Journal of Business Ethics (2020) 162:191–209
https://doi.org/10.1007/s10551-018-3968-1

ORIGINAL PAPER

The Synergistic Effect of Descriptive and Injunctive Norm Perceptions on Counterproductive Work Behaviors

Ryan P. Jacobson[1] · Lisa A. Marchiondo[1] · Kathryn J. L. Jacobson[1] · Jacqueline N. Hood[1]

Received: 9 November 2017 / Accepted: 2 July 2018 / Published online: 9 August 2018

Abstract

This paper addresses the potentially interactive effects of descriptive and injunctive norm perceptions on an unethical workplace behavior: counterproductive work behavior (CWB) perpetration. We draw on the Focus Theory of Normative Conduct and its conceptual distinction between norm types to refine research on this topic. We also test a person-by-environment interaction to determine whether the interactive effects of these norms for CWB are enhanced among employees reporting a stronger need to belong to social groups (NTB). In two studies, predictors were assessed in an initial survey and the dependent variable was assessed weeks later. Individuals employed across a range of industries served as participants. In Study 1, descriptive and injunctive norm perceptions of CWB interacted to predict CWB perpetration. This finding was replicated in Study 2. Additionally, Study 2 demonstrated that the interaction between the two norm types was especially strong among individuals high in NTB. Results suggest that to decrease CWB perpetration, organizations may profitably leverage the persuasive effects of "social norms marketing" to alter employee perceptions of the typicality and level of approval for CWBs. This is the first study to demonstrate that both descriptive and injunctive norm perceptions predict CWB perpetration. The demonstrated three-way interaction between the two norm types and NTB advances existing theory regarding the cognitive and motivational mechanisms underlying normative social influence.

Keywords Social norms · Counterproductive work behaviors · Social influence · Need to belong

It is only by imitating the vices of others that I have earned my misfortunes.
—Donatien Alphonse François, Marquis de Sade

Introduction

Do the unethical actions of others corrupt us, increasing the likelihood that we will steal, cheat, lie, insult, malinger, or abuse? One would expect the typical layperson to answer "no," based on evidence that people routinely and markedly underestimate the extent to which their behaviors have been influenced by others' actions and beliefs (Cialdini 2005; Nolan et al. 2008). This myopic self-attributional bias notwithstanding, decades of social scientific research attest to the important role of social influence in guiding human behavior (see Cialdini and Goldstein 2004; Hogg 2010; Miller and Prentice 1996). In particular, the considerable evidence for the persuasive effects of social norms (see Cialdini 2012) suggests that the Marquis de Sade's circumstance is more common than most might expect; our own vices (and virtues) can often come, over time, to increasingly resemble those of our fellows and associates.

Normative social influence, the process by which the social norms of one's group affect one's actions, has been somewhat sparsely studied in the workplace but holds

✉ Ryan P. Jacobson
rjacobson@unm.edu

Lisa A. Marchiondo
marchiondo@unm.edu

Kathryn J. L. Jacobson
kjacobson@unm.edu

Jacqueline N. Hood
jnhood@unm.edu

[1] Anderson School of Management, University of New Mexico, MSC05 3090, 1, Albuquerque, NM 87131-0001, USA

considerable promise for understanding workplace behavior (Goldstein and Cialdini 2011; Morris et al. 2015). Scholars across a wide variety of disciplines have devoted increased research attention to normative social influence in recent years, including social psychology (e.g., Jacobson et al. 2011), political psychology (e.g., Panagopoulos et al. 2014), consumer behavior (e.g., Burchell et al. 2013), accounting (e.g., Bobek et al. 2013; Cohen et al. 2015), finance (e.g., Cahan et al. 2017), and sustainability studies (e.g., De Groot et al. 2013). A likely reason for the increased interdisciplinary attention toward normative social influence stems from the demonstrated efficacy of practical interventions that leverage the persuasive effects of norms to promote socially desirable action (see Miller and Prentice 2016). These "social norms marketing" interventions typically use persuasive messaging to correct perceptions of others' engagement in and approval for specific behaviors (e.g., energy consumption), thereby influencing the individual to adopt ethical and socially desirable actions.

Employing social norms marketing techniques in organizational contexts represents a potentially promising but underexplored strategy to discourage the expression of unethical workplace behaviors. However, a better understanding of the process by which organizational social norms guide workplace behavior—and the situational and individual difference factors that moderate this process—is critical to developing effective norm-based behavioral change initiatives in organizations. We enhance such understanding with the current research by examining counterproductive work behaviors (CWBs)—volitional behaviors intended to harm specific individuals and/or the overall organization (Spector et al. 2006)—through the lens of the Focus Theory of Normative Conduct (see Cialdini 2012). A limited number of prior studies have examined the effects of norms on harmful work behaviors (e.g., Glomb and Liao 2003; Robinson and O'Leary 1998). However, it is important to note that these studies have varied considerably in the way they have conceptualized and operationalized the construct of social norms. Therefore, it is difficult to compare discrete findings and identify their unique contributions to the broader literature.

Additionally, the notion that organizational norms are instrumental in shaping a psychological climate for deviance, mistreatment, and/or incivility has often been emphasized in the organizational climate literature (see Greve et al. 2010; Paulin and Griffin 2017; Yang et al. 2014). While there have been multiple studies that examine workplace mistreatment from an organizational climate perspective (see Yang et al. 2014), these studies typically draw inferences about the role of norms based on measures of climate that we would consider rough proxies for norms as we define and measure them in this investigation. We contend that the way the construct of social norms is operationalized matters and that introducing greater precision in these respects will enhance understanding of the factors that influence CWB.

The two studies we report in this paper contribute to the CWB literature and the broader social norms literature in the following ways. First, these studies represent the first demonstration in the CWB literature that two different types of social norms (descriptive and injunctive) independently predict CWB perpetration. This demonstration therefore helps to expand the current understanding of how social norms affect unethical behaviors in the workplace. Second, by applying an established social norms theory (i.e., Focus Theory) to the study of CWB antecedents, the results of these studies help to connect CWB research to an expansive interdisciplinary literature on social norms. Third, these studies enhance CWB scholarship by demonstrating that the need to belong to social groups (NTB), a heretofore unexamined individual difference affecting CWB perpetration, enhances the extent to which social norms perceptions interact to encourage CWB perpetration. Fourth, and finally, these studies contribute to the social norms literature by replicating a finding reported in only two prior studies involving descriptive and injunctive norms—that perceptions of the norms interact in a synergistically enhancing manner to encourage norm-consistent behavior.

The Focus Theory of Normative Conduct provides enhanced conceptual clarity in defining social norms, which then leads to greater precision in operationalizing the construct and investigating the effects of norms on behavior. Focus Theory suggests that it is important to distinguish between the commonness or typicality of a behavior (descriptive norm) and the extent to which that behavior is approved of by one's peers (injunctive norm). These different forms of information about a behavior represent different norm types, according to the theory—norms that influence behavior somewhat independently and through somewhat separable psychological mechanisms (Cialdini 2012; Jacobson et al. 2011). Incorporating a distinction between descriptive and injunctive norms has increased the explanatory power of the norms construct across a very wide variety of behavioral domains, including (among others) binge drinking on college campuses (see Borsari and Carey 2003), smoking (Linkenbach and Perkins 2003), seat belt use (Litt et al. 2014), bystander intervention in school bullying incidents (Perkins et al. 2011), conservation behavior among hotel guests (Goldstein et al. 2008), and household energy consumption (Nolan et al. 2008; Schultz et al. 2007). Given this evidence in support of Focus Theory's tenets and based on prior research indicating that alternative social norms' conceptualizations have shown promise in understanding CWB, we suggest that Focus Theory's conceptual distinction between norm types will help to refine and advance future research on this topic.

Additionally, despite a recent increase in interdisciplinary research on normative social influence, questions remain regarding the cognitive and motivational mechanisms that drive norm-based conformity (Göckeritz et al. 2010; Smith et al. 2012). For example, while evidence indicates that descriptive and injunctive norms represent somewhat distinct causal influences (see Cialdini 2012); it is unclear whether the effects of these normative perceptions may interact to influence behavior. For example, does the perceived level of approval for a behavior (e.g., approval for tardiness) affect the extent to which the individual is influenced by the behavior's perceived prevalence (e.g., prevalence of tardiness)? Additionally, much remains unknown regarding how key individual differences affect the process of normative social influence (Göckeritz et al. 2010; White and Simpson 2013). We investigate these questions in the present study—identifying descriptive and injunctive norm perceptions of CWB as somewhat independent but also interactive influences on CWB and demonstrating that the need to belong to social groups (i.e., NTB) intensifies their interactive effects.

The Focus Theory of Normative Conduct

The Focus Theory of Normative Conduct (Cialdini et al. 1990; Cialdini 2012) was developed to enhance the explanatory power of the social norms construct. A key assertion of the theory is that the term "social norm" actually refers to two somewhat different types of social norms that convey unique information and motivate behavior in different ways. Whereas the *descriptive norm* represents the perceived prevalence of a behavior, the *injunctive norm* represents the perceived degree of social approval/disapproval for the behavior. Drawing on a much earlier distinction between "informational" and "normative" influence suggested by Deutsch and Gerard (1955), Focus Theory asserts that the different forms of information provided by each norm stimulate behavioral change by engaging different motivational processes. According to the theory, the primary reason to attend to information about a behavior's prevalence (i.e., descriptive norm) is to make more accurate or efficient decisions. Especially in complex or uncertain situations, the typical behaviors of others serve as "social proof" (Cialdini 2009) that can enhance decision-making at a relatively low cost in terms of time and cognitive effort. For example, panic-stricken coworkers rapidly fleeing a construction jobsite indicates the likely possibility of a real and present threat to personal safety. Under these circumstances, if one were to quickly (and without contemplation) mimic the actions of one's colleagues (i.e., run for one's life), then this would often result in a more personally beneficial outcome than if one were to ignore such information.

In contrast to descriptive norms, Focus Theory suggests that the primary reason to conform to injunctive norms is to obtain and maintain the approval of members of one's social group. In essence, injunctive norms represent the informal rules and standards group members are expected to follow (Cialdini and Trost 1998). Although abiding by such standards is often in an individual's best interest because this can provide access to important collective benefits (Bicchieri 2006; Fehr and Fischbacher 2004), this is not always the case. At times, ignoring injunctive norms may benefit individuals and their groups by encouraging new ideas and stimulating creative solutions to old problems. Because of the more complex costs and benefits of being swayed by the approval/disapproval of one's peers, following injunctive norms tends to be associated with more cognitively effortful style of decision-making (Jacobson et al. 2011; Kredentser et al. 2012) and consideration of goals related to a more interpersonal sense of self (Jacobson et al. 2011).

Importantly, although both types of normative information are often available for most forms of behavior, Focus Theory suggests that norms exert their strongest effects when they are subjectively salient. Such salience (i.e., focus) can be induced via experimental manipulations of the situation—as with Cialdini and colleagues' research (1990) on the differential effects of descriptive and injunctive norms for littering. Alternatively, salience can be heightened through persuasive messaging manipulations—framing a request either as something that is typical among one's peers or highly approved of by them (e.g., White and Simpson 2013). In the absence of external procedures to bring selective focus on one of the norm types, the theory suggests that each norm is also associated with some degree of chronic salience. In other words, individuals also have chronic, baseline perceptions of the descriptive and injunctive norms within a social group that may somewhat independently affect their behaviors (Cialdini 2012; Jacobson et al. 2011).

