Journal of Organizational Behavior

Research Article

Journal of Organizational Behavior, J. Organiz. Behav. **34**, 492–519 (2013)
Published online 14 September 2012 in Wiley Online Library (wileyonlinelibrary.com) **DOI**: 10.1002/job.1825

Effects of leadership consideration and structure on employee perceptions of justice and counterproductive work behavior

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Summary In this paper, we examine the effects of leadership consideration and structure on two important organizational behavior outcomes: employee perceptions of organizational justice and counterproductive work behavior (CWB). We examine these effects across two studies using multisource data (employees and supervisors in Study 1; employees and coworkers in Study 2). Results reveal that consideration and structure have distinct effects across distributive, procedural, informational, and interpersonal dimensions of justice. Moreover, results suggest that consideration and structure have multiplicative effects on employee CWB. We find the highest levels of CWB among employees of supervisors who exhibit high structure and low consideration. Interestingly, results also suggest that the effects of structure on CWB may be curvilinear (u-shaped) such that moderate levels of structure are associated with the lowest levels of CWB. We discuss implications for future consideration and structure research as well as managerial practice. Copyright © 2012 John Wiley & Sons, Ltd.

Keywords: leadership; consideration; structure; justice; counterproductive behavior

Extensive research spearheaded by scholars at Ohio State University isolated two fundamental dimensions of leadership—consideration and structure (Hemphill, 1957; Fleishman, 1951, 1957). Consideration is characterized by behaviors that indicate one is friendly and approachable, respects the input of others, and treats group members as equals (Fleishman, 1973). Leadership structure is exemplified by behaviors that help delineate group roles, define and enforce performance expectations, and establish clear channels of communication with subordinates (Fleishman, 1973). These leadership constructs once dominated the literature but were completely abandoned by the late 1980s (Judge, Piccolo, & Ilies, 2004). In large part, the demise of consideration and structure was precipitated by faulty conclusions drawn from qualitative literature reviews as well as methodological shortcomings common in leadership research at the time (Judge et al., 2004). For instance, Fleishman (1998) concluded that the full effects of consideration and structure were obscured because scholars had focused too much on simple main effects and failed to consider nonlinear relationships (e.g., multiplicative and curvilinear) involving these dimensions. Clarifying the importance of these constructs, an extensive meta-analytic review by Judge et al. (2004) uncovered impressive validity estimates for consideration and structure that generalized across time, data source, and criteria.

Although researchers have concentrated on more dramatic forms of leadership (e.g., abusive, charismatic, and visionary) in recent years, there is good reason to refocus attention toward consideration and structure. Perhaps most importantly, these two factors succinctly represent the fundamental, day-to-day, behaviors that are important across all types of leaders (Fleishman, 1951, 1953, 1957; Yukl, 1971). Although the relevance of some responsibilities (e.g., formulating an inspiring vision) varies depending on a leader's level in the organizational hierarchy (Day & Lord, 1988; Katz & Kahn, 1978), consideration and structure are important across all levels of

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Received 4 December 2010
Revised 21 July 2012, Accepted 28 July 2012

leadership (Fleishman, 1973). Given the widespread applicability and fundamental nature of these leadership dimensions, research focused on consideration and structure has the potential to enhance our understanding of leadership's influence in contemporary organizations. As a result of the long-standing research stagnation, there are basic questions regarding the psychological and behavioral effects of consideration and structure that remain unanswered.

For instance, in the decades following the decline of scholarly interest in consideration and structure, organizational justice emerged as one of the most studied topics in the organizational behavior literature (Colquitt, Greenberg, & Scott, 2005). Theoretically, it is reasonable to expect that consideration and structure will exert a robust influence on employee perceptions of justice (Judge et al., 2004). As an example, a leader who treats employees with respect, shows concern for employees, and communicates with employees in a friendly manner (i.e., higher levels of consideration) should likely foster favorable perceptions of interactional justice. Similarly, a leader who clarifies role expectations and sets uniform standards for performance (i.e., higher levels of structure) should help foster high levels of distributive and procedural justice. At this point, these assertions are speculative as no empirical work has examined the effects of consideration and structure on employee justice perceptions, despite calls for such research (Judge et al., 2004).

There has also been "an explosion of research interest" in counterproductive work behavior (CWB) since the mid-1990s (Fox & Spector, 2005, p. 3). However, the relative dearth of research examining the effects of positive leadership behaviors on CWB (e.g., Judge, Fluegge, Hurst, & Livingston, 2007) has produced insufficient insight into the nature of leadership–CWB relationships. Given that the proliferation of CWB research occurred after consideration and structure were abandoned, research into the possible influence of these leadership dimensions on employee CWB is particularly lacking. Theoretically, there is reason to expect that consideration and structure may influence employee CWB. Social learning theory (SLT; Bandura, 1973, 1977) suggests that employees tend to mirror their supervisors' behavior (e.g., Mayer, Kuenzi, Greenbaum, Bardes, & Salvador, 2009; Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008; Pearson & Porath, 2004). Supervisors who exhibit consideration (e.g., treat others with respect) and structure (e.g., establish clear standards) will likely help to establish behavioral norms indicating that CWBs (e.g., treating others rudely and showing up to work late) are inappropriate in the work environment.

The present research advances the organizational behavior literature by linking the Ohio State leadership dimensions to psychological and behavioral outcomes of significant interest to organizational scholars and practitioners. Namely, we investigate the effects of consideration and structure on employee justice perceptions and CWB. To address past methodological limitations and more accurately estimate the full impact of consideration and structure, we examine linear, interactive, and curvilinear effects of these leadership dimensions. Further, we examine these effects across two studies integrating multiple sources of leadership data.

Theoretical Background and Hypotheses

Leadership consideration and structure

Early leadership research primarily followed a trait approach in which scholars attempted to link leader traits with outcomes of interest (for a review, see Bass & Bass, 2008). However, the results of the trait approach did not impress a group of researchers at Ohio State University, and they sought to describe the *behaviors* displayed by effective supervisors (Fleishman, 1973). Ultimately, these scholars identified about 1800 leadership behaviors that could be succinctly represented by two core leadership factors (Fleishman, 1951, 1953, 1957). The first factor, consideration, includes behaviors that help develop positive supervisor–subordinate relationships and is characterized by mutual trust, respect, and rapport (Fleishman, 1973). For example, supervisors who exemplify the consideration dimension are friendly, engaging, and sociable; they treat employees as equals, look out for the welfare of their subordinates,

DOI: 10.1002/job

involve subordinates in decisions, provide explanations for their actions, and are willing to adjust course when necessary. In contrast, supervisors who are considered to be lower in consideration tend to be hostile, punitive, and insensitive (Yukl, 1971). The second factor, structure, comprises behaviors that organize and define group relationships, establish communication channels, and facilitate the accomplishment of group goals (Fleishman, 1973). Supervisors who provide structure set clear expectations and standards, decide what work will be done, how the work should be done, and who will do the work. Supervisors who provide little structure offer scant direction for subordinate activities, do not develop uniform work procedures, and fail to clarify individuals' roles within their work units. Together, consideration and structure are consistent with core psychological principles of management including role clarity, goal setting, and as we will argue in the succeeding texts, fairness.

It is important to emphasize that, despite a long absence from the research literature, consideration and structure have not been supplanted by more contemporary leadership constructs. Recently, an extensive meta-analytic review by DeRue, Nahrgang, Wellman, and Humphrey (2011) detailed the conceptual and empirical distinctions among a variety of leadership constructs including consideration, structure, transformational leadership, and transactional leadership. They described that the constructs most similar to structure are the contingent reward and management-by-exception (active) components of transactional leadership in that they all involve *task-oriented* behaviors associated with defining and directing follower performance. Although related, these are distinct constructs. For instance, structure and management-by-exception (active) and contingent reward are not highly correlated ($\rho = .31$, .28, respectively), and structure displays unique relations with a variety of outcomes including group performance, follower job satisfaction, and satisfaction with leader (DeRue et al., 2011). Consideration is thought to be most similar to transformational leadership. However, leadership scholars also emphasize that these are distinct constructs (e.g., Bass & Bass, 2008; DeRue et al., 2011; Seltzer & Bass, 1990). Conceptually, consideration focuses on *relational-oriented* behavior, whereas transformational leadership generally involves more *change-oriented* behavior (DeRue et al., 2011). Empirically, research confirms that consideration and transformational leadership display unique relations with a variety of important outcomes including group performance and satisfaction with one's leader (e.g., DeRue et al., 2011; Seltzer & Bass, 1990). Thus, research and theory suggest that consideration and structure remain important and distinct constructs that merit greater research attention (e.g., Fleishman, 1998; Judge et al., 2004).

Consideration, structure, and employee justice perceptions

The organizational justice literature incorporates four distinct dimensions of workplace fairness including distributive, procedural, informational, and interpersonal justice (Colquitt, 2001; Colquitt & Shaw, 2005). Scholarly interest in organizational justice began to proliferate after interest in leadership consideration and structure had largely subsided (for a detailed timeline of the organizational justice literature, see Colquitt, Greenberg, & Zapata-Phelan, 2005). As a result, there are no extant empirical studies directed at understanding the effects of leadership consideration and structure on employee justice perceptions, but there are reasons to expect effects between these constructs. In the following paragraphs, we define each justice facet and discuss how and why each facet might be influenced by leadership consideration and structure.

Leadership structure may be particularly relevant in influencing employee perceptions of distributive justice (Judge et al., 2004). Distributive justice is grounded in principles of equity theory (Adams, 1965). Equity theory suggests that judgments regarding the fairness of allocation distributions hinge upon beliefs that rewards or punishments are consistent with a recipient's contributions. Simply stated, outcomes viewed as congruent with one's inputs tend to engender positive perceptions of distributive justice. Conversely, an allocation decision will be viewed as unfair if an individual perceives an imbalance between the recipient's outcomes and inputs. Although conceptualizations of leadership structure do not explicitly focus on allocation decisions, we believe structure does have clear implications for distributive justice perceptions. For instance, leadership structure helps ensure standardized work environments and enforce uniform performance guidelines. In contrast, a lack of structure may result

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in a failure to enforce common standards of performance. It stands to reason that the level of structure provided by a supervisor will help shape employees' beliefs that equal contributions (inputs) are required of all employees. Moreover, given their focus on goal attainment, leaders who provide structure refrain from rewarding employees unless they meet stated performance expectations. As a result, structure should foster confidence among employees that outcomes are allocated on the basis of merit.

