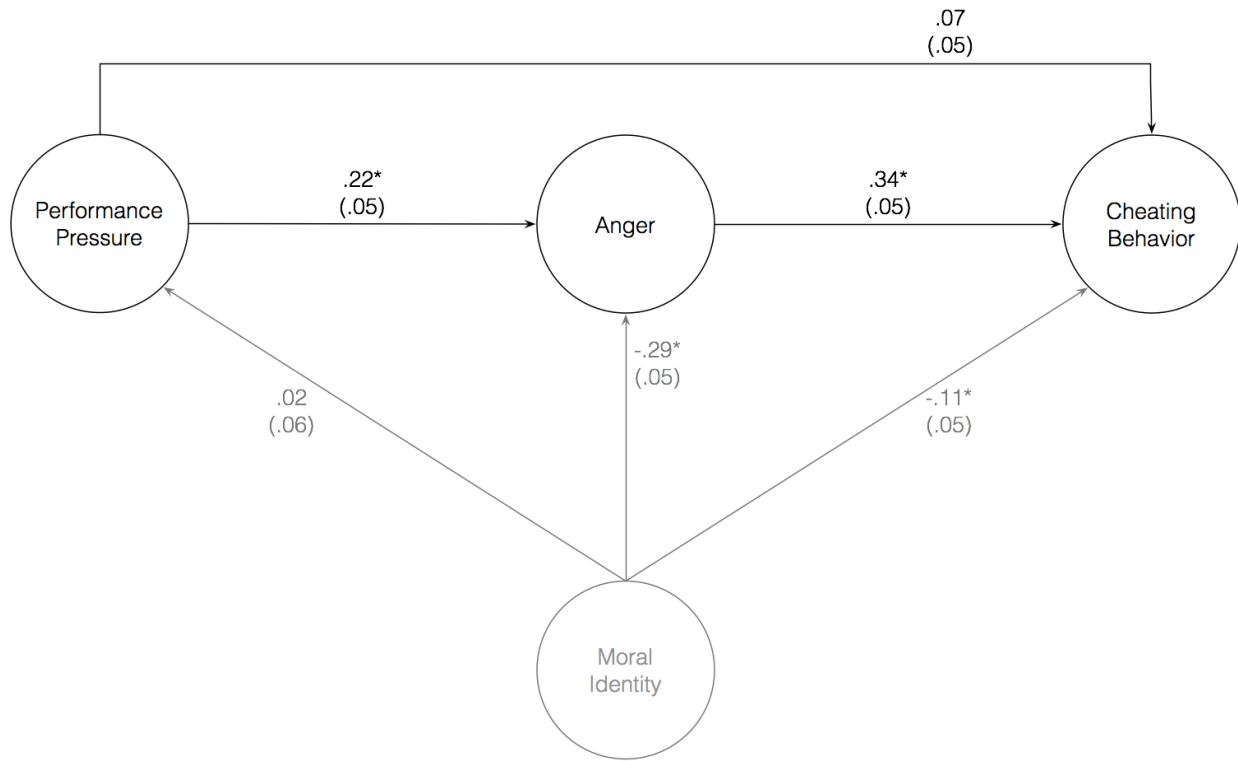
Variable	Mean	S.D.	1	2	3	4	5	6
1. Performance pressure	3.66	0.84	(.85)					
2. Anger	2.13	1.04	.18**	(.88)				
3. Self-concern	3.35	0.86	.20**	.27**	(.78)			
4. Cheating behavior	1.62	0.58	-.01	.22**	.21**	(.85)		
5. Moral identity	4.51	0.45	.19**	.07	-.02	-.08	(.69)	
6. Neuroticism	2.47	0.69	.05	.38**	.15**	.10	.03	(.75)

Note. $n = 300$. Coefficient alphas are on the diagonal.

* $p < .05$.