It is important to note that the theory acknowledges substantial real world overlap between these forms of information for some behaviors. For example, making rude bodily noises at a client dinner in an upscale restaurant may be both uncommon and met with almost universal disapproval by others. In these cases, it is highly likely that one type of information could serve as a proxy for the other or could lead one to make an inference about the other (e.g., "others do not do this, so it must be disapproved"). Additionally, evidence indicates that, in some instances, individuals can adopt injunctive and descriptive norms as "personal norms" (see Cialdini et al. 1990; Kallgren et al. 2000) and that, once internalized, personal norms can guide behavior independently from the current descriptive or injunctive norms in the social environment. In cases of conforming to internalized personal norms, little is yet known regarding the cognitive and motivational processes involved in their effects on behavior. The assertion of the theory is not that

the two types of information are completely separable or that social norm salience will override one's habitual responses to personal norms, but simply that, when one is focused on one or the other type of normative information in the social environment, these norms tend to influence individuals via somewhat different psychological processes.

At least four lines of evidence support Focus Theory's conceptual distinction between norm types. Much of this evidence is derived from designs in which: (a) situational manipulations make one type of normative information selectively salient, (b) persuasive messaging encourages a specific form of behavior by selectively highlight a specific norm type (i.e., same behavior advocated but different norm type), or survey-based evidence demonstrates different moderating relationships for each norm type. First, the likelihood of being swayed by a specific norm type can depend on key aspects of the situation. For example, consistent with the suggestion that people use descriptive norms as a heuristic to make more accurate/efficient decisions, individuals are more likely to rely on descriptive norms in cognitively effortful decision-making situations that involve novelty, ambiguity, uncertainty, or threat (Deutsch and Gerard 1955; Griskevicius et al. 2006; Sherif 1936; Tesser et al. 1983).

Second, research indicates that individuals tend to respond to each norm with somewhat different forms of psychological processing. For example, when descriptive versus injunctive norms are made selectively salient, people tend to think about somewhat different goals and somewhat different aspects of self. A focus on descriptive norms is more strongly associated with intrapersonal goals related to accuracy and efficiency in decision-making, whereas a focus on injunctive norms is more strongly associated with social approval-related goals and thoughts about interpersonal aspects of self (Jacobson et al. 2011). Additionally, contemplating a decision to follow a descriptive norm tends to stimulate a more heuristic and less cognitively effortful form of processing than does contemplating the same behavior following exposure to an injunctive norm (Jacobson et al. 2011).

Third, research demonstrates that chronic perceptions of the descriptive and injunctive norms for a behavior in a given social context can exert somewhat independent effects on behavior. For example, descriptive and injunctive norm perceptions have explained unique variance in the frequency of performing a variety of behaviors, such as gambling (Larimer and Neighbors 2003), the willingness to "cheat" on one's committed partner (Buunk and Bakker 1995), marijuana use (Neighbors et al. 2008), organizational citizenship behaviors (Jacobson et al. 2015a), and adolescent smoking (Zaleski and Aloise-Young 2013).

Finally, research indicates that specific individual difference traits differentially moderate the effectiveness of influence attempts framed using the two norm types. For example, supporting the suggestion that following descriptive norms tends to represent a heuristic response while following injunctive norms requires effortful contemplation, cognitive elaboration (i.e., the tendency to think hard about decisions) is positively related to the persuasiveness of injunctive norm-framed messages but negatively related to the persuasiveness of descriptive norm-framed messages. Supporting the suggestion that following an injunctive norm tends to require the person to inhibit desires to satisfy immediate intrapersonal goals (e.g., pursue a personally enjoyable activity) in favor of more long-term interpersonal goals (e.g., maintaining the approval of one's peers), the trait of self-control is positively related to the effectiveness of injunctive norm-framed messages (Jacobson et al. 2015b).

In the current investigation, an individual difference trait that we expect to be particularly relevant to CWB is the need to belong to social groups (NTB). For individuals high in NTB, the drive to achieve and protect a positive reputation among peers is critically important (Leary et al. 2013). This leads them to pay closer attention to aspects of the social context in which they are embedded; such as the presence or lack of camaraderie among colleagues (Rego and Souto 2009), the degree of procedural fairness in their organizations (De Cremer and Leonardelli 2003), and the extent to which they are the target of workplace ostracism (Yang and Treadway 2018). A relatively straightforward expectation from the perspective of Focus Theory is that the effects of injunctive norms should be enhanced among those scoring high in NTB because following injunctive norms is primarily driven by social approval motives. However, in the present investigation, we will also test an extension of this expectation of the theory. We expect that, for CWBs, not only will those scoring high in NTB be especially likely to be swayed by their perceptions of injunctive norms, but that they will also be especially likely to be swayed by the *alignment versus misalignment* of injunctive and descriptive norm information (i.e., the extent to which common behaviors are associated with social approval and uncommon behaviors are associated with disapproval). Because of their concern for maintaining social approval, high NTB individuals should be especially wary prior to performing a CWB due to the reputational damage that could ensue if others disapprove of the behavior. Thus, we expect these individuals to be especially likely to evaluate both approval and prevalence information in conjunction prior to engaging in the behavior. For example, although it appears acceptable to others to take some office supplies for home use, individuals high in NTB should be especially likely to *also* monitor the extent to which coworkers actually raid the supply closet for this purpose prior to adopting this form of behavior for themselves.

CWB Antecedents and Consequences

A large volume of research has examined antecedents to CWBs (e.g., theft, bullying, sabotage, tardiness, undermining another's work). Identifying predictors has been deemed important due to the demonstrated negative effects of CWBs on organizations (Bowling and Burns 2015). For example, a typical instance of fraud costs an organization five percent of its annual revenue (ACFE 2016) and the overall monetary cost of white-collar crimes in the U.S. is estimated at $600 billion (Ivancevich et al. 2003). Additionally, CWB is negatively related to team performance (Aubé and Rousseau 2014) and the psychological, physical and organizational effects for employees who are targets of CWB are damaging and pervasive. For example, bullying, a discrete form of CWB, leads to a variety of negative outcomes such as mental health problems, PTSD, burnout, strain, physical health problems, absenteeism, low levels of job satisfaction and commitment, and an increased intent to leave (Nielsen and Einarsen 2012). Put simply, considering the various forms of CWB, the overall cumulative cost of CWB to organizations and their employees is vast (Vardi and Weitz 2016).

Both individual and situational antecedents to various types of CWB have been studied (Martinko et al. 2002). Individual antecedents are relatively stable differences between employees, which include demographic variables (e.g., sex), personality traits (e.g., Five Factor Model, Machiavellianism), and other facets of one's worldview (e.g., locus of control, attribution style). Research has demonstrated that males and younger employees are more likely to engage in workplace aggression (Hershcovis et al. 2007) and that younger employees tend to exhibit more theft, production deviance, and absenteeism (Lau et al. 2003). Further, employees low in agreeableness and conscientiousness and high in neuroticism (DeShong et al. 2015) are more likely to exhibit CWB. The Dark Triad (e.g., Machiavellianism; DeShong et al. 2015), as well as external work locus of control, have also been shown to positively relate to CWB perpetration (Sprung and Jex 2012).

Research on situational antecedents to CWB has often focused on CWB either as an emotion-based response to stressful work conditions (e.g., Chen and Spector 1992; Fox and Spector 1999; Levine 2010) or as a cognitive response to experienced injustice in the workplace (e.g., Greenberg 1990; Skarlicki and Folger 1997; Skarlicki et al. 1999). For example, emotions like anger and anxiety have been shown to mediate the relationship between situational factors like organizational constraints and CWB (Spector 1998) and both distributive and procedural justice perceptions have been shown to positively relate to CWB outcomes including theft, vandalism, and sabotage (Greenberg 1990; Jermier et al. 1994).

Prior research has also examined the effects of social norms on CWB. Overall, these studies provide evidence that work group norms are related to individual perpetration of CWB. However, the manner in which these studies have operationalized the construct of social norms has varied considerably, which casts some doubt on the contribution of specific findings to the broader literature on the relationship between norms and CWBs. For example, Glomb and Liao (2003) measured self-reported workplace aggression and then operationalized the workgroup norm for aggression as the workgroup's mean self-reported aggression score—demonstrating that these aggregate workgroup scores were related to individual self-reported aggression scores. Robinson and O'Leary (1998) operationalized antisocial workplace behavior norms similarly, demonstrating that workgroup self-report means were positively related to the self-reported antisocial behavior scores of individuals within those workgroups. The results of these and other studies (e.g., Tepper et al. 2008) are therefore based on a definition of the social norm as an aggregate of self-reported perpetration among individuals in a workgroup or organization. By focusing on the average frequency or likelihood of the behavior in the group, we would consider this form of operationalization to be a somewhat objective representation of the descriptive norm—an estimate of the actual rather than perceived frequency of the behavior among one's peers.

In contrast, Gillatly (1995) operationalized the social norm for absenteeism as the *perceived* average number of days one's departmental peers were absent during the previous 12-month period. In this study, he demonstrated a positive relationship between perceptions of absenteeism among one's peers and self-reported absenteeism. We have operationalized perceived descriptive norms for CWB in the current study in manner that is consistent with Gillatly's (1995) norms measure. In focusing on perceptions of a behavior's frequency among peers, we would consider both Gillatly's measure and our descriptive norms scale to be examples of subjective, perception-based indexes of the norm.

Restubog and colleagues (2011) used another type of social norms operationalization in their investigation of employee responses to abusive supervision. These scholars defined aggressive norms in the organization as an aggregate of *supervisors'* perceptions of the frequency of aggressive organizational behaviors. They reported a positive relationship between these supervisor perceptions and employee reports of psychological distress, a relationship that was mediated by employee perceptions of abusive supervision. This type of operationalization of norms clearly targets the descriptive norm but estimates this as an aggregate of supervisor rather than subordinate perceptions of the behavior.

Other studies have examined the influence of what we would define as the perceived injunctive norms for a specific CWB in the organization. In other words, rather than

focusing on the perceived or actual frequency of the behavior, this type of norm operationalization measures individuals' perceptions of the degree of approval for the behavior among one's peers. For example, in one of the two studies conducted by Tepper and colleagues (2008), the authors adapted an existing measure of the self-reported frequency of deviant behaviors to measure respondents' perceptions of how strongly they thought their coworkers would approve if they performed the focal behavior. Using this index of social norms, they demonstrated that coworker approval of deviance moderated (accentuating) the negative relationship between affective commitment and self-reported deviance.

Research has also conflated CWB descriptive and injunctive norm perceptions in their operationalizations. For example, Bacharach and colleagues (2002) measured "permissive drinking norms" in the workplace by computing an aggregate of individuals' perceptions of the average amount of alcohol their peers consume daily (descriptive norm), combined with the perceived appropriateness of drinking (injunctive norm) in a variety of work-related situations (e.g., at lunch) among their coworkers.

We designed the present research, in part, to address the lack of consistency in the measurement and conceptualization of CWB norms—an aspect of the current literature on this topic that makes it difficult to draw meaningful conclusions regarding the broad patterns of obtained results. It seems likely, for example, that supervisor perceptions of subordinate deviance are subject to different perceptual and cognitive biases than subordinates' perceptions of peer behaviors. Additionally, supervisors and subordinates have differential access to information about deviant behaviors, which makes a perfect correspondence between these perceptions unlikely. Similarly, due to self-presentational motivations, an index of the norm based on aggregated self-reports of frequency is unlikely to be equivalent to an index based on individuals' perceptions of the frequency of that behavior among peers. By examining CWB through the lens of Focus Theory, we introduce more precise, theory-driven definitions of two types of norms that have been shown to predict behavior across a wide array of behavioral domains. Additionally, by focusing on subjective perceptions of the descriptive and injunctive norms for CWB, we align our research with Focus Theory's assertion that it is the subjective salience of the norm that matters most in determining the norm's effects on behavior.