Leaders who exhibit consideration "do little things" to make work pleasant for employees (Stogdill, 1963), which may include providing small rewards in the form of praise and encouragement. Thus, one might expect consideration to be positively related to perceptions of distributive justice. However, on balance, the theoretical connections between consideration and employee perceptions of distributive justice are negligible in comparison with structure. Therefore, we do not expect consideration to contribute significantly to employee distributive justice perceptions above and beyond the influence of structure. Taken together, we propose:

Hypothesis 1: Leadership structure will be positively related to employees' distributive justice perceptions, controlling for leadership consideration.

Thibaut and Walker (1975) made a major contribution to the justice literature by illustrating that the procedures used to arrive at outcomes are important in shaping peoples' fairness perceptions. Soon after, Leventhal (1980) argued that equity theory was too limited in its narrow focus on outcome distributions and delineated the key components of procedural justice. Specifically, Leventhal described six "rules" of procedural justice. First, the *consistency* rule suggests that procedures should be applied uniformly across individuals and across time. Second, the *bias-suppression* rule suggests that allocation procedures should be free of personal biases. Third, according to the *accuracy* rule, procedures should incorporate as much valid information as possible to help ensure decisions are correct. Fourth, because even well-intentioned decision makers can err, the *correctability* rule acknowledges that mechanisms (e.g., opportunity to appeal) should be in place to help correct mistakes. Fifth, the *representativeness* rule suggests that procedures need to consider the interests and concerns of all individuals affected by an allocation decision. Sixth, the *ethicality* rule suggests that procedures should be consistent with prevailing ethical standards. Leventhal's rules still provide the foundation on which contemporary procedural justice research is based (Colquitt, 2001).

Both consideration and structure should directly affect whether the "rules" of procedural justice are satisfied (Judge et al., 2004). For instance, leaders who exemplify consideration regularly consult the group about important decisions and incorporate suggestions from group members. Engaging in these behaviors should help fulfill the accuracy and representativeness rules of procedural justice. Further, such leaders treat subordinates equally, which is important for the consistency rule of procedural justice. Moreover, considerate leaders are willing to make changes when necessary. Thus, leaders who engage in behaviors consistent with consideration should help satisfy the correctability rule of procedural justice. Leadership structure should also help engender favorable perceptions of procedural justice. For instance, leaders who provide structure implement uniform procedures, rules, and regulations; they do not behave capriciously. In this regard, leadership structure is likely important for satisfying the consistency rule of procedural justice. Also, given their zeal for rules and standardization, leaders who provide structure would be expected to limit the influence of bias or inaccurate information in decision-making processes. Thus, structure should help satisfy the bias suppression and accuracy rules of procedural justice. Taken together, there is strong reason to suspect that consideration and structure will help foster favorable perceptions of procedural justice among employees.

Hypotheses 2a and 2b: Leadership a) consideration and b) structure will be positively related to employees' procedural justice perceptions.

Judge et al. (2004) speculated that consideration would influence employee perceptions of interactional justice, but structure would not. Broadly defined, interactional justice captures the quality of interpersonal treatment received from authority figures (Bies, 1987; Bies & Moag, 1986). More specifically, Bies and Moag (1986) described four general

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rules to foster favorable perceptions of interactional justice. First, decision makers should be transparent and honest when communicating to individuals affected by their decisions. Second, authorities should provide sufficient explanations for the outcomes associated with their decisions. Third, authority figures should be sincere and respectful in dealing with people. Fourth, decision makers should maintain propriety by avoiding improper statements or questions.

Greenberg (1990, 1993) later argued that interactional justice should be conceptualized as a multidimensional construct containing two distinct dimensions. First, he argued that *informational justice* captures the fairness of social accounts (explanations) provided by decision makers. Second, he argued that *interpersonal justice* reflects the extent to which authority figures treat individuals with dignity and respect. Subsequent empirical research confirmed that informational and interpersonal justice were strongly related but distinguishable constructs (e.g., Colquitt, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Colquitt & Shaw, 2005). In this study, we adopt the two-dimensional view of interactional justice, because consideration and structure are likely to exert distinct effects on informational and interpersonal justice that would be concealed if these dimensions were aggregated into a global interactional justice scale.

Specifically, there is clear reason to suspect that both leadership consideration and structure will help shape employee perceptions of informational justice. Again, informational justice hinges upon open communication between decision makers and those affected by the decisions. Leaders who display consideration interact regularly with employees, do not keep employees in the dark about important information, explain their decisions to employees, and listen to employee concerns. Similarly, leaders who provide structure clearly communicate their viewpoints to employees and ensure that procedural information is well understood by all relevant parties. Given the emphasis on candid and thorough communication, informational justice should be favorable in the presence of leadership consideration and structure.

In contrast, we only expect leadership consideration to influence interpersonal justice perceptions. There is no clear connection between leadership structure and interpersonal justice. For instance, the leader might be clear and detailed in his or her communications (high structure), without being polite or empathetic to subordinates. On the other hand, leadership consideration bares a direct connection to employee perceptions of interpersonal justice. Leaders who exhibit consideration are engaging and friendly; they show concern for the well-being of employees, treat individuals as equals, and work to ensure a pleasant environment. Being rude, condescending, or otherwise disrespectful to an employee would be out of character for a considerate leader. Thus, leader consideration should engender favorable perceptions of interpersonal justice among employees. Taken together, we propose:

Hypotheses 3a and 3b: Leadership a) consideration and b) structure will be positively related to employees' informational justice perceptions.

Hypothesis 4: Leadership consideration will be positively related to employees' interpersonal justice perceptions, controlling for leadership structure.

Consideration, structure, and counterproductive work behavior

Counterproductive work behavior can be defined as intentional actions that are counter to organizational norms and harmful to an organization or its members (Bennett & Robinson, 2000; Dalal, 2005; Gruys & Sackett, 2003; Robinson & Bennett, 1995, 1997). CWB encompasses a wide range of destructive behavior including insubordination, theft, physical aggression, verbal abuse, and withholding effort. These detrimental behaviors have been studied under a variety of labels (e.g., aggression, antisocial behavior, and deviance), but this line of research generally taps a common set of behaviors and frequently employs identical measurement scales (Spector & Fox, 2005; Spector et al., 2006). Research suggests that CWB is widespread (Aquino, Lewis, & Bradfield, 1999; Bennett & Robinson, 2000) and has important consequences for individuals and organizations (for reviews, see O'Leary-Kelly, Griffin, & Glew, 1996; Robinson & Greenberg, 1999). In fact, estimates suggest that the financial costs associated with CWB run in the billions

DOI: 10.1002/job

of dollars annually (Bensimon, 1994; Buss, 1993; Camara & Schneider, 1994; Coffman, 2003; Murphy, 1993). Thus, it is important to understand how managers may influence the occurrence of CWB through the leadership behaviors that they exhibit on a day-to-day basis.

In particular, there is strong theoretical reason to suspect that leadership consideration and structure may influence employee CWB. SLT (Bandura, 1973, 1977) provides an established theoretical framework for understanding the potential influence of leadership behavior on CWB (e.g., Mayer et al., 2009; Neubert et al., 2008; Pearson & Porath, 2004). At the heart of SLT is the notion that individuals learn the acceptable forms of behavior in a given context through observing the behavior of others. In his detailed treatise on the influence of social learning on destructive behavior, Bandura (1973) noted that individuals are particularly attuned to the behavior of people with whom they interact with frequently and who have higher status or hold positions of power. In organizational settings, direct supervisors represent among the most potent models for acceptable behavior (Mayer et al., 2009; Neubert et al., 2008). Importantly, SLT stresses that learning does not require individuals to directly experience the consequences (positive or negative) associated with behavior; rather, individuals frequently learn vicariously through observing how the behavior of others is rewarded or punished (Bandura, 1973). In work settings, this suggests that how a supervisor treats one employee may subsequently shape other subordinates' behavior.

As mentioned previously, supervisors who exhibit consideration strive to foster a civil and pleasant work environment. Their behavior toward subordinates signals that collegiality is the appropriate norm in the work environment. At the other end of the continuum, a supervisor who does not exhibit consideration might project an air of superiority, disregard the thoughts and feelings of subordinates, or otherwise treat people in a disrespectful manner. Again, supervisors are among the most salient models of acceptable behavior in the workplace (Mayer et al., 2009; Neubert et al., 2008). As such, SLT implies that the level of consideration demonstrated by direct supervisors plays an influential role in shaping the interpersonal work behavior of their employees. Specifically, the greater the consideration exhibited by a supervisor, the less likely an employee should be to act rudely, spread gossip, disobey authorities, or engage in other interpersonal forms of CWB.

Leaders who provide structure are known to explicate and enforce clear performance expectations. Given their emphasis on effective performance, it is unlikely that employee behavior such as tardiness, insubordination, or lackadaisical effort would be tolerated by a leader who exemplifies behaviors consistent with structure. Principles of SLT suggest that, by observing a leader's demonstration and enforcement of appropriate behavior, employees should learn that actions counter to effective group performance are unacceptable and will not be tolerated. On the other hand, leaders who do not provide structure provide little clarity with respect to performance standards and are generally lax in terms of rule enforcement. Thus, employees may come to believe that there are no consequences for showing up to work late, working slowly, or otherwise engaging in behavior harmful to productivity. Taken together, SLT suggests that the provision of structure may reduce the likelihood of CWB among employees. Consistent with this perspective, a recent study by Neubert et al. (2008) suggests that leadership structure is negatively related to employee CWB ($r = -.23$). Although this represents an important finding, there is also reason to suspect that the effect of structure may be more complex than conveyed in a simple linear relationship.