** $p < .01$.

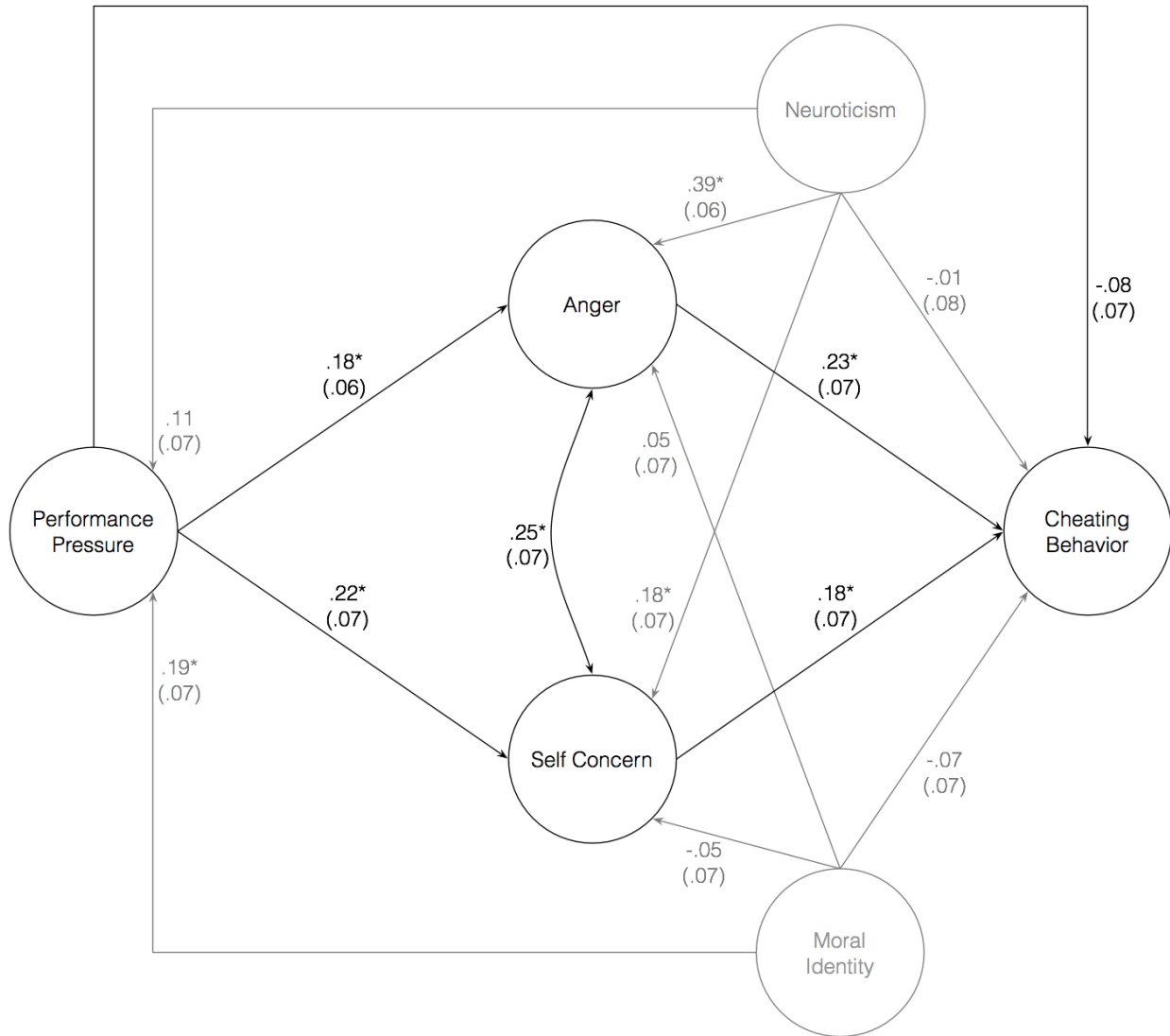
Figure 1. Study 2. Structural Equation Modeling Results for the Hypothesized Model.



Note. The standard errors of the standardized estimates are presented in parentheses. R^2 for anger = .13* ($SE = .04$); R^2 for cheating behavior = .16* ($SE = .04$).

* $p < .05$, two-tailed.

Figure 2. Study 3. Structural Equation Modeling Results for the Hypothesized Model.



Note. The standard errors of the standardized estimates are presented in parentheses. R^2 for anger = .21* ($SE = .05$); R^2 for self-concern = .09* ($SE = .04$); R^2 for cheating behavior = .11* ($SE = .04$).