Finally, organizational climate scholars have often invoked the concept of social norms as playing an important role in creating a psychological climate for CWB (e.g., Dietz et al. 2003; Greve et al. 2010; Neuman and Baron 1998; Simha and Cullen 2012). These references to the role of norms have often been exclusively theory-based or merely inferred from evidence based on measures of workplace climate. When empirical, these investigations of workplace climates for CWB often include measures that focus on: (a) generalized clusters of behavior types (e.g., "respectful treatment") or inferences about behavioral orientations (e.g., "A spirit of cooperation and teamwork exists in my workgroup"; Meterko et al. 2007) rather than specific forms of behavior, (b) perceptions of organizational policies, procedures, or practices (e.g., "Are reports of workplace violence from other employees taken seriously by management?"; Spector et al. 2007) rather than perceptions of peer behavior and judgments, or (c) elements of perceived typicality and approval simultaneously (e.g., "Respectful treatment is the norm in your unit/workgroup"; Walsh et al. 2012) rather than separately (e.g., using one item to assess how "respectful" individuals judge a specific behavior and another to assess how common this behavior is among others).

While one might expect these kinds of climate measures to overlap to some degree with measures of the perceived descriptive and injunctive norms for discrete CWBs, we think that these constructs are also conceptually distinct in that climate measures are typically broader in their focus (e.g., clusters of behavior types or joint perceptions of the two norm types) and often focus on a more "top-down" perspective of the organization's response or orientation to CWB. We think it is highly likely that perceptions of peer prevalence and approval for specific forms of incivility, aggression, harassment, or other CWB play an important role in the individual's assessment of the overall climate for these types of behavior. However, it is possible that some of these descriptive and injunctive norm perceptions may play a disproportionate role in affecting this overall climate impression—which represents an interesting question for future research. Additionally, other factors such as the organization's official reactions to CWBs are also likely affect these overall climate impressions. Therefore, we think it is valuable to begin to disentangle the normative perceptions for specific forms of CWB from overall climate impressions and that our study represents an initial step that may help to spur this line of inquiry.

Research Overview and Hypotheses

We conducted two studies to test two hypotheses about the effects of descriptive and injunctive norm perceptions of CWB on CWB perpetration. We expected both descriptive and injunctive norm perceptions of CWB to independently predict CWB perpetration for two reasons. First, as previously discussed, these two forms of norm perceptions have been previously shown to predict a wide variety of behaviors, including socially undesirable behaviors like binge drinking and littering. Second, although never examined simultaneously in the same study, prior research has demonstrated that both descriptive norm perceptions (e.g., Gillatly

1995) and injunctive norm perceptions (e.g., Tepper et al. 2008) predict discrete forms of CWB.

However, additionally, we expected that the effects of these norm perceptions would interact in influencing CWB perpetration. Scholars have emphasized examining the potentially interactive effects of descriptive and injunctive norm perceptions as an important topic for future research (Göckeritz et al. 2010; Rimal and Real 2005), although the bulk of studies examining the effects of descriptive and injunctive norm perceptions have not reported interaction tests. Thus, it is unclear how pervasive such interactions may be and whether these are more common for specific forms of behavior than for others.

Two previous studies have demonstrated synergistically enhancing interactions between descriptive and injunctive norm perceptions. Lee et al. (2007) demonstrated a two-way interaction between perceptions of peer drinking prevalence and approval for drinking on drinking behavior among college students. The interaction was synergistic such that the frequency of a student's drinking behavior was highest when peers were perceived to be frequent drinkers who also approved of heavy drinking. Göckeritz et al. (2010) demonstrated a two-way synergistic interaction between perceptions of descriptive and injunctive norms in predicting energy conservation behavior among neighbors. Similar to the Lee et al. (2007) study, conservation behavior was most prevalent when neighbors were perceived as both frequently performing and approving of conservation behavior.

Additionally, studies of norm-based persuasive messaging have often demonstrated that "aligned" descriptive and injunctive norm messages (e.g., high prevalence and high approval or low prevalence and low approval) are more effective in influencing behavior than messages relying on only one norm type or messages in which the two norm types are misaligned (e.g., high prevalence but low approval). For example, Schultz and colleagues (2008) demonstrated that hotel guests' rates of towel re-use were greatest when they were presented with information that re-use was both common and approved of by other guests—in comparison to conditions in which only the descriptive or injunctive norm was emphasized. Thus, this demonstrates that the norms have somewhat distinct effects that may potentially interact to influence behavior.

A final reason to expect a synergistically enhancing interaction between descriptive and injunctive norm perceptions of CWB stems from the fact that these norm types are not always naturally aligned in a given social context (Smith et al. 2012). For example, stealing office supplies may be regrettably common despite the fact that employees report disapproving of such behavior. In fact, behavioral change initiatives in organizations may often represent misaligned norms scenarios in which management desires to better align descriptive norms (e.g., reduce perceived prevalence of theft) with injunctive norms (e.g., reinforce existing disapproval of theft). For CWB in particular, the costs of following a descriptive norm of high prevalence may result in long-term reputational costs—especially when the norms are misaligned and high prevalence does not correspond with a high degree of approval. To avoid such costs, the person might be expected to consider the descriptive norm *in relation to* the injunctive norm before performing the behavior. If others approve of a CWB, then it may be safe to focus on the behavior's high prevalence as a guide. However, if others strongly disapprove of the behavior, then the person might resist the heuristic pull exerted from a perception of the behavior being common.

We suggest that considering the norm types in relation to one another should be especially likely for behaviors like CWBs that can have significant long-term reputational consequences when perpetrated. Tardiness, absenteeism, failing to report problems, failing to help colleagues, withholding information, and insulting colleagues represent behaviors that can inflict substantial damage on one's reputation. Although one may observe others performing a CWB with a relatively high degree of frequency, if others disapprove of the CWB, then being "caught" or singled out for performing the behavior could damage one's reputation. Even if it appears as if others do not disapprove of a CWB, one might be expected to pay attention to others' engagement in the CWB in order to ensure that one's perception of the injunctive norm is correct. Thus, we predicted:

H1 Injunctive norm perceptions of CWBs will moderate (enhancing) the positive relationship between descriptive norm perceptions of CWBs and CWB perpetration.

We have suggested that, prior to performing a CWB, individuals simultaneously consider both CWB norms as a form of "double-check" to protect their reputations. If true, then we reasoned that individuals with a strong desire to attain/maintain the approval of their peers (i.e., individuals high in NTB) would be most likely to consider these norms simultaneously prior to engaging in a CWB. Given the potential for CWB to threaten belonging and social acceptance, individuals high in NTB should be especially cautious in "trusting" the information conveyed by a descriptive or injunctive norm in isolation. Thus, the interactive effects of descriptive and injunctive norm perceptions should be most clearly demonstrated among individuals high in NTB.

H2 NTB moderates the two-way interaction between descriptive and injunctive norm perceptions of CWBs on CWB perpetration, resulting in a significant three-way interaction between descriptive norms, injunctive norms, and NTB. Specifically, NTB will strengthen the "aligned norms" effect whereby CWB perpetration will be highest

when NTB, descriptive norm perceptions, and injunctive norm perceptions are simultaneously high.

Study 1 (Pilot)

Prior research (e.g., Lee et al. 2007; Göckeritz et al. 2010) supports the assertion that, while often correlated, descriptive and injunctive norm perceptions represent somewhat distinct constructs that can have independent effects on behavior. However, because the effects of normative perceptions on CWBs had not yet been empirically examined prior to the present research, no existing measures of descriptive and injunctive norm perceptions of CWBs were available. Thus, we developed CWB norm perception scales by modifying an existing measure originally designed to assess the frequency of CWB perpetration. One goal of our pilot study was to obtain evidence that our CWB descriptive and injunctive norm perceptions scales assess separable constructs. An additional goal was to provide an initial test of our norm interaction hypothesis (H1).

Method

Participants and Procedure

Eighty-six individuals currently employed across a range of industries served as participants. All individuals received credit toward an MBA class research requirement for participating. The study involved two data collection sessions, separated in time to reduce the possibility of common method bias (see Ostroff et al. 2002; Podsakoff et al. 2003). Time 1 measures (CWB descriptive and injunctive norm perceptions) were completed during a one-hour lab session along with a variety of other tasks that were part of an unrelated study. Participants completing the Time 1 scales were contacted to complete the Time 2 dependent measure (CWB perpetration) between 2 and 4 weeks later via an online survey. Although our intention was to utilize an even longer interval between study sessions—taking an aggressive approach to minimize the potential for common method bias, practical constraints of the available research participation pool limited the interval to a maximum of 2–4 weeks for this study. Forty-seven individuals from the original sample (54.7%) also completed the CWB perpetration measure.

All participants in the final sample (M_{age} = 25.26) were currently employed either full-time (44.7%) or part-time (55.3%) across a range of industries, including finance/insurance/real estate (12.8%), health care (6.4%), accommodation/food services (17.0%), retail-wholesale (17.0%), professional/technical services (17.0%), public administration (6.4%)—along with a variety of other miscellaneous industries (23.4%). 29.8% reported that they were currently in a management position in their organization.[1]

Measures

Counterproductive Work Behaviors

The frequency of perpetrating CWBs was measured using Fox and Spector's 45-item Counterproductive Work Behavior Checklist (see Spector et al. 2006). Example item content includes, "How often have you done each of the following things on your present job: Tried to look busy while doing nothing"? All items ($\alpha = 0.95$) used a 5-point response scale (1 = *never*, 5 = *every day*).

Perceptions of Counterproductive Work Behavior Norms

Items were adapted from the Counterproductive Work Behavior Checklist (Spector et al. 2006) to reflect perceptions of the descriptive and injunctive norms for each behavior at the person's current workplace. Similar adaptations of existing behavioral frequency scales have been used successfully to measure descriptive and/or injunctive norm perceptions in previous research on behaviors like energy conservation (e.g., Göckeritz et al. 2010; Smith et al. 2012), high-risk drinking (e.g., Lee et al. 2007), adolescent smoking (Zaleski and Aloise-Young 2013) and employee deviance (Tepper et al. 2008). Each norm perceptions scale included 45 items measured on 5-point response scales. *Descriptive* norm items were preceded by the stem, "How common/uncommon is the following behavior at your current workplace?" and measured using a 5-point response scale (1 = *extremely uncommon*, 5 = *extremely common*). Item content was modified to fit this stem and response scale. For example, the item "Daydreamed rather than did your work" was modified to "A person daydreams rather than does their work." *Injunctive* norm items were preceded by the stem, "How strongly do employees disapprove/approve of the following behavior at your workplace?" and measured using a 5-point response scale (1 = *extremely disapprove*, 5 = *extremely approve*). Item content was identical to that of the descriptive norm perception items, which fit both sets of stems and response scales. These adapted scales displayed adequate reliability in this sample (α's = 0.97, 0.96 for descriptive and injunctive norm perceptions, respectively).

[1] Participant gender was not recorded due to a software programming error.