Fleishman (1995, 1998), for example, argued that prior research focused too much on simple main effects and overlooked the possibility of curvilinear and interactive effects. In a similar vein, Pierce and Aguinis (in press) recently warned that management scholars are generally too quick to assume linear relationships. In an effort to promote greater exploration of nonlinear relations in the management literature, they presented a meta-theoretical perspective called the "too-much-of-a-good-thing-effect." For example, they argued that it is not uncommon for variables that generally demonstrate positive effects on outcomes to "reach inflection points after which their relations with desired outcomes cease to be linear and positive" resulting in nonlinear effects (p. 4). Interestingly, Pierce and Aguinis explicitly pointed to leadership structure as a variable that might exert curvilinear effects on important outcome variables. Consistent with Fleishman (1995, 1998), they suggested that moderate levels of structure may be beneficial but may reach a point of diminishing returns at the high end of the structure continuum.

From an employees' perspective, it is possible that too much structure may be viewed as overbearing, micro-managing, and restrict feelings of autonomy (Tripp & Bies, 2009). Such perceptions may increase

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frustration and foster counterproductive behavioral reactions (e.g., Chen & Spector, 1992; Fox & Spector, 1999; Spector, 1978). According to the frustration–aggression model (e.g., Fox & Spector, 1999), employees may act out and engage in counterproductive behavior in response to workplace frustrations. As examples, frustrations can include lack of role clarity or a loss of control or autonomy (e.g., Fox, Spector, & Miles, 2001). Engaging in CWB in response to a workplace frustration may be an attempt to find an alternative means to achieve work-related goals or simply to seek retaliation against the organization and its members. Taken together, there is reason to suspect that structure may exert curvilinear (u-shaped) effects on CWB. That is, structure may generally help reduce CWB (Neubert et al., 2008) but reach a point of diminishing returns after which increased structure will tend to engender higher levels of employee CWB.

Moreover, the level of consideration demonstrated by a supervisor may influence how employees react to different levels of structure. Fleishman (1995, 1998) argued that structure may be viewed as supportive and helpful in the context of high consideration. But, in the context of low consideration, the same level of structure might be viewed as restrictive and intimidating. For instance, Fleishman and Harris (1962) found that employee grievances and turnover increased at high levels of structure, but only if the leader did not display high levels of consideration. Moreover, the principles of SLT (Bandura, 1973) suggest that the behavior of an inconsiderate boss may unwittingly model that aggression represents an appropriate means of expressing frustration in the workplace. It is particularly easy to imagine an employee reacting in counterproductive ways to the frustration associated with being micro-managed when the supervisor's behavior suggests that being respectful and considering the welfare of others is unimportant in the workplace. Taken together, we expect that consideration and structure will have interactive effects on CWB. Consistent with Fleishman's (1995, 1998) calls to explore the possibility of curvilinear and interactive effects, we propose the following hypotheses:

Hypothesis 5a: Leadership consideration and structure have interactive effects on employee CWB such that higher levels of structure will be positively associated with CWB at low, but not high, levels of consideration.

Hypothesis 5b: Leadership structure has a curvilinear relationship with CWB such that moderate levels of structure are associated with lower CWB than high or low levels of structure.

Indirect effects of consideration and structure on counterproductive work behavior

Judge et al. (2004) speculated that justice perceptions might mediate the effects of consideration and structure on outcomes, in general. Theoretically, there is reason to expect that employee justice perceptions might mediate the effects of consideration and structure on employee CWB, in particular. For instance, social exchange theory (Blau, 1964) suggests that employees who perceive that they are treated (un)fairly will feel an obligation to reciprocate the (un)fairness. As Gouldner (1960) described, the "norm of reciprocity, in its universal form, makes two interrelated, minimal demands: (1) people should help those who have helped them, and (2) people should not injure those who have helped them" (p. 171). Thus, an employee who perceives that he or she is treated justly should refrain from behavior that could harm his or her organization or its members. Conversely, an employee who perceives that he or she is treated unjustly may seek to even the score through destructive behavior. Similarly, principles of retributive justice suggest that an entity deemed responsible for unjust behavior deserves to be punished; retaliating against the transgressor can help restore a victim's sense of justice (e.g., Bies & Tripp, 1996; Carlsmith, Darley, & Robinson, 2002; Okimoto & Wenzel, 2009; Vidmar, 2000). Thus, theory supports that an employee who believes he or she is treated unfairly may seek to restore the balance of justice through CWB (Bies & Tripp, 1996). In line with this reasoning, empirical research suggests that employee perceptions of justice display small-to-moderate relations with CWB. For example, Dalal (2005) reported that the corrected meta-analytic correlation between CWB and organizational justice (defined as a composite of distributive and procedural justice) was −.25. A subsequent analysis by Berry, Ones, and Sackett (2007) found similar corrected meta-analytic relationships between CWB and distributive ($\rho = -.14$),

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procedural ($\rho = -.23$), and interpersonal ($\rho = -.14$) justice perceptions. Hershcovis et al. (2007) also reported comparable meta-analytic estimates associated with distributive and procedural justice perceptions.

Thus, extant research suggests that perceptions of justice may influence employees' CWB. We previously argued that leadership consideration and structure will help shape employee perceptions of justice. With these points in mind, it is reasonable to expect that the influence of consideration and structure may, in part, be transmitted through employee perceptions of justice. However, it is also important to recall that principles of SLT suggest that leaders may have a significant impact on employee CWB as a result of behavioral modeling. Taken together, we expect that leadership consideration and structure will have direct effects on CWB and indirect effects through employee perceptions of justice. This leads to our final set of hypotheses:

Hypotheses 6a and 6b: Employees' perceptions of justice will partially mediate the effects of leadership a) consideration and b) structure on employees' CWB.

The literature on consideration and structure has been criticized for relying too heavily on designs that collect leader behavioral data and outcomes from single sources (Kerr & Schriesheim, 1974). To help avoid variance inflation common in self-report studies, we collected reports of leadership behavior from multiple sources (e.g., Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In the first study, we test our hypotheses using both employee and supervisor reports of leadership behavior. In the second study, we test the same hypotheses using employee-reported and coworker-reported leadership behaviors.

Study 1

Method

Participants and procedure

We asked approximately 200 business students from two universities in the northeast USA to help invite participants into this study in exchange for extra credit. We provided students with electronic copies of recruitment fliers that described the study and participation incentives. The recruitment fliers also asked potential respondents to invite their direct supervisor to participate. We asked those interested to provide their name, email address, and the name and email address of their direct supervisor to the students. Upon receipt of the recruitment information, they emailed participants personalized instructions that included a hyperlink to the online survey. The survey began with an informed consent page stressing that all responses would be kept strictly confidential and described that participation was completely voluntary and individuals were free to discontinue their participation at any time without penalty. We used distinct online surveys to collect responses from the employees and their supervisors. The employee survey assessed the leadership behavior of their direct supervisor, their perceptions of workplace justice, and demographic information. The supervisor survey assessed supervisor's reports of their own leadership behavior, their employee's CWB, and their demographic information.

A total of 182 employees and 143 supervisors completed the surveys. The surveys included three items derived from Meade and Craig (2011) to detect careless responders. Specifically, two items asked participants to select a particular response (e.g., "Sometimes") from the response options, and the final item in the survey read: "We know that some individuals rush through surveys and respond carelessly. In your honest opinion, should we use your data in our analyses for this study (Yes or No)?" In total, we identified 24 respondents as careless responders. If either an employee or supervisor was flagged for careless responding, we eliminated both members of the dyad from the database. After eliminating careless responders, we included 158 employees and 122 supervisors in the sample. Respondents worked in a wide variety of occupational fields including retail, health care, accounting, finance, transportation, and public services. Women comprised the majority of employees

DOI: 10.1002/job

and supervisors (61 and 57 percent, respectively). The average age of the employees was 33 years, and their average tenure was 4.9 years. The average age of the supervisors was 44 years, and their average tenure was 9.8 years. Following Judge, Scott, and Ilies (2006), we collected names, email addresses, company names, job titles, and Internet protocol addresses to help ensure data integrity. In appreciation for their effort, we entered employees and supervisors into a random drawing to win one of four $50 electronic gift cards to Amazon.com.

Measures

Leadership consideration and structure. We used the Leader Behavior Description Questionnaire—Form XII (LBDQ-XII; Stogdill, 1963) to assess leadership consideration and structure. Although there are several instruments designed to test consideration and structure, recent meta-analytic work suggests that the LBDQ-XII exhibits the highest average validity across outcomes (Judge et al., 2004). In this study, both employees and their direct supervisors completed the LBDQ-XII items. We asked employees to consider the day-to-day behavior of their boss (i.e., direct supervisor) and indicate how frequently their boss engages in each of the behaviors referenced in the LBDQ-XII items. Following the LBDQ-XII leader self-report manual (Stogdill, 1963), instructions informed supervisors that the questions were not a test of ability, emphasized that there were no right or wrong answers, and asked the supervisors to describe their own management style as honestly and accurately as possible. We report the instructions and corresponding items in the Appendix. We collected all responses by using a 7-point scale ranging from 1 = *never* to 7 = *always*.

Justice perceptions. We assessed distributive, procedural, informational, and interpersonal justice perceptions using scales developed and validated by Colquitt (2001). We report the instructions and the corresponding items in the Appendix. We collected all responses using a 7-point scale ranging from 1 = *not at all* to 7 = *completely*.

Counterproductive work behavior. Self-reports of CWB can be susceptible to response distortion (Stewart, Bing, Davison, Woehr, & McIntyre, 2009), and assessing predictors and outcomes using self-reported data increases problems of common method variance (Podsakoff et al., 2003). To help avoid these issues, we used supervisor reports of their employees' CWB. Specifically, CWB was measured with eight items from Dalal, Lam, Weiss, Welch, and Hulin (2009). As two examples, supervisors were asked how often the employee named in the recruitment email: "Spent time on tasks unrelated to work" and "Behaved in an unfriendly manner." Recent research suggests that frequency scales, as opposed to agreement scales, are optimal for assessing CWB (Spector, Bauer, & Fox, 2010). Accordingly, we collected responses using a 7-point scale ranging from 1 = *never* to 7 = *every day*.