* $p < .05$, two-tailed.

Appendix

We followed measurement development procedures recommended by Edwards (2003) and Hinkin (1998) to generate items and provide validity evidence for our performance pressure measure. Each step is described below. For all CFA model comparison results, data are available from the first author.

Item development. A 4-item measure was created (Appendix Table 1 presents the items and factor loadings from two independent samples). We assessed the items' factor structure with data from full-time employees recruited from a variety of industries in the U.S. (e.g., finance, insurance, real estate, healthcare). In exchange for class credit, undergraduate business students from a large Southeastern university recruited full-time supervisors to the study. Established design protocols were followed to ensure that working adults were recruited: we emphasized the importance of integrity in the responses, compared student and participant email and IP addresses, asked students to provide participants' full company contact information to check that the participants met the study criteria, and provided students credit regardless of whether their recruited participant completed the surveys for the study (e.g., Greenbaum et al., 2012). A total of 111 supervisors participated (72.1% response rate). On average, respondents were 44.10 years old ($SD = 11.51$) and had worked in their organization for 10.77 years ($SD = 9.44$); 40.5% were female. EFA showed the 4 items yielded 1 distinct factor ($\lambda > 1.0$), accounting for 74.97% of the common variance; all loadings were greater than .70, and the measure's alpha was $\alpha = .89$.

Tests of convergent and discriminant validity. Data were collected from 2 samples to examine convergent and discriminant validity of our performance pressure measure vis-à-vis other constructs (Edwards, 2003; Hinkin, 1998).

Sample 1. Data were collected from full-time employees who were recruited from a variety of industries in the U.S. (e.g., finance, insurance, real estate, healthcare) to examine the correlations and factor structure of the performance pressure items compared to other measures that were predicted to be similar yet distinct from our measure (see Edwards, 2003, for a review). In exchange for class credit, undergraduate business students from a large Southeastern

university recruited full-time supervisors to complete the survey. We followed established design protocols were followed to ensure that working adults were recruited for the study (Greenbaum et al., 2012). 197 participants completed the survey. On average, respondents were 47.20 years old ($SD = 10.87$) and had worked in their organizations for 13.27 years ($SD = 10.34$); 34.7% were female. To provide convergent validity evidence, we expected performance pressure to be positively related to need for achievement (“*nAch*”, given its orientation toward achieving high quality performance; see McClelland, 2005), negative affect (“*NA*”, given its focus on stressors, such as pressure; see Weiss & Cropanzano, 1996), and utilitarianism (given its focus on the utility of outcomes; Reynolds, 2006). Like performance pressure, *nAch* and utilitarianism have a focus on outcomes, and so they should be related. Performance pressure is a negative subjective state toward performance concerns and therefore individuals with higher trait negativity (*NA*) should be sensitive to it, meaning the two constructs should be positively related. To provide discriminant validity evidence, we expected performance pressure to be negatively, if at all, related to moral inclusion (an obligation to show concern for welfare of others, as opposed to the self like performance pressure; Reed & Aquino, 2003) and formalism (an ethical decision-making orientation toward formal rules, as opposed to utility toward self-gains like performance pressure; Reynolds, 2006). Respondents rated all measures on a 7-point scale. We used Costa and McCrae’s (1992) 10-item *nAch* measure, Watson, Clark, & Tellegen’s (1988) 10-item *NA* measure, Reynolds’ (2006) 7-item utilitarianism measure and 6-item formalism measure, and Reed and Aquino’s (2003) 8-item moral inclusion measure. Descriptive statistics and coefficient alphas for all measures are shown in Appendix Table 2.

The analyses provide validity support for the measure. Performance pressure was related positively to *nAch* ($r = .22, p < .01$), *NA* ($r = .16, p < .01$), and utilitarianism ($r = .28, p < .01$) and was not related to moral inclusion ($r = .08, ns$) or formalism ($r = .13, ns$). CFAs showed performance pressure was distinct from the other variables. The 6-factor model (which included performance pressure, *nAch*, *NA*, utilitarianism, moral inclusion, and formalism) fit the data well ($\chi^2 [930] = 1529.21, p < .001$; CFI = .93; RMSEA = .06; SRMR = .07) and better than five

alternative 5-factor models (where we constrained the performance pressure items to load with items of one of the five other measures) and a 3-factor model (where we constrained the performance pressure items to load with items from the convergent validity measures [*nAch*, *NA*, and utilitarianism]).