Results and Discussion

As expected, descriptive ($M = 2.33$, SD = 0.72) and injunctive ($M = 1.94$, SD = 0.57) norm perceptions of CWBs were significantly correlated ($r = 0.50$, $p < 0.001$) and both descriptive ($r = 0.31$, $p < 0.001$) and injunctive norm perceptions of CWBs ($n = 47$, $r = 0.67$, $p < 0.001$) were significantly correlated with CWB perpetration ($M = 1.25$, SD = 0.33).

CFA Analyses

To provide evidence that the descriptive and injunctive norm measures captured unique constructs, we conducted confirmatory factor analyses (CFAs) using LISREL 9.2 on the data collected at Time 1 ($N = 86$). The first model contained two latent factors: one for descriptive and one for injunctive norms. Items were randomly allocated across three indicators per latent construct (per Little et al. 2013), and one loading per indicator was fixed to one in order to identify the model. Goodness of fit statistics revealed good fit: Minimum Fit Function χ^2 (8, $N = 86$) = 10.66, $p = 0.23$, RMSEA = 0.062, CFI = 0.996, and SRMR = 0.024. All completely standardized factor loadings were significant, ranging from 0.92 to 0.99.

We also tested a unidimensional CFA in which descriptive and injunctive norm items were modeled as indicators of a single latent variable. The same parceling and model fit procedures were used. Model fit was poor: $\chi^2(9) = 314.20$, $p < 0.001$, RMSEA = 0.628, CFI = 0.528, SRMR = 0.168, and three of the completely standardized factor loadings were relatively low (0.41 to 0.48), despite being significant. Together, these CFAs demonstrate that the two-factor model is most appropriate, as the descriptive and injunctive norm measures capture unique constructs.

Hypothesis Test

We tested the hypothesized two-way interaction between descriptive and injunctive norm perceptions of CWBs using Hayes' (2013) PROCESS macro (Model 1).[2] The overall regression (see Table 1) was significant, $R^2 = 0.51$, $F(3, 43) = 15.08$, $p < 0.001$. As predicted, the two-way interaction between descriptive and injunctive norm perceptions was also significant, $B = 0.21$, SE = 0.09, $t(43) = 2.34$, $p = 0.024$, 95% CI [0.03, 0.38]. This significant interaction (see Fig. 1) was probed following a set of procedures outlined by Hayes and Matthes (2009) to identify values of CWB injunctive norm perceptions at which CWB descriptive norm perceptions were significantly related to CWB perpetration. This analysis indicated that the effects of CWB descriptive norm perceptions were significant at values of CWB injunctive norm perceptions > 3.18, $B = 0.28$, SE = 0.14, $t(43) = 2.02$, $p = 0.050$, 95% CI [0.00, 0.55].

Table 1 Summary of moderated regression analysis for CWBs: Study 1

	B	SE	*t*	*p*
CWB descriptive norm	−0.38	0.16	−2.29	0.027
CWB injunctive norm	−0.23	0.28	−0.83	0.409
Descriptive × injunctive	0.21	0.09	2.34	0.024

$R^2 = 0.051$ ($p < 0.001$)

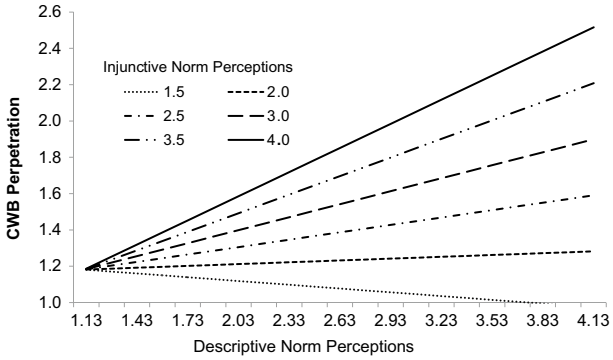

Fig. 1 The relationship between descriptive perceptions of CWBs (higher values indicate greater perceived typicality) and self-reported CWBs at six specific values of injunctive norm perceptions of CWBs (higher values indicate stronger perceived approval): Study 1

Discussion

These results suggest that our modified CWB norm perception scales measure distinct constructs. Additionally, these results offer promising initial support for H1. As hypothesized, descriptive and injunctive norm perceptions of CWBs interacted synergistically to influence CWB perpetration. However, this pilot study is limited in a number of ways. First, the sample size is small and a considerable degree of attrition (45%) occurred between our two data collection sessions. Second, the time interval between data collection sessions (2–4 weeks) was potentially too short—introducing the possibility that recall of norm perceptions responses influenced participants' reports of CWB perpetration. Third,

[2] Variance inflation factors (VIFs) were computed for this and all subsequent regression analyses to investigate the possibility of multicollinearity due to high correlations among our predictor variables—especially our norm perceptions variables. The VIF value for the norms predictors was 1.34 for Study 1 and values in Study 2 ranged from 1.47 to 1.49. None of the predictor variables was associated with a VIF of greater than 1.61 in any of the regression analyses for either study. As VIF values of greater than ten (e.g., Neter et al. 1989) are often described as a cutoff for indications of problematic multicollinearity, these results indicate that multicollinearity among predictor variables was not a problem in our studies.

the study did not include our hypothesized moderating variable (NTB), which prevented us from testing H2.

Study 2

Study 2 was designed to address the limitations of our pilot study and allow for full tests of each of our hypotheses. A limited set of control variables and our hypothesized moderator were included in the initial data collection session, a larger sample size was obtained, the time interval between predictor measures and dependent variable was increased (8–10 weeks), and participant instructions were modified to reduce attrition between time intervals. We utilized a longer time interval between data collection sessions, the longest possible when using the available participation pool, to address a potential limitation of our pilot study results—the possibility that common method bias may have inflated the observed relationships between predictor variables and our criterion variable. Based on consideration that common method bias can attenuate as well as inflate relationships between self-report variables (Lance and Sloan 1993) and Spector's (1977, 2006) arguments that common method bias is often more "urban legend" than "truth," we determined that increasing the time interval from 2 to 4 to 8–10 weeks should be sufficient to reasonably address this potential confound.

Method

Participants and Procedure

To encourage participation in both data collection sessions, the study was explicitly described as requiring completion of two online surveys—one at the beginning and then at the end of the semester. It was suggested that only those individuals interested in completing both surveys should sign up to participate. One hundred and thirteen working MBA students from a large university in the Southwestern U.S. completed the first online survey, which included hypothesis-relevant variables (norm perceptions of CWBs, NTB) and a limited set of individual difference variables demonstrated in past research to predict CWB (Big 5 traits, Machiavellianism) for use as controls.[3] Of the original participants, 97 (85.8%) also completed the second online survey (CWB perpetration) 8–10 weeks later.

The final sample therefore consisted of 97 employed MBA students (49.4% female, $M_{age} = 27.75$) who received credit toward a class research requirement for their involvement in the study. Participants were all currently employed either full-time (47.4%) or part-time (52.6%) across a range of industries, including construction (2.1%), finance/insurance/real estate (8.2%), government (14.4%), health care (5.2%), manufacturing (3.1%), internet (1.0%), retail-wholesale (8.2%), services (10.3%), and non-profit (9.3%)—along with a variety of other miscellaneous industries (38.1%). 21.8% reported that they were currently in a management position in their organization.

Measures

The same measures of CWB perpetration ($\alpha = 0.97$) and norm perceptions of CWBs (α's = 0.97, 0.98 for descriptive and injunctive norm perceptions, respectively) were used as in the pilot study.

Agreeableness, Conscientiousness, and Neuroticism These traits were measured using subscales from the Big Five Inventory (John et al. 1991). Nine items were used to measure both agreeableness (e.g., "I am someone who is helpful and unselfish with others") and conscientiousness (e.g., "I am someone who does things efficiently") and eight items were used to measure neuroticism (e.g., "I am someone who is depressed, blue"). A 5-point response scale was used for all items, anchored by 1 (*disagree strongly*) and 5 (*agree strongly*). The three scales displayed adequate reliability in the current sample (α's = 0.74, 0.83, 0.86 for agreeableness, conscientiousness, and neuroticism, respectively).

Machiavellianism This trait was assessed using Christie and Geis' (1970) 20-item measure. Respondents indicated the extent to which they agreed with a series of statements (e.g., "Anyone who completely trusts anyone else is asking for trouble") using a 5-point response scale, anchored by 1 (*strongly disagree*) and 5 (*strongly agree*). The scale displayed adequate internal consistency in the current sample ($\alpha = 0.77$).

Need to Belong Leary et al.'s (2013) 10-item measure was used to assess the desire to build and maintain social bonds. The Need to Belong Scale consists of statements such as "I want other people to accept me." Respondents reported the degree to which each statement characterized them on a 5-point scale anchored by 1 (*not at all*) and 5 (*extremely*). This scale displayed adequate reliability in the current sample ($\alpha = 0.87$).

[3] Survey completion time restrictions limited our use of control variables to a subset of the personality variables that have been previously demonstrated to predict CWB. Two personality models that have been used in past CWB research include the Five Factor Model and the Dark Triad. Based on prior meta-analytic evidence that agreeableness, conscientiousness, neuroticism, and Machiavellianism are relatively robust predictors of CWB perpetration (e.g., Berry et al. 2007; O'Boyle et al. 2012), we chose to include these as control variables in our study.

Table 2 Study 2 means, standard deviations, and variable intercorrelations

Variable	*M*	SD	1	2	3	4	5	6	7	10
1. Gender	0.46	0.50								
2. Agreeableness	3.81	0.60	−0.10							
3. Conscientiousness	3.98	0.65	−0.12	0.42**						
4. Neuroticism	2.69	0.61	−0.18	− 0.30**	−0.49**					
5. Machiavellianism	2.75	0.44	0.25*	−0.33**	−0.029**	0.20*				
6. CWB descriptive norm	2.07	0.71	0.10	−0.030**	−0.33**	0.18	0.34**			
7. CWB injunctive norm	1.67	0.56	0.02	− 0.30**	−0.33**	0.30**	0.24*	0.51**		
10. Need to belong	3.24	0.77	− 0.34**	0.04	− 0.12	0.41**	0.04	− 0.11	−0.04	
11. CWB perpetration	1.31	0.43	0.04	−0.28*	−0.0.28**	0.15	0.30**	0.56**	0.48**	0.07

*$p \leq 0.05$, **$p \leq 0.01$

Table 3 Summary of hierarchical regression analysis for variables predicting CWB perpetration: Study 2

Variable	Step 1				Step 2			
	B	SE *B*	*t*	*p*	*B*	SE *B*	*t*	*p*
Gender	0.05	0.09	0.55	0.581	0.04	0.08	0.56	0.575
Agreeableness	−0.11	0.08	−1.39	0.168	−0.04	0.07	−0.61	0.543
Conscientiousness	−0.012	0.08	−1.49	0.140	−0.04	0.07	−0.055	0.586
Neuroticism	−0.03	0.08	− 0.36	0.722	−0.05	0.07	−0.069	0.490
Machiavellianism	0.21	0.10	2.05	0.044	0.10	0.09	1.06	0.0293
CWB descriptive norm					0.23	0.06	3.76	<0.0001
CWB injunctive norm					0.19	0.08	2.48	0.015
R^2	0.15				0.39			
F for R^2 change	3.20*				17.05**			

*$p \leq 0.01$, **$p \leq 0.001$

Results and Discussion

Descriptive Statistics

Table 2 presents the means, standard deviations and intercorrelations of study variables. As expected and consistent with the results of Study 1, CWB descriptive norm perceptions were significantly correlated with CWB injunctive norm perceptions ($r=0.51$, $p<0.001$). Further, CWB descriptive ($r=0.56$, $p<0.001$) and injunctive norm perceptions ($r=0.48$, $p<0.001$) were significantly related to CWB perpetration. Among the control variables, agreeableness ($r=-0.28$, $p=0.005$) and conscientiousness ($r=-0.28$, $p=0.006$) were negatively related and Machiavellianism ($r=0.30$, $p=0.003$) was positively related to CWBs. Neither neuroticism ($r=0.15$, $p=0.155$) nor gender (0 = female, 1 = male; $r=-0.04$, $p=0.690$) was significantly related to CWBs.