Demographic control variables. In addition to the substantive variables of interest in this study, we controlled for participants' age, gender, and job tenure as these variables may have modest relationships with the outcomes of interest in this study (e.g., Berry et al., 2007; Hershcovis et al., 2007).

Results

We report descriptive statistics and internal-consistency reliabilities for study scales in Table 1. To provide evidence for the discriminant validity of the scales used in our study, we conducted confirmatory factor analysis (CFA) using Amos 19 (Arbuckle, 2010). We used an item parceling strategy to facilitate more accurate and stable parameter estimates (Millsap, 2002). Specifically, parcels were created by combining items with the highest and lowest loadings for each construct, followed by the items with the next highest and lowest loadings until all of the items were included (Bagozzi & Heatherton, 1994).

We present the full results of our CFA in Table 2 and briefly summarize here. First, as demonstrated in Model 1, the hypothesized measurement model fit the data well, and all item loadings from the items to their latent factors were significant. Hu and Bentler (1999) suggest that *SRMR* values less than 0.08 and *CFI* values of 0.95 and above

DOI: 10.1002/job

Table 1. Study 1 scale means, standard deviations, correlations, and internal consistency reliabilities.

		M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
1	Gender	0.39	0.49	—											
2	Age	33.20	13.41	−.03	—										
3	Tenure	4.90	5.22	.05	.44**	—									
4	Consideration	5.21	0.92	−.02	−.04	.12	(.89)								
5	Structure	5.35	0.82	−.04	.10	.15	.65**	(.85)							
6	Distributive justice	4.93	1.34	.13	−.05	.16*	.53**	.46**	(.92)						
7	Procedural justice	4.77	1.37	.08	−.02	.20*	.59**	.58**	.78**	(.92)					
8	Informational justice	5.44	1.13	−.09	−.03	.11	.72**	.67**	.51**	.53**	(.90)				
9	Interpersonal justice	6.10	1.03	−.07	−.04	.12	.68**	.50**	.46**	.49**	.71**	(.91)			
10	Consideration[a]	5.62	0.60	−.06	.09	.17	.33**	.14	.15	.12	.26**	.20**	(.75)		
11	Structure[a]	5.65	0.67	.04	.00	.15	.22*	.22*	.29**	.25**	.20*	.19	.48**	(.76)	
12	Deviance[a]	2.00	0.90	−.02	.11	.12	−.30**	−.10	−.22*	−.18	−.27**	−.30**	−.28**	−.35**	(.87)

$n = 158$. *SD*, standard deviation.
[a]Supervisor-reported data ($n = 122$). Gender 0 = *female*, 1 = *male*.
**$p < 0.01$; *$p < .05$.

Table 2. Study 1 confirmatory factor analyses.

Model	χ^2	Δ χ2	*df*	χ^2/df	*TLI*	*CFI*	*RMSEA*
1	285.37	—	137	2.08	0.92	0.94	0.08
2	371.72	86.35***	142	2.62	0.89	0.91	0.10
3	389.40	104.03***	142	2.74	0.88	0.90	0.11
4	394.86	109.49***	142	2.78	0.87	0.90	0.11
5	352.48	67.11***	142	2.48	0.90	0.91	0.10
6	441.41	156.04***	146	3.03	0.86	0.88	0.11
7	528.45	243.08***	142	3.72	0.81	0.84	0.13
8	505.12	219.75***	142	3.56	0.82	0.85	0.13
9	830.57	545.20***	151	5.50	0.68	0.72	0.17
10	936.53	651.16***	152	6.16	0.64	0.68	0.18

Δ χ2 reflects comparison between current model and hypothesized five-factor model. Model 1 = Hypothesized six factor model with leader consideration, leader structure, distributive justice, procedural justice, informational justice, and interpersonal justice indicators loaded onto six latent factors. Model 2 = Five-factor model with leader consideration, leader structure, distributive justice, procedural justice indicators loaded onto four latent factors and informational justice, and interpersonal justice indicators loaded onto a common latent factor. Model 3 = Five-factor model with leader consideration and structure indicators loaded onto a common latent factor and distributive justice, procedural justice, informational justice, and interpersonal justice indicators loaded onto four latent factors. Model 4 = Five-factor model with leader structure, distributive justice, procedural justice, and informational justice indicators loaded onto four latent factors and leadership consideration and interpersonal justice indicators loaded onto a common latent factor. Model 5 = Five-factor model with leader structure, distributive justice, procedural justice, and interpersonal justice indicators loaded onto four latent factors and leadership consideration and informational justice indicators loaded onto a common latent factor. Model 6 = Four-factor model with leader structure, distributive justice, procedural justice indicators loaded onto three latent factors and leadership consideration, informational justice, and interpersonal justice indicators loaded onto a common latent factor. Model 7 = Five-factor model with leader consideration, procedural justice, informational justice, and interpersonal justice indicators loaded onto four latent factors and leadership structure and distributive justice loaded onto a common latent factor. Model 8 = Five-factor model with leader consideration, distributive justice, informational justice, and interpersonal justice indicators loaded onto four latent factors and leadership structure and procedural justice loaded onto a common latent factor. Model 9 = Two-factor model with leader consideration, distributive justice, informational justice, and interpersonal justice indicators loaded onto a common latent factors and leadership structure and procedural justice loaded onto a common latent factor. Model 10 = Single-factor model.
***$p < .001$.

indicate good model fit. *RMSEA* values of about 0.08 or lower indicate a reasonable error of approximation (Browne & Cudeck, 1993). Evidence of discriminant validity is present when alternate measurement models, in which

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indicators are loaded onto latent constructs other than their theoretical construct, result in reduced model fit compared with the hypothesized measurement model (Anderson & Gerbing, 1988). In total, we examined nine alternative models, and each model produced significantly reduced fit compared with the hypothesized measurement model (Table 2). For example, results suggested that model fit was significantly reduced when leadership consideration and structure indicators were loaded on a single latent factor (Model 3).

Given the robust correlations between employee-reported consideration and informational and interpersonal justice perceptions ($r = .72$, .68, respectively), we were particularly interested in the discriminant validity of these constructs. Accordingly, we conducted supplemental CFAs to examine the factor structure of these constructs using item-level data. First, a simple structure in which indicators for consideration, informational justice, and interpersonal justice indicators are loaded onto distinct latent factors produced a good fit to the data (χ^2 (149) = 263.377; *CFI* = 0.95; *RMSEA* = 0.07; *TLI* = 0.93). Next, we tested a model in which consideration and informational justice indicators are loaded onto a common factor and interpersonal justice items are loaded onto a unique factor. A chi-squared difference test suggested a significantly worse fit to the data ($\Delta\chi^2$ (2) = 131.89, $p < .001$; *CFI* = 0.88; *RMSEA* = 0.10; *TLI* = 0.85). Then we tested a model in which consideration and interpersonal justice indicators are loaded onto a common factor and informational justice items are loaded onto a unique factor. Again, a chi-squared difference test suggested a significantly worse fit to the data ($\Delta\chi^2$ (2) = 190.33, $p < .001$; *CFI* = 0.85; *RMSEA* = 0.11; *TLI* = 0.82). Then we tested a model in which interpersonal and informational justice indicators are loaded onto a common factor and consideration items are loaded onto a unique factor. A chi-squared difference test suggested a significantly worse fit to the data ($\Delta\chi^2$ (2) = 202.61, $p < .001$; *CFI* = 0.85; *RMSEA* = 0.12; *TLI* = 0.81). Thus, although consideration is strongly related to informational and interpersonal justice perceptions, our CFA results suggest that they are distinct constructs. Taken together, these results provide support for the construct validity of the measures used in this study.

To test Hypotheses 1–4, we used multiple regression analysis in SPSS 19 (IBM Corporation, Armonk, NY). We present full results in Table 3 and summarize here. We controlled for gender, age, and tenure across the analyses; we discuss here only the substantive variables of interest. We begin by describing the results using *employee-reported* leadership consideration and structure. Consistent with Hypothesis 1, structure had a significant positive relationship with distributive justice perceptions. Unexpectedly, however, consideration actually had a more robust relationship with distributive justice perceptions than structure. In support of Hypotheses 2a and 2b, consideration and structure were significantly related to employee perceptions of procedural justice. In support of Hypotheses 3a and 3b, consideration and structure were significantly associated with informational justice. Consistent with Hypothesis 4, only consideration was significantly linked to interpersonal justice.

Next, we retested these hypotheses using *supervisor-reported* leadership behavior. Consistent with Hypotheses 1 and 2b, structure was significantly related to distributive and procedural justice. Counter to Hypothesis 3b, supervisor-reported structure was not significantly associated with informational justice perceptions, controlling for consideration, employee age, gender, and tenure. Consistent with Hypothesis 3a, consideration was significantly related to informational justice. However, counter to Hypotheses 2a and 4a, supervisor-reported consideration was not significantly related to procedural or interpersonal justice, controlling for structure, employee age, gender, and tenure.

Next, we used polynomial regression analysis to test for interactive effects between structure and consideration, and curvilinear effects of structure, on employee CWB proposed in Hypotheses 5a and 5b. Analysis involving curvilinear and interactive effects can be accomplished by entering relevant main effects, quadratic terms, and multiplicative terms into a common regression equation (for detailed descriptions, see Aguinis, 2004; Cohen, Cohen, West, & Aiken, 2003). Specifically, the full equation can be expressed as $\hat{Y} = b_0 + b_1X + b_2X^2 + b_3Z + b_4XZ + b_5X^2Z + e$. To begin, we focused on employee-reported leadership consideration and structure. We summarize the results of these analyses in Table 4. In the first step of the analysis, the control variables did not account for significant variance in CWB. In the second step, consideration and structure together accounted for 10 percent of the variance in CWB, above and beyond the control variables, $\Delta R^2 = .10$, $F(2, 115) = 6.82$, $p < .01$. In the third step, the higher order terms as a set did not account for a significant amount of incremental variance beyond the variables entered into the first step of the analysis. We then removed the higher order terms involving quadratic structure and reran the analysis focusing solely

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Table 3. Study 1 justice perceptions regressed onto consideration and structure.