Sample 2. To provide discriminant validity evidence of performance pressure from other perceptions about performance (i.e., supervisor bottom-line mentality [SBLM], performance-to-reward expectancy, importance of goal performance) and performance orientations (performance goal orientation, learning goal orientation), we recruited a total of 218 full-time employees through Amazon's MTurk. On average, respondents were 30.69 years old ($SD = 8.99$) and had worked in their organizations for 4.21 years ($SD = 3.33$); 30.7 % were managers and 30.7% were female. The measure's alpha was $\alpha = .84$. We used Greenbaum et al.'s 4-item SBLM measure, Sims, Szilagyi, & McKemey's (1976) 6-item performance-to-reward expectancy measure, Ashford's (1986) 3-item importance of goal performance measure, and Button, Mathieu, and Zajac's (1996) 8-item measures of performance and learning goal orientation. All measures were rated on a 5-point scale (1 = *Strongly disagree*, 5 = *Strongly agree*). Descriptive statistics and coefficient alphas are shown in Appendix Table 3.

The analyses demonstrate validity evidence, as performance pressure was significantly and positively related to SBLM ($r = .35, p < .01$), performance-to-reward expectancy ($r = .29, p < .01$), importance of goal performance ($r = .15, p < .05$), and performance goal orientation ($r = .27, p < .01$), and it was not related to learning goal orientation ($r = .09, ns$). CFA showed that performance pressure was distinct from the other variables. The 6-factor model (which included performance pressure, SBLM, performance-to-reward expectancy, importance of goal performance, performance goal orientation, and learning goal orientation) fit the data well ($\chi^2 [480] = 1109.49, p < .001$; CFI = .92; RMSEA = .08; SRMR = .08) and better than five alternative 5-factor models (where we constrained the performance pressure items to load with items from the other measures) and a 1-factor model (where all items were constrained to load on one overall factor).

Appendix Table 1*Performance Pressure Items and Factor Loadings*

Items	Factor Loadings	
	Sample 1	Sample 2
The pressures for performance in my workplace are high.	.91	.70
I feel tremendous pressure to produce results.	.86	.85
If I don't produce at high levels, my job will be at risk.	.74	.72
I would characterize my workplace as a results-driven environment.	.73	.77

Note. Sample 1, $n = 197$; Sample 2, $n = 218$.
All factor loadings were significant at $p < .01$, two-tailed.

Appendix Table 2*Correlations and Descriptive Statistics for Appendix Sample 1*

Variable	Mean	S.D.	1	2	3	4	5	6
1. Performance pressure	5.15	1.37	(.88)					
2. Need for achievement	6.11	0.71	.22**	(.82)				
3. Negative affect	1.58	0.48	.16*	-.21**	(.85)			
4. Utilitarianism	5.86	0.59	.28**	.40**	-.14	(.80)		
5. Moral inclusion	4.09	0.52	.08	.12	.01	.27**	(.85)	
6. Formalism	6.45	0.54	.13	.40**	-.26	.56**	.35**	(.84)

Note. $n = 197$. Coefficient alphas are on the diagonal.

* $p < .05$.

** $p < .01$.

Appendix Table 3*Correlations and Descriptive Statistics for Appendix Sample 2*

Variable	Mean	S.D.	1	2	3	4	5	6
1. Performance pressure	3.37	0.83	(.84)					
2. Supervisor bottom-line mentality	2.77	1.12	.35**	(.89)				
3. Performance-to-reward expectancy	3.35	0.93	.29**	.02	(.89)			
4. Importance of goal performance	3.82	0.77	.15*	-.17*	.40**	(.78)		
5. Performance goal orientation	3.85	0.52	.27**	.05	.28**	.35**	(.79)	
6. Learning goal orientation	3.93	0.62	.09	-.09	.30**	.59**	.36**	(.89)

Note. $n = 218$. Coefficient alphas are on the diagonal.

* $p < .05$.

** $p < .01$.