CFA Analyses

Like Study 1, one- and two-factor CFAs were modeled to ensure that the descriptive and injunctive norm measures captured unique constructs. We used the same parceling and model fit procedures. The two-factor CFA demonstrated good fit: Minimum Fit Function χ^2 (8, $N=97$) = 11.05, $p=0.20$, RMSEA = 0.063, CFI = 0.996, and SRMR = 0.016. All completely standardized factor loadings were significant, ranging from 0.90 to 0.99. However, the unidimensional CFA had poor fit: $\chi^2(9)=317.25$, $p<0.001$, RMSEA = 0.594, CFI = 0.627, SRMR = 0.238, and three of the completely standardized factor loadings were relatively low (0.50 to 0.54). Replicating the results of the pilot study, these results provide evidence that the two norms measures capture unique constructs.

Exploratory Analysis

First, to explore the extent to which the norms perceptions measures might predict unique variance above and beyond our control variables, we conducted a hierarchical regression analysis (see Table 3) that included all control variables in Step 1 and descriptive and injunctive norm perceptions of CWBs in Step 2. In Step 1, the combined effect of the control variables was significant, $F(5, 91)=3.20$, $p=0.010$, predicting 15% of the variance in CWB perpetration. Only

Table 4 Summary of moderated regression analysis for CWBs: Study 2, H2

	B	SE	*t*	*p*
CWB descriptive norm	− 0.48	0.10	− 5.06	< 0.001
CWB injunctive norm	− 0.83	0.13	− 6.24	< 0.001
Descriptive × injunctive	0.40	0.05	8.48	< 0.001
Gender	0.04	0.06	0.62	0.540
Agreeableness	− 0.04	0.05	− 0.71	0.478
Conscientiousness	< − 0.01	0.05	− 0.02	0.987
Neuroticism	− 0.04	0.05	− 0.59	0.560
Machiavellianism	0.11	0.07	1.54	0.127

$R^2 = 0.66$ ($p < 0.001$)

Machiavellianism emerged as a significant individual predictor in this step, $B = 0.21$, SE = 0.10, $p = 0.044$. In Step 2, the addition of descriptive and injunctive norm perceptions improved model prediction, $\Delta F(2,89) = 17.05$, $p < 0.001$, and accounted for an additional 24% of the variance in CWB perpetration. Additionally, both forms of norm perceptions emerged as significant individual predictors. This indicates that, while correlated, the norm perceptions predict unique variance and are therefore somewhat independent in their effects. Additionally, these results indicate that descriptive and injunctive norm perceptions of CWBs predict unique variance in CWB perpetration beyond a set of established personality predictors.

Hypothesis Tests

To test H1, we used Hayes' (2013) PROCESS macro (Model 1) to examine the two-way interaction between descriptive and injunctive norm perceptions of CWBs. Respondent gender (0 = female, 1 = male), agreeableness, conscientiousness, neuroticism, and Machiavellianism were included as controls.[4] The overall regression was significant, $R^2 = 0.66$, $F(8, 88) = 21.50$, $p < 0.001$ (see Table 4). However, most importantly and replicating the results of Study 1, the predicted two-way interaction between descriptive and injunctive norm perceptions was significant, $B = 0.40$, SE = 0.05, $t(88) = 8.48$, $p < 0.001$, 95% CI [0.31, 0.49]. As in Study 1, we probed this interaction by identifying values of CWB injunctive norm perceptions at which CWB descriptive norm perceptions were significantly related to CWB perpetration. This analysis indicated that the effects of descriptive norm perceptions of CWB were significant at values of CWB injunctive norm perceptions > 1.45, $B = 0.10$, SE = 0.10, $t(88) = 1.99$, $p = 0.050$, 95% CI [0.00, 0.19].

Table 5 Summary of moderated regression analysis for CWBs: Study 2, H3

	B	SE	*t*	*p*
CWB descriptive norm	0.33	0.40	0.83	0.409
CWB injunctive norm	0.22	0.54	0.41	0.684
Need to belong	0.44	0.26	1.70	0.094
Descriptive × injunctive	− 0.19	0.21	− 0.91	0.368
Descriptive × need to belong	− 0.24	0.12	− 1.99	0.050
Injunctive × need to belong	− 0.29	0.15	− 1.94	0.055
Descriptive × injunctive × need to belong	0.17	0.06	2.91	0.005
Gender	0.04	0.05	0.84	0.406
Agreeableness	− 0.02	0.05	− 0.50	0.620
Conscientiousness	− 0.02	0.05	− 0.36	0.723
Neuroticism	− 0.07	0.05	− 1.40	0.165
Machiavellianism	0.09	0.06	1.53	0.129

$R^2 = 0.76$ ($p < 0.001$)

Table 6 Descriptive × injunctive norm interaction on CWBs at values of need to belong: Study 2

Need to belong	*B*	SE	*t*	*p*
Low (− 1 SD)	0.24	0.07	3.40	0.001
Mean	0.37	0.04	8.64	< 0.001
High (+ 1 SD)	0.51	0.05	9.31	< 0.001

Next, we used Hayes' (2013) PROCESS macro (Model 3) to test the hypothesized (H2) three-way interaction between CWB descriptive norm perceptions, CWB injunctive norm perceptions, and NTB. This analysis included the main effects of CWB descriptive norm perceptions, CWB injunctive norm perceptions, NTB, all possible two-way interactions between these variables, and the three-way interaction. The analysis also included all previously mentioned control variables.[5] The overall regression was significant, $R^2 = 0.76$, $F(12, 84) = 21.70$, $p < 0.001$ (see Table 5). Supporting H2, the predicted three-way interaction was also significant, $B = 0.17$, SE = 0.06, $t(84) = 2.91$, $p < 0.001$, 95% CI [0.06, 0.29]. Next, we conducted a series of planned interaction probes to better understand the nature of the interaction. First, a simple interaction analysis demonstrated that the two-way interaction between descriptive and injunctive norm perceptions was significant at both one standard deviation above and below the mean of NTB. However, as expected, the magnitude of the two-way interaction effect was stronger at higher than lower levels of NTB (see Table 6).

[4] A test that omitted these controls led to an identical statistical conclusion.

[5] A test that omitted these controls led to an identical statistical conclusion.

Table 7 Conditional effect of descriptive norm perceptions of CWBs on CWB perpetration at levels of need to belong and injunctive norm perceptions: Study 2

Need to belong	CWB injunctive norm	*B*	SE	*t*	*p*
Low (− 1 SD)	Low (− 1 SD)	0.02	0.07	0.23	0.818
Low (− 1 SD)	Mean	0.15	0.06	2.66	0.009
Low (− 1 SD)	High (+ 1 SD)	0.28	0.07	4.06	< 0.001
Mean	Low (− 1 SD)	− 0.0.02	0.05	− 0.36	0.717
Mean	Mean	0.19	0.04	4.67	< 0.001
Mean	High (+ 1 SD)	0.40	0.05	8.60	< 0.001
High (+ 1 SD)	Low (− 1 SD)	− 0.05	0.07	− 0.71	0.470
High (+ 1 SD)	Mean	0.23	0.06	4.11	< 0.001
High (+ 1 SD)	High (+ 1 SD)	0.52	0.06	9.22	< 0.001

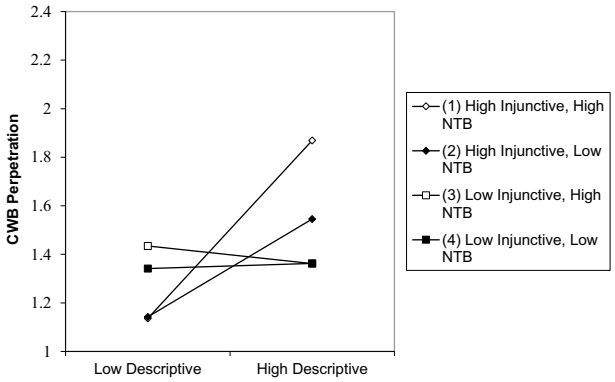

Fig. 2 Three-way interaction between descriptive norm perceptions, injunctive norm perceptions, and NTB: Study 2

Second, we decomposed into simple effects the two-way descriptive × injunctive norm interaction at the mean and at high (+ 1 SD) and low levels of NTB (− 1 SD). As can be seen in Table 7, at the mean of NTB, the frequency of performing CWBs increases as a function of how prevalent the individual perceives such behaviors to be in the organization (descriptive norm), but only when the individual also perceives that others moderately or highly approve of those behaviors (mean or + 1 SD of injunctive norm). When individuals perceived others to highly disapprove of CWBs (− 1 SD), perceptions of the behaviors' prevalence do not significantly affect their likelihood of performing CWBs. This pattern is replicated at low and high levels of NTB, such that the simple effect of descriptive norm perceptions is only significant at moderate and high levels of injunctive norm perceptions. However, as can be seen in Fig. 2 and Table 7, the positive relationship between descriptive norm perceptions and CWB perpetration at moderate and high levels of injunctive norm perceptions becomes stronger as levels of NTB increase. Overall, then, consistent with our hypothesis, the synergistic effects of descriptive and injunctive norm perceptions of CWBs become stronger as NTB increases.

Table 8 Slope differences for three-way interaction

Pair of slopes	*t* value for slope difference	*p* value for slope difference
(1) and (2)	2.819	0.006
(1) and (3)	10.704	0.000
(1) and (4)	6.701	0.000
(2) and (3)	3.517	0.001
(2) and (4)	3.545	0.001
(3) and (4)	− 0.672	0.503

Third, and finally, we conducted post hoc analyses to calculate slope differences tests (Dawson and Richter 2006). The results are reported in Table 8. Of primary relevance to our hypothesis, one comparison focused on the difference in the effect of descriptive norm perceptions when injunctive norm perceptions were high (+ 1 SD) and NTB was simultaneously low (− 1 SD) versus when injunctive norm perceptions were high (+ 1 SD) and NTB was high (+ 1 SD). As expected, these slopes ($B = 0.28$ vs $B = 0.51$) were significantly different, $t = 2.82$, $p = 0.006$. This indicates that, when CWBs are perceived as being relatively approved of by coworkers, the perceived prevalence of CWBs increases the likelihood of CWB perpetration—an effect that is stronger for individuals with high versus low belongingness needs. In contrast, a second focal comparison tested for a difference in the effect of descriptive norm perceptions when injunctive norm perceptions were low (− 1 SD) and NTB was simultaneously low versus high. These slopes ($B = 0.02$ vs $B = -0.05$) were not significantly different, $t = -0.67$, $p = 0.503$. This indicates that, when CWBs are perceived as being relatively disapproved of by coworkers, the perceived prevalence of CWBs is unrelated to CWB perpetration for those with low or high levels of NTB.