		Distributive justice			Procedural justice			Informational justice			Interpersonal justice		
Step	Variable	*b*	95% CI[c]	ΔR^2	*b*	95% CI[c]	ΔR^2	*b*	95% CI[c]	ΔR^2	*b*	95% CI[c]	ΔR^2
1	Gender	.38*	0.02, 0.73	.06*	.24	−0.10, 0.58	.06*	−.16	−0.39, 0.08	.03	−.13	−0.37, 0.12	.03
	Age	−.01	−0.03, 0.00		−.01	−0.02, 0.00		−.01	−0.02, 0.00		.00	−0.01, 0.01	
	Tenure	.03	−0.00, 0.07		.04*	0.00, 0.07		.01	−0.02, 0.03		.01	−0.01, 0.04	
2	Consideration[a]	.55***	0.30, 0.80	.28***	.50***	0.27, 0.74	.39***	.59***	0.43, 0.76	.57***	.67***	0.50, 0.85	.44***
	Structure[a]	.34*	0.05, 0.62		.59***	0.32, 0.85		.49***	0.31, 0.68		.13	−0.07, 0.32	
1	Gender	.17	−0.33, 0.67	.08*	−.08	−0.58, 0.41	.08*	−.14	−0.55, 0.27	.04	−.18	−0.56, 0.20	.05
	Age	−.02*	−0.04, −0.00		−.02*	−0.04, −0.00		−.01	−0.03, 0.00		−.01	−0.03, 0.00	
	Tenure	.05*	0.00, 0.10		.06*	0.02, 0.11		.03	−0.01, 0.07		.03	−0.01, 0.07	
2	Consideration[b]	.03	−0.42, 0.48	.07**	−.06	−0.51, 0.39	.05*	.38*	0.00, 0.75	.07*	.20	−0.14, 0.54	.04
	Structure[b]	.54**	0.13, 0.95		.50*	0.09, 0.91		.15	−0.18, 0.49		.19	−0.11, 0.50	

[a]Employee reported.
[b]Supervisor reported.
[c]95% confidence intervals around unstandardized regression coefficients.
*$p < .05$; **$p < .01$; ***$p < .001$.
Unstandardized regression coefficients for the full models are presented

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Table 4. Study 1 counterproductive work behavior regressed onto consideration and structure.

		Employee-reported leadership			Supervisor-reported leadership		
Step	Variable	*b*	95% CI	ΔR^2	*b*	95% CI	ΔR^2
1	Gender	−.05	−0.39, 0.29	.02	−.04	−0.39, 0.31	.01
	Age	.00	−0.01, 0.02		.00	−0.01, 0.02	
	Tenure	.01	−0.02, 0.05		.01	−0.02, 0.05	
2	Consideration	−.37***	−0.58, −0.15	.10**	−.27	−0.56, 0.03	.17***
	Structure	.14	−0.12, 0.39		−.43**	−0.69, −0.17	
3a	Consideration × Structure	−.15	−0.47, 0.18	.04	.18	−0.28, 0.64	.02
	Structure^2	−.11	−0.44, 0.22		.01	−0.33, 0.34	
	Consideration × Structure^2	.12	−0.16, 0.39		−.34	−0.94, 0.26	
3b	Consideration × Structure	−.23*	−0.44, −0.01	.03*	.24	−0.18, 0.66	.01

95% confidence intervals around unstandardized regression coefficients. Structure^2 represents the quadratic structure term.
*$p < .05$; **$p < .01$; ***$p < .001$.

on the Consideration × Structure interaction. Results suggested that there was a significant interaction that accounted for 3 percent of the variance in CWB above and beyond the main effects alone, $\Delta R^2 = .03$, $\Delta F(1, 114) = 4.35$, $p < .05$. Simple slopes analysis (e.g., Cohen et al., 2003) indicated that consideration was not significantly related to CWB at low levels of structure ($b = -.20$, $t = -1.52$, *ns*). But, consideration did have a significant negative relation with CWB at average ($b = -.38$, $t = -3.59$, $p < .01$) and above average ($b = -57$, $t = -3.97$, $p < .001$) levels of structure. Or, viewing the interaction from the perspective of structure, simple slopes analysis indicated that structure was positively related to CWB at low levels of consideration ($b = .33$, $t = 2.09$, $p < .05$), but was not significantly associated with CWB at average ($b = .11$, $t = .88$, *ns*), or above average levels of consideration ($b = -.10$; $t = -0.61$, *ns*). Substantively, the results indicated that the highest levels of CWB were found under conditions of high structure and low consideration (Figure 1). Thus, Hypothesis 5a received support. However, Hypothesis 5b, predicting a curvilinear effect of Structure on CWB, was not supported.

Next, we tested Hypotheses 5a and 5b using *supervisor-reported* consideration and structure. First, we entered the control variables into the equation. In Step 2, consideration and structure together accounted for 17 percent of the variance in CWB, above and beyond the control variables, $\Delta R^2 = .17$, $F(52, 113) = 11.96$, $p < .001$. In Step 3, the higher order terms as set did not account for significant incremental variance beyond the variables included in the previous step. We then reran the analysis focusing solely on the Consideration × Structure interaction, and the results indicated that

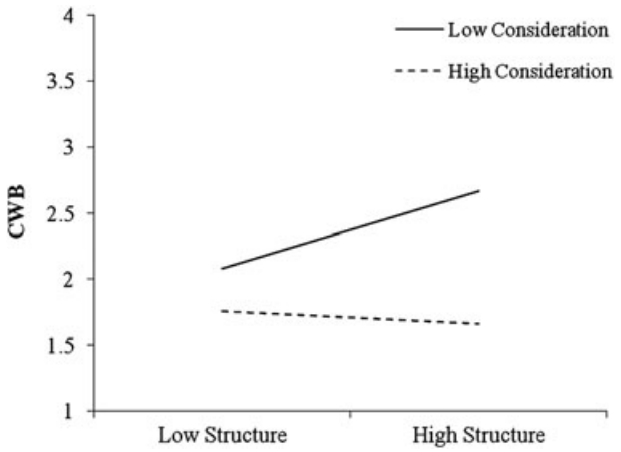

Figure 1. Employee-reported Consideration × Structure interactive effects on counterproductive work behaviors observed in Study 1

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there was not a significant interaction between supervisor-reported consideration and structure on CWB. Thus, Hypotheses 5a and 5b were both rejected in the analyses involving supervisor-reported consideration and structure.

Next, we tested Hypotheses 6a and 6b using the PROCESS computational program for SPSS developed by Hayes (2012). PROCESS provides a flexible computation tool that integrates contemporary techniques for testing relationships involving multiple mediating and moderating variables (e.g., Edwards & Lambert, 2007; Hayes & Preacher, 2012; MacKinnon, Fairchild, & Fritz, 2007; Muller, Judd, & Yzerbyt, 2005; Preacher, Rucker, & Hayes, 2007). To begin, we tested a "direct effect moderation model" (Edwards & Lambert, 2007, p. 4) in which CWB was regressed onto the hypothesized mediators (i.e., distributive, procedural, informational, and interpersonal justice perceptions), *employee-reported* leadership consideration and structure, the Consideration × Structure interaction, and the control variables (i.e., age, gender, and tenure). Results suggested that distributive ($b = -.07$, *ns*), procedural ($b = -.05$, *ns*), informational ($b = -.03$, *ns*), and interpersonal justice perceptions ($b = -.15$, *ns*) were not significantly related to CWB, controlling for age, gender, tenure, and the leadership dimensions. Additionally, PROCESS utilizes bootstrapping techniques to estimate indirect effects in mediated analyses (Hayes, 2012). The 95 percent confidence intervals associated with the bootstrapped indirect effect estimates (generated across 1000 samples) of consideration and structure through each of the four justice facets all included zero. Similarly, the confidence intervals associated with the total indirect effects of consideration and structure on CWB also included zero.

Next, we tested the mediated hypotheses using *supervisor-reported* consideration and structure. Again, the results suggested that distributive ($b = -.03$, *ns*), procedural ($b = .04$, *ns*), informational ($b = -.05$, *ns*), and interpersonal justice perceptions ($b = -.18$, *ns*) were not significantly related to CWB, controlling for age, gender, tenure, and the leadership dimensions. Moreover, the bootstapped estimates and associated confidence intervals indicated that consideration and structure did not have significant indirect effects on CWB through any of the four justice dimensions. Thus, the effects of consideration and structure on CWB were not mediated by employee justice perceptions. Hypotheses 6a and 6b were uniformly rejected.

Study 2

The goal of Study 2 is to replicate the findings of Study 1 by using a different source of data. Namely, in Study 2, we assess leader consideration and structure and employee CWB from coworkers of employees who work for the same boss. We specifically sought coworker reports of CWB in Study 2, as research suggests peers may have clearer insight into the typical day-to-day behavior of coworkers than supervisors (Latham & Mann, 2006; Latham, Skarlicki, Irvine, & Siegel, 1993). Our second study focuses on the same set of hypotheses described in Study 1.

Methodology

Participants and procedure

In Study 2, we recruited working adults by using the StudyResponse Project (SRP) hosted by the School of Information Studies at Syracuse University (for published studies using SRP respondents, see Piccolo & Colquitt, 2006; Reynolds & Ceranic, 2007; Wallace & Chen, 2005; Wallace & Vodanovich, 2004). SRP prescreened panelists to find individuals willing and able to recruit one of their coworkers who worked under the same direct supervisor to complete an online survey. Next, SRP sent recruitment emails with the link to the online survey to 328 working adults (165 coworker dyads). Surveys assessed respondents' perceptions of their direct supervisor's leadership behavior, respondents' justice perceptions, and respondents' assessments of their participating coworkers' CWB. A follow-up email was sent after one week. A total of 289 individuals completed the survey for a response rate of 88 percent. From these respondents, we were able to connect 135 matching dyads. Respondents who did not have matching coworker data lacked criterion data and were eliminated from the database, reducing the number of

DOI: 10.1002/job

respondents to 270. As a check, the survey asked participants to indicate whether they and the coworker they recruited to participate in this survey (or who recruited them to participate) currently work for the same direct boss (supervisor). Of the 270 respondents, 226 (84 percent) indicated they did currently work for the same direct supervisor. We eliminated from the sample the 44 respondents who indicated they did not share the same direct boss. The survey also included multiple items to detect careless responders; we identified 16 participants as careless responders and eliminated them from the database. Thus, the final sample included 210 employees (105 coworker dyads) representing numerous occupational fields, including administrative services, education, computer technology, accounting, financial services, and health care. A majority of respondents were men (69 percent). The average age in the sample was 39.9 years, and the average tenure was 7.8 years. We collected Internet protocol addresses, job titles, and employer names to help ensure data integrity (e.g., Judge et al., 2006). In appreciation for their effort, we awarded each participant a $5 electronic gift card to Amazon.com.

Measures

The measurement scales used in Study 2 were identical to Study 1. However, rather than supervisors reporting on employees' CWB, coworkers of the employees provided these data. Similarly, coworkers rather than supervisors provided the second source of LBDQ-XII data.

Results

We report descriptive statistics and internal-consistency reliabilities for Study 2 scales in Table 5. Mirroring Study 1, we conducted a series of CFAs to examine the construct validity of the measurement instruments used in this study. In this study, we used the same analytic procedures described in Study 1. Consistent with Study 1, all alternative models provided significantly worse fit to the data compared with our hypothesized measurement model (Table 6). Thus, the CFAs provided additional support for the construct validity of our measures.

Next, we moved on to test the study hypotheses. We found a similar pattern of results across the analyses involving employee-reported and coworker-reported leadership (Table 7). Consistent with Hypothesis 1, structure had a significant positive relationship with distributive justice perceptions. In support of Hypotheses 2a and 2b, consideration and structure were significantly linked to procedural justice. In support of Hypotheses 3a and 3b, consideration and structure were significantly related to informational justice. Consistent with Hypotheses 4, consideration had a robust relationship with interpersonal justice. Although not predicted, structure also had a significant relationship with interpersonal justice perceptions. We also explored the possibility of non-linear effects of consideration and structure on the justice dimensions. Across Studies 1 and 2, there was no evidence of significant curvilinear structure effects, or Structure × Consideration interactions, on any of the four justice facets. Similar null findings emerged whether the analyses focused on employee-reported, supervisor-reported, or coworker-reported leadership behavior. Substantively, results suggested that the effects of consideration and structure on justice perceptions were linear and additive.

Next, we used polynomial regression analysis to test for curvilinear effects of structure, and the interactive effects between structure and consideration on employee CWB proposed in Hypotheses 5a and 5b. We summarize the results in Table 8. In Steps 1 and 2, we entered our control variables into the regression equation, followed by the main effects of consideration and structure. In Step 3, we included the higher order terms into the regression equation. Together, the higher order effects accounted for 11 percent of the variance in CWB incremental to the control variables and main effects of consideration and structure alone, $\Delta R^2 = .11$, $F(3, 199) = 9.81$, $p < .001$. The results suggested that consideration and structure had interactive effects on CWB. Further, the effect of structure on CWB was curvilinear. The higher order coefficient representing the quadratic Structure × Consideration interaction was not significant, which suggests that the effect of structure on CWB was similarly curved across levels of consideration (e.g., Cohen et al., 2003). Substantively, the form of the Consideration × Structure interaction was similar to the interaction observed in Study 1 (Figure 2). More specifically, simple slopes analysis indicated that consideration was not significantly related to CWB at low levels of structure ($b = -.08$, $t = -.37$, *ns*). But, consideration

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Table 5. Study 2 scale means, standard deviations, correlations, and internal consistency reliabilities.

		M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
1	Gender	0.69	0.46	—											
2	Age	39.85	8.80	−.12	—										
3	Tenure	7.76	5.41	−.08	.51**	—									
4	Consideration	4.75	0.79	.06	.13	.00	(.74)								
5	Structure	5.13	0.88	.12	.09	−.08	.72**	(.88)							
6	Distributive justice	4.94	1.18	.17*	.20**	.06	.45**	.53**	(.88)						
7	Procedural justice	4.82	1.13	.11	.12	.03	.64**	.64**	.74**	(.90)					
8	Informational justice	4.91	1.13	.04	.05	−.09	.62**	.60**	.57**	.75**	(.89)				
9	Interpersonal justice	5.20	1.29	.01	.08	−.02	.63**	.54**	.56**	.73**	.80**	(.90)			
10	Consideration[a]	4.75	0.79	.12	.10	.02	.67**	.57**	.38**	.49**	.49**	.47**	(.74)		
11	Structure[a]	5.13	0.88	.09	.10	−.06	.59**	.78**	.45**	.51**	.55**	.45**	.72**	(.88)	
12	Deviance[a]	2.53	1.27	.13	−.08	.00	−.34**	−.15*	−.11	−.14*	−.14*	−.21**	−.35**	−.14*	(.95)

$n = 210$. *SD*, standard deviation.
[a]Coworker-reported data. Gender 0 = *female*, 1 = *male*.
$^{**}p < 0.01$; $^{*}p < .05$.

Table 6. Study 2 confirmatory factor analyses.

Model	χ^2	Δ χ2	*df*	χ^2/df	*TLI*	*CFI*	*RMSEA*
1	319.85	—	137	2.33	0.92	0.94	0.08
2	360.84	40.99***	142	2.54	0.91	0.92	0.09
3	357.02	37.17***	142	2.51	0.91	0.93	0.09
4	478.46	158.61***	142	3.37	0.86	0.88	0.11
5	435.24	115.39***	142	3.07	0.90	0.88	0.10
6	507.12	187.27***	146	3.47	0.85	0.87	0.11
7	505.74	185.89***	142	3.56	0.85	0.87	0.11
8	533.06	213.21***	142	3.75	0.84	0.86	0.12
9	557.99	238.14***	151	3.70	0.84	0.86	0.11
10	848.68	528.83***	152	5.58	0.73	0.76	0.15

Δ χ^2 reflects comparison between current model and hypothesized five-factor model. Model 1 = Hypothesized six-factor model with leader consideration, leader structure, distributive justice, procedural justice, informational justice, and interpersonal justice indicators loaded onto six latent factors. Model 2 = Five-factor model with leader consideration, leader structure, distributive justice, procedural justice indicators loaded onto four latent factors and informational justice, and interpersonal justice indicators loaded onto a common latent factor. Model 3 = Five-factor model with leader consideration and structure indicators loaded onto a common latent factor and distributive justice, procedural justice, informational justice, and interpersonal justice indicators loaded onto four latent factors. Model 4 = Five-factor model with leader structure, distributive justice, procedural justice, and informational justice indicators loaded onto four latent factors and leadership consideration and interpersonal justice indicators loaded onto a common latent factor. Model 5 = Five-factor model with leader structure, distributive justice, procedural justice, and interpersonal justice indicators loaded onto four latent factors and leadership consideration and informational justice indicators loaded onto a common latent factor. Model 6 = Four-factor model with leader structure, distributive justice, procedural justice indicators loaded onto three latent factors and leadership consideration, informational justice, and interpersonal justice indicators loaded onto a common latent factor. Model 7 = Five-factor model with leader consideration, procedural justice, informational justice, and interpersonal justice indicators loaded onto four latent factors and leadership structure and distributive justice loaded onto a common latent factor. Model 8 = Five-factor model with leader consideration, distributive justice, informational justice, and interpersonal justice indicators loaded onto four latent factors and leadership structure and procedural justice loaded onto a common latent factor. Model 9 = Two-factor model with leader consideration, distributive justice, informational justice, and interpersonal justice indicators loaded onto a common latent factors and leadership structure and procedural justice loaded onto a common latent factor. Model 10 = Single-factor model.
$^{***}p < .001$.

did have significant negative relations with CWB at average ($b = -.74$, $t = -4.81$, $p < .001$) and above average ($b = -1.39$, $t = -7.05$, $p < .001$) levels of structure. Viewing the interaction from the perspective of structure, simple

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Table 7. Study 2 justice perceptions regressed onto consideration and structure.

		Distributive justice			Procedural justice			Informational justice			Interpersonal justice		
Step	Variable	*b*	95% CI[c]	ΔR^2	*b*	95% CI[c]	ΔR^2	*b*	95% CI[c]	ΔR^2	*b*	95% CI[c]	ΔR^2
1	Gender	.35*	0.05, 0.63	.08***	.13	−0.12, 0.37	.03	−.07	−0.33, 0.19	.02	−.09	−0.39, 0.20	.01
	Age	.02*	0.00, 0.04		.00	−0.01, 0.02		.00	−0.02, 0.02		−.00	−0.02, 0.01	
	Tenure	.01	−0.02, 0.04		.01	−0.02, 0.03		−.01	−0.04, 0.01		.00	−0.03, 0.03	
2	Consideration[a]	.19	−0.05, 0.44	.25***	.55***	0.34, 0.75	.45***	.57***	0.35, 0.78	.41***	.82***	0.57, 1.06	.42***
	Structure[a]	.56***	0.33, 0.78		.45***	0.26, 0.64		.40***	0.20, 0.60		.30**	0.08, 0.53	
1	Gender	.38*	0.07, 0.69	.08***	.15	−0.14, 0.43	.03	−.06	−0.35, 0.22	.02	−.10	−0.44, 0.24	.01
	Age	.02*	0.00, 0.04		.01	−0.01, 0.03		.00	−0.01, 0.02		.00	−0.02, 0.02	
	Tenure	.00	−0.03, 0.03		.00	−0.03, 0.34		−.02	−0.05, 0.01		.00	−0.04, 0.03	
2	Consideration[b]	.13	−0.14, 0.39	.18***	.35**	0.12, 0.60	.26***	.31**	0.08, 0.55	.30***	.53***	0.25, 0.82	.26***
	Structure[b]	.49***	0.26, 0.72		.40***	0.19, 0.62		.49***	0.28, 0.70		.34**	0.09, 0.59	

[a]Employee-reported.
[b]Coworker-reported.
[c]95% confidence intervals around unstandardized regression coefficients.
*$p < .05$; **$p < .01$; ***$p < .001$.
Unstandardized regression coefficients for the full models are presented.