General Discussion

The results of our two studies offer unique contributions to the literatures on CWB antecedents and normative social influence. Concerning CWB antecedents, ours are the first studies to demonstrate that perceptions of both the descriptive and injunctive norms for CWB independently predict CWB perpetration. This finding is especially interesting and important given evidence (e.g., Cialdini 2005; Nolan et al. 2008) that individuals routinely underestimate the role that others' actions and beliefs have on their behavior. In Study 2, descriptive and injunctive norms explained an additional 24% of the variance in CWB perpetration beyond the 15%

explained by a set of established personality predictors. Future research attention toward the role of social norms in shaping unethical organizational behavior, such as CWB, appears well deserved given these findings.

The present studies also contribute to the CWB literature by examining CWB through the lens of an established social norms theory (i.e., Focus Theory) and demonstrating that two types of social norms perceptions have somewhat independent, as well as interactive effects on behavior. Past research on social norms as antecedents to CWB has used a variety of different operationalizations of the social norms construct—often conflating descriptive and injunctive norms, examining perceptions of only one norm type, or estimating the norm based on an aggregate of self-reported CWB rather than as the individual's perception of coworker frequency. By demonstrating that descriptive and injunctive norm perceptions of CWB predict CWB perpetration, our research may serve as a bridge connecting CWB research on norms to a broader norms literature derived from the Focus Theory of Normative Conduct. Finally, our finding that NTB enhances the interaction between descriptive and injunctive norm perceptions adds to the literature by demonstrating how forces within the person combine with forces inherent in the situation to explain CWB perpetration.

Our findings contribute to the normative social influence literature by adding to the list of ethics-related behaviors influenced by descriptive and injunctive norms and by suggesting aspects of cognition and motivation associated with their effects. Specifically, in terms of *how* individuals use norm-related information when deciding how to behave, one important question concerns the extent to which the effects of descriptive and injunctive norms are independent or interactive. In other words, does the individual consider descriptive and injunctive norms independently—with each type of norm having a separable effect on behavior, or does the person consider the norms in relation to one another—with each norm having the potential to intensify or undermine the effects of the other? Although prior evidence suggests that the effects of the two norm types are at least somewhat independent (e.g., Buunk and Bakker 1995; Jacobson et al. 2015a; Larimer and Neighbors 2003), only three prior studies had examined the potentially interactive effects of descriptive and injunctive norms on behavior.

Consistent with Lee et al. (2007) and Göckeritz et al. (2010), who examined interactive effects of norms on drinking behavior and energy conservation behavior (respectively), perceptions of descriptive and injunctive norms for CWBs interacted in their effects on CWB perpetration in both of our studies. CWB perpetration was most frequent when CWBs were perceived as both common and approved of by peers (i.e., the norms were "aligned"). These results suggest that, for unethical behavior like CWBs, individuals may consider each norm in relation to the other prior to taking action. Potentially, considering each type of normative information in conjunction serves as a "double-check" against the other, helping to ensure that performing the CWB will not adversely affect the individual's reputation. For example, even if tardiness is somewhat frequent, the majority of coworkers may privately disapprove of such behavior. Alternatively, although it may appear that one's coworkers do not disapprove of tardiness, the fact that they are rarely tardy could signal that one has misjudged the level of disapproval for tardiness.

Another open question about the effects of norms concerns the extent to which motivational dynamics may affect the process by which norms influence behavior. Consistent with the idea that individuals consider the CWB norms in relation to one another due to reputational concerns, we found that the interactive effects of CWB norms were strongest among individuals with high concern for their social standing (i.e., high NTB). By demonstrating how a motivational individual difference can affect the process of normative social influence, this finding helps to illustrate the active nature by which the individual seeks out and uses social norms to guide their behavior. Rather than passively responding to norms, these findings provide support for the idea (Jacobson et al. 2015b) that individuals actively, but not necessarily consciously, use descriptive and injunctive norms as important signposts that assist them in navigating the social world. Further, these findings illustrate that individuals with different types of motivations or different magnitudes of these drives may actually use norms in somewhat different ways. For example, those who care little about social approval may possibly consider the two forms of normative information in a relatively independent manner whereas those strongly driven by reputational considerations may be more attentive to the extent of alignment/misalignment of the norms.

Limitations

One limitation of our studies surrounds the use of self-report data when assessing CWB and, more specifically, the extent to which social desirability bias among self-reporters could lead to an underestimate of CWB prevalence. Although the self-reported ratings of CWB obtained in our studies are similar in magnitude to those reported in other studies that have successfully used this measure (e.g., Fida et al. 2015; Iliescu et al. 2015; Spector et al. 2006), these mean scores remain low (Ms = 1.25, 1.31). This restricted range in our dependent variable presents the viable possibility of attenuation in the relationships we report involving this variable—perhaps underestimating the role of social norms in guiding CWB. Future research involving CWB self-report may profit from inclusion of social desirability measures to provide an estimate of

the extent of this bias and from possible modifications to either participant instructions or the context in which surveys are completed (e.g., solo rather than group administration) to reduce the possible effects of social desirability.

Despite this possible limitation, it also important to note that Berry et al. (2012) have provided meta-analytic evidence that self and other reports of CWB provide comparable and valid estimates of the phenomenon. Specifically, their analysis demonstrated moderate to strong correlations between self and other reports of CWB, similar patterns of relationships of the two ratings types with common correlates (e.g., Big 5), a tendency for self-raters to actually report a greater magnitude of CWB perpetration than other-raters of them, and little incremental variance provided by other-reports over self-reports in relationships with common correlates. This evidence suggests that social desirability may not play a major role in self-reports of CWB and that the low mean scores often obtained in both self and other reports of the phenomenon reflect objectively low frequencies of these behaviors in the workplace.

Another concern stemming from our reliance on self-report data is the possibility of common method bias. To address this possibility, we assessed our independent and dependent variables at two different time periods—a strategy demonstrated to reduce the impact of common method bias (Ostroff et al. 2002; Podsakoff et al. 2003). Moreover, common method variance is likely to deflate interaction term estimates (Siemsen et al. 2010)—which should bolster confidence in the results of our moderation tests.

Another potential limitation with the current study is that the sample consisted of employed MBA students recruited from university classes. While generalizability is a common concern when utilizing student samples, the current samples are somewhat unique from other student samples in that nearly half of the individuals in each sample were employed full-time, a range of different industries was represented, and the participants were older than traditional undergraduate students. Additionally, prior CWB studies have found little evidence of differences in responses between student and non-student working samples (e.g., Fox et al. 2001).

Finally, although each of our studies contained relatively small samples, participants were employed in a variety of occupations across different organizations and industries. This eliminates the possibility that the results were due to sampling a specific organization that is unique in terms of the role of CWB norm perceptions in guiding CWB perpetration. Rather, because these results were obtained even though the sample sizes were relatively small and despite the fact that participants were reflecting on different workplaces should bolster confidence in the robustness and generalizability of these effects.

Future Research

These results suggest a number of fruitful areas for future research. One profitable domain could be to explore factors that affect perceptions of CWB norms. Specific individual differences like agreeableness, integrity-related values, or past experiences as victims of CWB could bias these perceptions. Additionally, situational factors like witnessing a vivid act of CWB or being exposed to gossip about CWB could also affect CWB norm perceptions. A better understanding of the factors that influence CWB norm perceptions promises to enhance the ability to predict CWB perpetration and to craft interventions to reduce CWB.

An additional avenue for applied research is examining the extent to which norm perceptions deviate from the actual levels of prevalence and approval for CWBs in organizational contexts. Identifying the presence and size of discrepancies would indicate the most fruitful areas for social norms marketing interventions—interventions that could then be empirically assessed in terms of their efficacy in reducing CWB perpetration. In gaining a greater understanding of CWB, studies could then examine how injunctive norms of approval/disapproval can be utilized to enhance prosocial rule-breaking—deliberate violations of formal policy or regulation with the intent of improving the welfare of the organization or an organizational stakeholder (Morrison 2006).

These results also reinforce the importance of exploring the psychological mechanisms underlying normative social influence. Consistent with previous research, the present studies indicate that descriptive and injunctive norms have separable effects on behavior and influence the individual via different psychological routes. Although emerging research (e.g., Jacobson et al. 2011, 2015b; Kredentser et al. 2012; White and Simpson 2013) has helped to clarify the different processes involved in the influence of descriptive versus injunctive norms, much still remains unknown regarding the cognitive and motivational mechanisms by which they affect behavior.

Practical Implications

CWB is becoming increasingly common and costly for organizations (Coffin 2003; Mount et al. 2006; Vardi and Weitz 2016). Indeed, certain forms of CWB such as incivility are becoming commonplace in the public sphere (Emerson et al. 2015). Understanding the etiology of CWB is critical to devising strategies to mitigate these unethical behaviors. The present studies have clear practical implications in this regard. For example, managers

may also consider relatively minor changes to policy and practices to emphasize the desired CWB norms—when possible, publicly reinforcing disapproval for specific CWBs while also highlighting a low degree of prevalence (e.g., discussing in a team meeting how, despite the fact that instances of tardiness were relatively low in frequency over the past month, these admittedly small number of cases still had negative effects on team productivity and morale). Changes to policy, such as instituting zero tolerance policies (Aquino and Douglas 2003) could also help to reduce the perceived prevalence of specific CWBs while also emphasizing the clear organizational disapproval for these behaviors.

Additionally, these results provide further support for the idea that organizational leaders and other influential employees should pay careful attention to the observable behaviors they model at work. This is consistent with evidence that leaders play key roles in creating and modeling civil behavior that can strengthen positive organizational norms and supplant negative ones—a concept consistent with social learning theory (Mayer et al. 2009; O'Leary-Kelly et al. 1996). In particular, ethical leaders demonstrate "normatively appropriate conduct through personal actions and interpersonal relationships" and "promot[e]… such conduct to followers through two-way communication, reinforcement, and decision-making" (Brown et al. 2005, p. 120). Ethical leaders therefore actively attempt to reduce the perceived prevalence and acceptance of CWB (as well as increase the perceived prevalence and approval for citizenship behaviors) across organizational levels (Mayer et al. 2009; Schaubroeck et al. 2012).

The high degree of influence organizational leaders possess in their potential to model behavior suggests that selection procedures for supervisory positions should focus on both past behaviors as well as traits associated with low degrees of CWB. Organizations should therefore consider carefully documenting any perpetration of CWB among employees as part of the performance review process. When attempting to promote from within the organization, this information should be given special consideration to avoid the potential of promoting an individual who may, though the process of modeling, give subordinates the impression that CWBs are either approved of or common. Relevant Big Five traits (agreeableness, conscientiousness, and neuroticism; DeShong et al. 2015), the Dark Triad (DeShong et al. 2015), locus of control (Sprung and Jex 2012), and integrity/character (Fine et al. 2010; Ones et al. 1993) represent traits predictive of CWB perpetration that could be considered during selection/promotion processes as a way of reducing the likelihood of hiring managers who exhibit, and therefore model, CWB.

On a more extensive scale, social norms marketing interventions might be considered to reduce CWB. Social norms marketing interventions (e.g., Moreira et al. 2009) have been successfully employed in a number of contexts to promote more socially adaptive behaviors (e.g., reducing binge drinking, decreasing smoking, encouraging bystander intervention in school bullying incidents: Borsari and Carey 2003; Linkenbach and Perkins 2003; Perkins et al. 2011, respectively). These interventions use persuasive messaging to correct common misconceptions about the prevalence and approval for behavior, perceptions that are often overestimated in the case of negative social behaviors and underestimated in the case of positive social behaviors (Miller and Prentice 2016). Given the evidence from our studies, social norms marketing techniques hold considerable promise for reducing CWB perpetration in organizations.