Table 8. Study 2 counterproductive work behavior regressed onto consideration and structure.

		Employee-reported leadership			Coworker-reported leadership		
Step	Variable	*b*	95% CI	ΔR^2	*b*	95% CI	ΔR^2
1	Gender	.38*	0.02, 0.73	.02	.46*	0.12, 0.82	.02
	Age	−.01	−0.03, 0.02		−.01	−0.03, 0.01	
	Tenure	.01	−0.02, 0.05		.02	−0.02, 0.05	
2	Consideration	−.77***	−1.07, −0.47	.13***	−.88***	−1.18, −0.59	.16***
	Structure	.26	−0.00, 0.54		.34*	0.07, 0.60	
3	Consideration × Structure	−.75***	−1.06, −0.43	.11***	−.73***	−1.05, −0.41	.09***
	Structure^2	.71***	0.44, 0.97		.63***	0.38, 0.89	
	Consideration × Structure^2	.06	−0.08, 0.19		.08	−0.06, 0.21	

95% confidence intervals around unstandardized regression coefficients. Structure^2 represents the quadratic structure term.
*$p < .05$; **$p < .01$; ***$p < .001$.

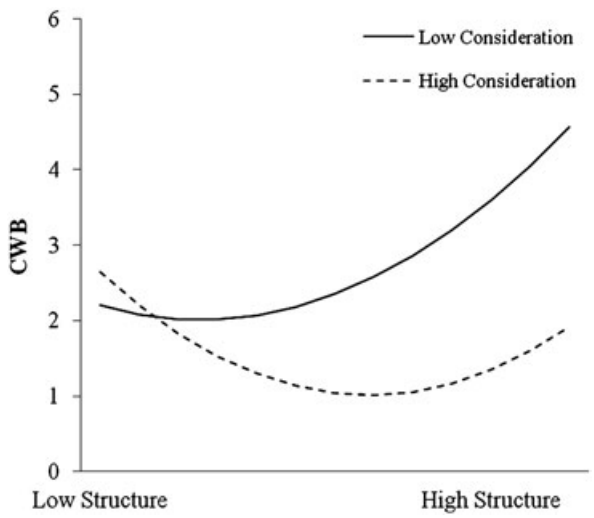

Figure 2. Employee-reported Consideration × Structure interaction and curvilinear structure effect on counterproductive work behavior in Study 2

slopes analysis indicated that structure was positively related to CWB at low levels of consideration ($b = .80$, $t = 4.58$, $p < .001$), but was not significantly associated with CWB at average ($b = .21$, $t = 1.51$, *ns*), or above average levels of consideration ($b = -.38$; $t = -1.86$, *ns*), although the *p*-value associated with the latter effect ($p = .06$) was near conventional standards of significance. Substantively, the form of the interaction was such that the highest levels of CWB were found under conditions of high structure and low consideration. Interestingly, the effect of structure was also curvilinear (u-shaped) such that moderate levels of structure were associated with the lowest levels of CWB (Figure 2). Simple slope procedures for interpreting curvilinear relations (Cohen et al., 2003) suggested that the direction of the slopes changed moving from low (−1 *SD*) to average and high (+1 *SD*) levels of structure ($b = -.98, .27, 1.52$, respectfully). To facilitate interpretation, we conducted an analysis of variance to examine mean differences in CWB across low (1 *SD* or more below the mean), moderate (within ±1 *SD* of the mean), and high structure (1 *SD* or more above the mean). The results indicated significant mean differences in CWB across levels of structure, $F(2, 200) = 8.57$, $p < .001$. Pairwise comparisons suggested that moderate structure was associated with significantly lower CWB ($M = 2.35$), than either

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low ($M = 3.14$, $p < .05$) or high levels of structure ($M = 2.71$, $p < .001$). We found no significant differences between low and high levels of structure. Taken together, results suggest that moderate levels of structure are optimal; too little, or too much, structure may increase employee CWB.

Next, we repeated the polynomial regression analysis including *coworker-reported* consideration and structure (Table 8). Together, the nonlinear effects accounted for 9 percent of the variance in CWB incremental to the control variables and main effects of consideration and structure alone, $\Delta R^2 = .09$, $F(3, 199) = 8.50$, $p < .001$. First, results suggested that consideration and structure had multiplicative effects on CWB. Simple slopes analysis indicated that consideration was not significantly related to CWB at low levels of structure ($b = -.20$, $t = -0.90$, *ns*). But, consideration did have significant negative relations with CWB at average ($b = -.85$, $t = -5.53$, $p < .001$) and above average ($b = -1.50$, $t = -7.58$, $p < .001$) levels of structure. Viewed differently, simple slopes analyses indicated that structure was positively related to CWB at low ($b = .86$, $t = 4.92$, $p < .001$) and moderate levels of consideration ($b = .29$, $t = 2.09$, $p < .05$) but was not related to CWB at high levels of consideration ($b = -.28$; $t = -1.42$, *ns*). Substantively, we observed the highest levels of CWB under high structure and low consideration. Additionally, results also suggested that the effect of Structure was curvilinear. The higher order coefficient representing the quadratic Structure × Consideration interaction was not significant indicating that the effect of structure on CWB was similarly curved across levels of consideration (e.g., Cohen et al., 2003). Simple slope analyses (Cohen et al., 2003) suggested that the direction of the slopes changed moving from low (−1 *SD*) to average and high (+1 *SD*) levels of structure ($b = -.79$, .34, 1.47, respectfully). Additionally, an analysis of variance indicated significant mean differences, $F(2, 200) = 7.57$, $p < .001$, in CWB across low (1 *SD* or more below the mean), moderate (within ±1 *SD* of the mean), and high structure (1 *SD* or more above the mean). Pairwise comparisons suggested that high structure was associated with greater CWB ($M = 3.35$) than low ($M = 2.52$, $p < .05$) or moderate levels of structure ($M = 2.34$, $p < .001$) and that the mean differences between low and moderate levels of structure were not statistically significant. Across the employee-reported and coworker-reported leadership analyses, the results suggested that consideration moderated the effect of structure and structure demonstrated curvilinear relations with CWB. Thus, Hypotheses 5a and 5b were supported in Study 2.

Finally, we tested Hypotheses 6a and 6b using the PROCESS computational program (Hayes, 2012). Specifically, CWB was regressed onto the hypothesized mediators (i.e., distributive, procedural, informational, and interpersonal justice perceptions), *employee-reported* leadership consideration and structure, the Consideration × Structure interaction, and the control variables (i.e., age, gender, and tenure). Results suggested that distributive ($b = -.07$, *ns*), procedural ($b = .09$, *ns*), informational ($b = .09$, *ns*), and interpersonal justice perceptions ($b = -.07$, *ns*) were not significantly related to CWB, controlling for age, gender, tenure, and the leadership dimensions. Further, the 95 percent confidence intervals associated with the bootstrapped indirect effect estimates (generated across 1000 samples) of consideration and structure through each of the four justice facets, as well as the total indirect effects, all included zero. We then repeated the analyses with *coworker-reported* consideration and structure. Results suggested that distributive ($b = -.05$, *ns*), procedural ($b = .06$, *ns*), informational ($b = .10$, *ns*), and interpersonal justice perceptions ($b = -.12$, *ns*) were not significantly related to CWB, controlling for age, gender, tenure, and the leadership dimensions. Again, the 95 percent confidence intervals around the bootstrapped estimates of indirect effects all included zero. Taken together, these results suggest that the effects of employee-reported leadership consideration and structure on CWB were not mediated by employee justice perceptions. Thus, Hypotheses 6a and 6b were not supported.

Discussion

Contrary to previous conclusions that leadership consideration and structure offered little explanatory value in pertinent organizational outcomes, Judge et al. (2004) demonstrated that the Ohio State leadership factors have impressive validity across a range of important outcomes. However, because these constructs were discarded nearly

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three decades ago, basic questions remain unanswered regarding the implications of consideration and structure for outcomes of interest to contemporary organizational scholars. This article helps advance our understanding by demonstrating that these two fundamental dimensions of leadership behavior have significant impact on employee justice perceptions and CWB. Results revealed a number of interesting points with noteworthy implications for research and practice.

First, Judge et al. (2004) explicitly highlighted the need for research directed at understanding the relationships between leadership consideration and structure and employee justice perceptions. This article answers their call for research. Consistent with hypotheses, structure displayed the most consistent relations with distributive justice perceptions across all sources (employee, supervisor, and coworker). Consideration and structure exhibited relatively similar relations with procedural and informational justice. Not surprisingly, interpersonal justice perceptions were most strongly affected by the level of consideration provided by supervisors. Taken together, our results suggest that leaders can significantly influence their employees'perceptions of justice through engaging behavior consistent with consideration and structure. But, our results also underscore that the impact of consideration and structure will vary depending on the particular facet of justice of interest.