Conclusion

Although the typical layperson underestimates normative social influence, the results of our studies suggest that it would be unwise for managers and organizational leaders to fall prey to this bias. We demonstrate that counterproductive behaviors in organizations like lying, cheating, stealing, abusing, insulting, and malingering are, in a sense, contagious—influenced by perceived descriptive and injunctive norms for these behaviors among colleagues. Further, we demonstrate that CWB norms are more influential among individuals high in NTB—illustrating a person-by-environment interaction that helps to clarify the motivational basis for the effect. Fortunately, scientific investigations of normative social influence have helped to develop possible remedies—applied persuasive interventions that promise to change normative perceptions as a way of changing behavior. Exploring the efficacy of such interventions in organizations represents an important domain for future CWB scholarship.

Acknowledgements We wish to express deep appreciation to the research assistants of UNM's Anderson Behavioral Laboratory for their help with data collection.

Compliance with Ethical Standards

Conflict of interest All of the authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

References

Aquino, K., & Douglas, S. (2003). Identity threat and antisocial behavior in organizations: The moderating effects of individual differences, aggressive modeling and hierarchical status. *Organizational Behavior and Human Decision Processes, 90*, 195–208.

Association of Certified Fraud Examiners (ACFE) (2016). *Report to the nations on occupational fraud and abuse: 2016 global fraud study*. Retrieved from ACFE Website: https://s3-us-west-2.amazonaws.com/acfepublic/2016-report-to-the-nations.pdf.

Aubé, C., & Rousseau, V. (2014). Counterproductive behaviors. *Team Performance Management, 20*, 202–220.

Bacharach, S. B., Bamberger, P. A., & Sonnenstuhl, W. J. (2002). Driven to drink: Managerial control, work-related risk factors, and employee problem drinking. *Academy of Management Journal, 43*(4), 637–658.

Berry, C. M., Carpenter, N. C., & Barratt, C. L. (2012). Do other-reports of counterproductive work behavior provide an incremental contribution over self-reports? A meta-analytic comparison. *Journal of Applied Psychology, 97*(3), 613–636.

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*(2), 410–424.

Bicchieri, C. (2006). *The grammar of society: The nature and dynamics of social norms*. Cambridge: Cambridge University Press.

Bobek, D. D., Hageman, A. M., & Kelliher, C. F. (2013). Analyzing the role of social norms in tax compliance behavior. *Journal of Business Ethics, 115*, 451–468.

Borsari, B., & Carey, K. B. (2003). Descriptive and injunctive norms in college drinking: A meta-analytic integration. *Journal of Studies on Alcohol, 64*(3), 331–341.

Bowling, N. A., & Burns, G. N. (2015). Sex as a moderator of the relationship between predictor variables and counterproductive work behavior. *Journal of Business & Psychology, 30*, 193–205.

Brown, M. E., Treviño, L. K., & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes, 97*(2), 117–134.

Burchell, K., Rettie, R., & Patel, K. (2013). Marketing social norms: Social marketing and the 'social norm approach'. *Journal of Consumer Behaviour, 12*(1), 1–9.

Buunk, B. P., & Bakker, A. B. (1995). Extradyadic sex: The role of descriptive and injunctive norms. *Journal of Sex Research, 32*(4), 313–318.

Cahan, S. F., Chen, C., & Chen, L. (2017). Social norms and CSR performance. *Journal of Business Ethics, 145*, 493–508.

Chen, P. Y., & Spector, P. E. (1992). Relationships of work stressors with aggression, withdrawal, theft and substance use: An exploratory study. *Journal of Occupational and Organizational Psychology, 65*, 177–184.

Christie, R., & Geis, F. (1970). *Studies in Machiavellianism*. New York: Academic Press.

Cialdini, R. B. (2005). Basic social influence is underestimated. *Psychological Inquiry, 16*(4), 158–161.

Cialdini, R. B. (2009). *Influence: Science and practice* (5th edn.). Boston: Allyn & Bacon.

Cialdini, R. B. (2012). The focus theory of normative conduct. In P. van Lange, A. Kruglanski & T. Higgins. (Eds.), *Handbook of theories of social psychology (Vol* (2, pp. 295–312). London: Sage.

Cialdini, R. B., & Goldstein, N. J. (2004). Social influence: Compliance and conformity. *Annual Review of Psychology, 55*, 591–621.

Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology, 58*(6), 1015–1026.

Cialdini, R. B., & Trost (1998). Social influence: Social norms, conformity, and compliance. In D. T. Gilbert, S. T. Fiske & G. Lindzey (Eds.), *The handbook of social psychology* (pp. 151–192). New York: McGraw-Hill.

Coffin, B. (2003). Breaking the silence on white collar crime. *Risk Management, 50*(9), 8–9.

Cohen, J., Manzon, G. B., & Zamora, V. L. (2015). Contextual and individual dimensions of taxpayer decision making. *Journal of Business Ethics, 126*, 631–647.

Dawson, J. F., & Richter, A. W. (2006). Probing three-way interactions in moderated multiple regression: Development and application of a slope difference test. *Journal of Applied Psychology, 91*(4), 917–926.

De Cremer, D., & Leonardelli, G. J. (2003). Cooperation in social dilemmas and the need to belong: The moderating effect of group size. *Group Dynamics: Theory, Research, and Practice, 7*(2), 168–174.

De Groot, J. I., Abrahamse, W., & Jones, K. (2013). Persuasive normative messages: The influence of injunctive and personal norms on using free plastic bags. *Sustainability, 5*(5), 1829–1844.

DeShong, H. L., Grant, D. M., & Mullins-Sweatt, S. N. (2015). Comparing models of counterproductive workplace behaviors: The five-factor model and the dark triad. *Personality and Individual Differences, 74*, 55–60.

Deutsch, M., & Gerard, H. B. (1955). A study of normative and informational social influences upon individual judgment. *The Journal of Abnormal and Social Psychology, 51*(3), 629–636.

Dietz, J., Robinson, S. L., Folger, R., Baron, R. A., & Schulz, M. (2003). The impact of community violence and an organization's procedural justice climate on workplace aggression. *Academy of Management Journal, 46*(3), 317–326.

Emerson, K., Joosse, A. P., Dukes, F., Willis, W., & Cowgill, K. H. (2015). Disrupting deliberative discourse: Strategic political incivility at the local level. *Conflict Resolution Quarterly, 32*(3), 299–324.

Fehr, E., & Fischbacher, U. (2004). Third-party punishment and social norms. *Evolution and Human Behavior, 25*, 63–87.

Fida, R., Paciello, M., Tramontano, C., Fontaine, R. G., Barbaranelli, C., & Farnese, M. L. (2015). An integrative approach to understanding counterproductive work behavior: The roles of stressors, negative emotions, and moral disengagement. *Journal of Business Ethics, 130*(1), 131–144.

Fine, S., Horowitz, I., Weigler, H., & Basis, L. (2010). Is good character good enough? The effects of situational variables on the relationship between integrity and counterproductive work behaviors. *Human Resource Management Review, 20*(1), 73–84.

Fox, S., & Spector, P. E. (1999). A model of work frustration-aggression. *Journal of Organizational Behavior, 20*, 915–931.

Fox, S., Spector, P. E., & Miles, D. (2001). Counterproductive work behavior (CWB) in response to job stressors and organizational justice: Some mediator and moderator tests for autonomy and emotions. *Journal of Vocational Behavior, 59*, 291–309.

Gillatly, I. R. (1995). Individual and group determinants of employee absenteeism: Test of a causal model. *Journal of Organizational Behavior, 16*, 469–485.

Glomb, T. M., & Liao, H. (2003). Interpersonal aggression in work groups: Social influence, reciprocal, and individual effects. *Academy of Management Journal, 46*, 486–496.

Göckeritz, S., Schultz, P., Rendón, T., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2010). Descriptive normative beliefs and conservation behavior: The moderating roles of personal involvement and injunctive normative beliefs. *European Journal of Social Psychology, 40*(3), 514–523.

Goldstein, N. J., & Cialdini, R. B. (2011). Managing normative influences in organizations. In D. De Cremer, R. van Dick & J. K. Murnighan (Eds.), *Social Psychology and Organizations* (pp. 67–85). New York: Routledge.

Goldstein, N. J., Cialdini, R. B., & Griskevicius, V. (2008). A room with a viewpoint: Using social norms to motivate environmental conservation in hotels. *Journal of Consumer Research, 35*(3), 472–482.

Greenberg, J. (1990). Employee theft as a reaction to underpayment inequity: The hidden cost of pay cuts. *Journal of Applied Psychology, 75*, 561–568.

Greve, H. R., Palmer, D., & Pozner, J. E. (2010). Organizations gone wild: The causes, processes, and consequences of organizational misconduct. *Academy of Management Annals, 4*(1), 53–107.

Griskevicius, V., Goldstein, N. J., Mortensen, C. R., Cialdini, R. B., & Kenrick, D. T. (2006). Going along versus going alone: When fundamental motives facilitate strategic (non) conformity. *Journal of Personality and Social Psychology, 91*(2), 281–294.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York: Guilford Press.

Hayes, A. F., & Matthes, J. (2009). Computational procedures for probing interactions in OLS and logistic regression: SPSS and SAS implementations. *Behavior Research Methods, 41*, 924–936.

Hershcovis, M. S., Turner, N., Barling, J., Arnold, K. A., Dupré, K. E., Inness, M., … Sivanathan, N. (2007). Predicting workplace aggression: A meta-analysis. *Journal of Applied Psychology, 92*(1), 228–238.

Hogg, M. A. (2010). Influence and leadership. In S. T. Fiske, D. T. Gilbert & G. Lindzey (Eds.), *The Handbook of Social Psychology* (5th edn., pp. 1166–1207). New York: Wiley.

Iliescu, D., Ispas, D., Sulea, C., & Ilie, A. (2015). Vocational fit and counterproductive work behaviors: A self-regulation perspective. *Journal of Applied Psychology, 100*(1), 21–39.

Ivancevich, J. M., Duening, T. N., Gilbert, J. A., & Konopaske, R. (2003). Deterring white-collar crime. *Academy of Management Executive, 17*, 114–127.

Jacobson, R. P., Jacobson, K. J. L., & Hood, J. N. (2015a). Norm perceptions predict citizenship behaviors. *Journal of Managerial Psychology, 30*(8), 894–908.

Jacobson, R. P., Mortensen, C. R., & Cialdini, R. B. (2011). Bodies obliged and unbound: differentiated response tendencies for injunctive and descriptive social norms. *Journal of Personality and Social Psychology, 100*(3), 433.

Jacobson, R. P., Mortensen, C. R., Jacobson, K. J. L., & Cialdini, R. B. (2015b). Self-control moderates the effectiveness of influence attempts highlighting injunctive social norms. *Social Psychological and Personality Science, 6*(6), 718–726.

Jermier, J. M., Knights, D., & Nord, W. (1994). *Resistance and power in organizations*. London: Routledge.

John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The big five inventory—Versions 4a and 54*. Berkeley: University of California, Berkeley, Institute of Personality and Social Research.

Kallgren, C. A., Reno, R. R., & Cialdini, R. B. (2000). A focus theory of normative conduct: When norms do and do not affect behavior. *Personality and Social Psychology Bulletin, 26*(8), 1002–1012.

Kredentser, M. S., Fabrigar, L. R., Smith, S. M., & Fulton, K. (2012). Following what people think we should do versus what people actually do elaboration as a moderator of the impact of descriptive and injunctive norms. *Social Psychological and Personality Science, 3*(3), 341–347.

Lance, C. E., & Sloan, C. E. (1993). Relationships between overall and life facet satisfaction: A multitrait-multimethod (MTMM) study. *Social Indicators Research, 30*(1), 1–15.

Larimer, M. E., & Neighbors, C. (2003). Normative misperception and the impact of descriptive and injunctive norms on college student gambling. *Psychology of Addictive Behaviors, 17*(3), 235.

Lau, V. C. S., Au, W. T., & Ho, J. M. C. (2003). A qualitative and quantitative review of antecedents of counterproductive behavior in organizations. *Journal of Business and Psychology, 18*(1), 73–99.

Leary, M. R., Kelly, K. M., Cottrell, C. A., & Schreindorfer, L. S. (2013). Construct validity of the need to belong scale: Mapping the nomological network. *Journal of Personality Assessment, 95*(6), 610–624.

Lee, C. M., Geisner, I. M., Lewis, M. A., Neighbors, C., & Larimer, M. E. (2007). Social motives and the interaction between descriptive and injunctive norms in college student drinking. *Journal of Studies on Alcohol and Drugs, 68*(5), 714–721.

Levine, E. L. (2010). Emotion and power (as social influence): Their impact on organizational citizenship and counterproductive individual and organizational behavior. *Human Resource Management Review, 20*(1), 4–17.

Linkenbach, J. W., & Perkins, H. W. (2003). Most of us are tobacco free: An eight-month social norms campaign reducing youth initiation of smoking in Montana. In W. Perkins (Ed.), *The social norms approach to preventing school and college age substance abuse: A handbook for educators, counselors, and clinicians* (pp. 224–234). San Francisco: Jossey-Bass.

Litt, D. M., Lewis, M. A., Linkenbach, J. W., Lande, G., & Neighbors, C. (2014). Normative misperceptions of peer seat belt use among high school students and their relationship to personal seat belt use. *Traffic injury prevention, 15*(7), 748–752.

Little, T. D., Rhemtulla, M., Gibson, K., & Schoemann, A. M. (2013). Why the items versus parcels controversy needn't be one. *Psychological Methods, 18*(3), 285–300.

Martinko, M. J., Gundlach, M. J., & Douglas, S. C. (2002). Toward an integrative theory of counterproductive workplace behavior: A causal reasoning perspective. *International Journal of Selection and Assessment, 10(1-2)*, 36–50.

Mayer, D. M., Kuenzi, M., Greenbaum, R., Bardes, M., & Salvador, R. B. (2009). How low does ethical leadership flow? Test of a trickle-down model. *Organizational Behavior and Human Decision Processes, 108*(1), 1–13.

Meterko, M., Osatuke, K., Mohr, D., Warren, N., & Dyrenforth, S. (2007). *Civility: The development and psychometric assessment of a survey measure*. Paper presented at the Academy of Management, Philadelphia, PA.

Miller, D. T., & Prentice, D. A. (1996). The construction of social norms and standards. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social Psychology: Handbook of Basic Principles* (pp. 799–829). New York: Guilford Press.

Miller, D. T., & Prentice, D. A. (2016). Changing norms to change behavior. *Annual Review of Psychology, 67*, 339–361.

Moreira, M. T., Smith, L. A., & Foxcroft, D. (2009). Social norms interventions to reduce alcohol misuse in University or College students. *Cochrane Database of Systematic Reviews, 3*, CD006748.

Morris, M. W., Hong, Y. Y., Chiu, C. Y., & Liu, Z. (2015). Normology: Integrating insights about social norms to understand cultural dynamics. *Organizational Behavior and Human Decision Processes, 129*, 1–13.

Morrison, E. W. (2006). Doing the job well: An investigation of Pro-social rule breaking. *Journal of Management, 32*(1), 5–28.

Mount, M., Ilies, R., & Johnson, E. (2006). Relationship of personality traits and counterproductive work behaviors: The mediating effects of job satisfaction. *Personnel Psychology, 59*(3), 591–622.

Neighbors, C., Geisner, I. M., & Lee, C. M. (2008). Perceived marijuana norms and social expectancies among entering college student marijuana users. *Psychology of Addictive Behaviors, 22*(3), 433.

Neter, J., Wasserman, W., & Kutner, M. H. (1989). *Applied linear regression models*. Homewood: Irwin.

Neuman, J. H., & Baron, R. A. (1998). Workplace violence and workplace aggression: Evidence concerning specific forms, potential causes, and preferred targets. *Journal of Management, 24*(3), 391–419.

Nielsen, M. B., & Einarsen, S. (2012). Outcomes of exposure to workplace bullying: A meta-analytic review. *Work & Stress, 26*(4), 309–332.

Nolan, J. M., Schultz, P. W., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2008). Normative social influence is underdetected. *Personality and Social Psychology Bulletin, 34*(7), 913–923.

O'Boyle, E. H., Forsyth, D. R., Banks, G. C., & McDaniel, M. A. (2012). A meta-analysis of the Dark Triad and work behavior: A social exchange perspective. *Journal of Applied Psychology, 97*(3), 557–579.

O'Leary-Kelly, A. M., Griffin, R. W., & Glew, D. J. (1996). Organization-motivated aggression: A research framework. *Academy of Management Review, 21*(1), 225–253.

Ones, D. S., Viswesvaran, C., & Schmidt, F. L. (1993). Comprehensive meta-analysis of integrity test validities: Findings and implications for personnel selection and theories of job performance. *Journal of Applied Psychology, 78*(4), 679–703.

Ostroff, C., Kinicki, A. J., & Clark, M. A. (2002). Substantive and operational issues of response bias across levels of analysis: An example of climate-satisfaction relationships. *Journal of Applied Psychology, 87*, 355–368.

Panagopoulos, C., Larimer, C. W., & Condon, M. (2014). Social pressure, descriptive norms, and voter mobilization. *Political Behavior, 36*(2), 451–469.

Paulin, D., & Griffin, B. (2017). Team Incivility Climate Scale: Development and validation of the team-level incivility climate construct. *Group & Organization Management, 42*(3), 315–345.

Perkins, H. W., Craig, D. W., & Perkins, J. M. (2011). Using social norms to reduce bullying: A research intervention among adolescents in five middle schools. *Group Processes & Intergroup Relations, 14*(5), 703–722.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903.

Rego, A., & Souto, S. (2009). Does the need to belong moderate the relationship between perceptions of spirit of camaraderie and employees' happiness? *Journal of Occupational Health Psychology, 14*(2), 148–164.

Restubog, S. L. D., Scott, K. L., & Zagenczyk, T. J. (2011). When distress hits home: The role of contextual factors and psychological distress in predicting employees' response to abusive supervision. *Journal of Applied Psychology, 96*(4), 713–729.

Rimal, R. N., & Real, K. (2005). How behaviors are influenced by perceived norms a test of the theory of normative social behavior. *Communication Research, 32*(3), 389–414.

Robinson, S. L., & O'Leary-Kelly, A. M. (1998). Monkey see, monkey do: The influence of work groups on antisocial behavior of employees. *Academy of Management Journal, 41*, 658–672.

Schaubroeck, J. M., Hannah, S. T., Avolio, B. J., Kozlowski, S. W., Lord, R. G., Treviño, L. K., … Peng, A. C. (2012). Embedding ethical leadership within and across organization levels. *Academy of Management Journal, 55*(5), 1053–1078.

Schultz, P. W., Kazian, A. M., & Zaleski, A. C. (2008). Using normative social influence to promote conservation among hotel guests. *Social Influence, 3*(1), 4–23.

Schultz, P. W., Nolan, J. M., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2007). The constructive, destructive, and reconstructive power of social norms. *Psychological Science, 18*(5), 429–434.

Sherif, M. (1936). *The psychology of social norms*. New York: Harper.

Siemsen, E., Roth, A., & Oliveira, P. (2010). Common method bias in regression models with linear, quadratic, and interaction effects. *Organizational Research Methods, 13*(3), 456–476.

Simha, A., & Cullen, J. B. (2012). Ethical climates and their effects on organizational outcomes: Implications from the past and prophecies for the future. *The Academy of Management Perspectives, 26*(4), 20–34.

Skarlicki, D. P., & Folger, R. (1997). Retaliation in the workplace: The roles of distributive, procedural, and interactional justice. *Journal of Applied Psychology, 82*, 434–443.

Skarlicki, D. P., Folger, R., & Tesluk, P. (1999). Personality as a moderator in the relationship between fairness and retaliation. *Academy of Management Journal, 42*, 100–110.

Smith, J. R., Louis, W. R., Terry, D. J., Greenaway, K. H., Clarke, M. R., & Cheng, X. (2012). Congruent or conflicted? The impact of injunctive and descriptive norms on environmental intentions. *Journal of Environmental Psychology, 32*(4), 353–361.

Spector, P. E. (1977). What to do with significant multivariate effects in multivariate analyses of variance. *Journal of Applied Psychology, 62*(2), 158–163.

Spector, P. E. (1998). A control theory of the job stress process. In C. L. Cooper (Ed.), *Theories of organizational stress* (pp. 153–169). Oxford: Oxford University Press.

Spector, P. E. (2006). Method variance in organizational research: Truth or urban legend? *Organizational Research Methods, 9*(2), 221–232.

Spector, P. E., Coulter, M. L., Stockwell, H. G., & Matz, M. W. (2007). Perceived violence climate: A new construct and its relationship to workplace physical violence and verbal aggression, and their potential consequences. *Work & Stress, 21*(2), 117–130.

Spector, P. E., Fox, S., Penney, L. M., Bruursema, K., Goh, A., & Kessler, S. (2006). The dimensionality of counterproductivity: Are all counter-productive behaviors created equal? *Journal of Vocational Behavior, 68*, 446–460.

Sprung, J. M., & Jex, S. M. (2012). Work locus of control as a moderator of the relationship between work stressors and counterproductive work behavior. *International Journal of Stress Management, 19*(4), 272–291.

Tepper, B. J., Henle, C. A., Lambert, L. S., Giacalone, R. A., & Duffy, M. K. (2008). Abusive supervision and subordinates organizational deviance. *Journal of Applied Psychology, 93*(4), 721–732.

Tesser, A., Campbell, J., & Mickler, S. (1983). The role of social pressure, attention to the stimulus, and self-doubt in conformity. *European Journal of Social Psychology, 13*(3), 217–233.

Vardi, Y., & Weitz, E. (2016). *Misbehavior in organizations: A dynamic approach*. New York: Routledge.

Walsh, B. M., Magley, V. J., Reeves, D. W., Davies-Schrils, K. A., Marmet, M. D., & Gallus, J. A. (2012). Assessing work-group norms for civility: The development of the Civility Norms Questionnaire-Brief. *Journal of Business and Psychology, 27*, 407–420.

White, K., & Simpson, B. (2013). When do (and don't) normative appeals influence sustainable consumer behaviors? *Journal of Marketing, 77*(2), 78–95.

Yang, J., & Treadway, D. C. (2018). A social influence interpretation of workplace ostracism and counterproductive work behavior. *Journal of Business Ethics, 148*(4), 879–891.

Yang, L. Q., Caughlin, D. E., Gazica, M. W., Truxillo, D. M., & Spector, P. E. (2014). Workplace mistreatment climate and potential employee and organizational outcomes: A meta-analytic review from the target's perspective. *Journal of Occupational Health Psychology, 19*(3), 315–335.

Zaleski, A. C., & Aloise-Young, P. A. (2013). Using peer injunctive norms to predict early adolescent cigarette smoking intentions. *Journal of Applied Social Psychology, 43*(S1), E124–E131.