We also hypothesized that employee perceptions of justice would partially mediate the effects of leadership consideration and structure on CWB. However, our data did not support this perspective. In contrast to the seemingly ubiquitous role ascribed to justice in the OB literature, employee perceptions of justice lacked explanatory power in our two studies. In fact, none of the four justice dimensions helped explain employee counterproductive behavior beyond the variability that could be accounted for by the leadership dimensions. Importantly, these results were consistent whether employees, their coworkers, or their managers provided the leadership data. Although the finding that justice perceptions did not play a role in influencing CWB might be a disappointment to justice scholars, we believe our results should be very encouraging to leadership scholars and practitioners. Namely, our research suggests that managers have the power to directly influence the occurrence of CWB by engaging in appropriate leadership behavior. Presumably, a manager should have more control over his or her own leadership behavior than employee justice perceptions, which are inherently subjective and idiosyncratic (e.g., justice is in eye of the beholder). Our finding that leadership behavior directly, rather than indirectly, influences employee CWB is consistent with principles of SLT (Bandura, 1973) and accumulating empirical evidence suggesting that employees mirror the behaviors exhibited from their direct supervisors (e.g., Brown, Trevino, & Harrison, 2005; Mayer et al., 2009; Neubert et al., 2008). Supervisors who are cold, secretive, and distant (i.e., low in consideration) signal that it is acceptable to treat others in a rude or inconsiderate manner. As a result, low supervisor consideration begets higher levels of CWB among employees. On the other hand, supervisors who are friendly, communicative, and who protect the welfare of their employees model positive behaviors that help limit employee CWB.

These research findings also underscore Fleishman's (1995, 1998) warnings that the relationships between structure and employee behavior may not be adequately represented by simple main effects alone. For example, across three of four analyses results suggest that the effect of structure was dependent on the level of leader consideration (the exception involved supervisor-reported leadership). More specifically, higher levels of structure were associated with greater CWB when consideration was low (Figure 1). As Fleishman (1998) described, when a boss is highly considerate, employees are likely to view increased structure as supportive and helpful for achieving performance goals. However, high structure may seem controlling and threatening to employees who perceive their boss as being low on consideration. Moreover, the results of our second study also suggested that the structure–CWB relationship was curvilinear such that moderate levels of structure were associated with the lowest levels of employee CWB (Figure 2). Interestingly, the curvilinear effect of structure on CWB mirrors the curvilinear effect of structure on employee turnover observed by Fleishman and Harris (1962). Similar to the "too-much-of-a-good-thing effect" (Pierce & Aguinis, in press), our results suggest that structure may only be beneficial (i.e., reduce CWB) up to a point. In line with SLT principles, if a supervisor does not delineate and enforce clear rules and performance standards (i.e., exhibits low structure), employees may learn that it is okay to "slack" on the job. However, if a supervisor provides too much structure, employees may perceive that they lack autonomy and control; the frustration–aggression model suggests that these cognitions often stimulate counterproductive behavior (e.g., Fox & Spector, 1999; Fox et al., 2001).

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We assessed leadership from multiple perspectives to address common source criticisms levied against past esearch involving consideration and structure (e.g., Kerr & Schriesheim, 1974). Substantively, our results were generally consistent across coworker-reported and employee-reported leadership behaviors. However, the observed relationships between consideration and structure and employee justice perceptions were weaker (Table 3), and the interactive effect of consideration and structure on CWB was insignificant (Table 4) using supervisor self-reported leadership behavior. Interestingly, supervisor-reports resulted in higher means and less variance than employee-reports of leadership behavior. For instance, in Study 1, paired sample *t*-tests suggested that supervisor-reported consideration ($M = 5.62$) was significantly higher than employee-reported consideration ($M = 5.21$; $t = 4.28$, $p < .001$) and displayed less variance than employee reports ($\sigma^2 = .36, .85$, respectively). Similarly, supervisor-reported structure ($M = 5.65$) was significantly higher than employee-reported structure ($M = 5.35$; $t = 3.16$, $p < .01$) and less variant than employee reports ($\sigma^2 = .45, .67$, respectively). Thus, although consideration and structure have significant utility for explaining employee perceptions and behaviors regardless of data source, we caution that research focusing exclusively on self-reported leadership may produce weaker relationships with employee outcomes. Ideally, researchers should consider collecting leadership from multiple sources.

Practical implications

The practical implications of our findings involving leadership consideration are relatively straightforward—engaging in higher levels of consideration may help engender more favorable perceptions of justice (i.e., procedural, informational, and interpersonal) and help limit employee CWB. The practical implications of structure are more muddied. Increased structure can help foster favorable perceptions of justice (i.e., distributive, procedural, and informational). But, as described earlier, the effects of structure on CWB are complex. The practical advice to a supervisor might be to provide more or less structure, depending both on the level of consideration and the level of structure currently exhibited. More specifically, our results suggest that the best management style for reducing employee CWB is to demonstrate high consideration and exhibit moderate levels of structure. Highly considerate leaders who implement too much or too little structure may unwittingly foster increased CWB among employees.

Given the importance of the Ohio State factors for employee justice perceptions and CWB, organizations may find it fruitful to train first-line supervisors in these leadership behaviors. For instance, to foster high consideration among supervisors, training content might emphasize the strategies for fostering open channels of communication with employees. Further training might teach supervisors how to engage in participative decision making and might stress the importance of fostering a positive work environment. To help realize the benefits of leadership structure, and avoid the potential negative consequences (i.e., increased CWB), training content might underscore the importance of clear performance standards and rule enforcement, while also stressing that supervisors must avoid being too stifling in controlling the activities of their employees. Although new training programs can be expensive, the costs associated with training might be offset by the financial benefits that organizations realize by reducing employee CWB. Employee CWB costs organizations billions of dollars annually (e.g., Bensimon, 1994; Buss, 1993; Camara & Schneider, 1994; Coffman, 2003; Murphy, 1993). Interventions that produce even modest reductions in CWB can help organizations achieve substantial savings (Henle, 2005).

Limitations and future research directions

Our findings should be considered in light of a few limitations. For instance, we collected CWBs using subjective ratings. All subjective performance measures are susceptible to various rating errors (e.g., halo, leniency, and severity) and socially desirable responding. To help reduce the likelihood of socially desirable responding, survey instructions stressed that all responses were strictly confidential and would be used only for research purposes. Further, we warned respondents that raters tend to be overly favorable when evaluating the performance of

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coworkers and requested that the respondents answer the questions as honestly and accurately as possible. However, given the potential problems associated with subjective ratings, we encourage researchers to replicate the findings presented in the current investigation with objective measures of workplace deviance such as personnel data containing unexcused absences, tardiness, theft, or formal demerits.

Additionally, the use of nonself-report measures of CWB (i.e., coworker and supervisor reports) may have influenced the results of our hypotheses predicting that justice perceptions would partially mediate the relationships between leader behavior and CWB. Again, our results suggested that justice perceptions were not significantly linked to CWB after controlling for leadership consideration and structure. Interestingly, recent meta-analytic research suggests that the effects of perceived justice on CWB are substantially weaker when these variables are not assessed using single-source designs (Berry et al., 2007). It is plausible that measuring justice perceptions and CWB using employee self-report might have resulted in more robust justice–CWB relations and revealed support for our mediated hypotheses. However, such a design would also be more susceptible to problems of common method variance.

Although we collected data from different sources, our research was not longitudinal in nature, and the causal ordering of our results remains indeterminate. Further, it is important to note that we adopted an entity approach in our measurement of the justice dimensions (e.g., Cropanzano, Byrne, Bobocel, & Rupp, 2001). That is, employees reported how they perceive their boss on the four justice dimensions across time and across allocation contexts. It is possible that different results may have emerged had we assessed justice perceptions using an event paradigm. Accordingly, it will be important for future research to examine the influence of consideration and Structure on employee reactions to a particular event (e.g., a performance review and promotion decision) that occurs after the leadership assessments are collected. An event-based research methodology would help draw stronger conclusions regarding the causal influence of consideration and structure on employee justice perceptions. Researchers might also extend their investigations to explore whether event-based justice perceptions mediate the effects of consideration and structure on employee CWB.

Another promising avenue for future research would be to integrate measures of leaders' dispositions to expand the relationships examined in this article. In particular, it would be interesting to examine how a leader's justice orientation (e.g., Liao & Rupp, 2005) affects his or her leadership behavior. It is plausible that a boss who strongly internalizes justice as a core value and regularly attends to issues of fairness (i.e., high justice orientation) might be careful to behave in a considerate manner and provide an appropriate level of structure (not too much, not too little) to meet the needs of his or her employees and foster favorable perceptions of justice. In this manner, research might extend our results to find that consideration and structure mediate the relationship between a leader's justice orientation and his or her employees' perceptions of justice.

We should also note that the consideration, structure, (Stogdill, 1963) and justice measures (Colquitt, 2001) used in this study share some semantic similarities (see Appendix). For instance, one of the structure items captures the extent to which a boss encourages the use of uniform procedures. This item might be interpreted as falling within the procedural justice construct domain. However, there are important conceptual differences between the construct domains assessed by the leadership and justice measures. Of greatest importance, the leadership items referenced the day-to-day behavior exhibited by leaders, whereas the justice items used in this study were specifically tied to allocation contexts (e.g., Colquitt, 2001). For example, a boss might strongly encourage all employees to follow specific procedures for completing work assignments; but ensuring that employees follow standard operating procedures does not mean the boss will necessarily use fair procedures when making allocation decisions (e.g., pay raises) that affect his or her employees.

Finally, this study focused on the Ohio State leadership dimensions. There has been a proliferation of leadership constructs (e.g., authentic leadership, abusive leadership, ethical leadership, servant leadership, transactional leadership, and transformational leadership) since the demise of consideration and structure research. It would be fruitful to integrate other relevant leadership constructs when examining the effects of consideration and structure. For instance, adopting a leader–member exchange perspective, researchers might examine whether relationship quality moderates the effects of consideration and structure on relevant outcomes such as justice perceptions and CWB. Another important area of

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research would be to test the validity of consideration and structure for predicting justice perceptions and CWB, controlling for constructs prominent in the contemporary leadership literature (e.g., abusive leadership and transformational leadership). For example, Keller (2006) recently found that structure was significantly associated with a variety of performance criteria (i.e., technical quality, schedule performance, and cost performance), controlling for the effects of transformational leadership.

Conclusions

This article suggests that leaders who demonstrate high levels of consideration and structure can help engender favorable perceptions of justice among subordinates. Moreover, consideration and structure can significantly impact the level of counterproductive behavior in the workplace. Interestingly, the results indicated that the effects of structure on CWB may be curvilinear and dependent on the level of consideration provided by supervisors. These findings underscore the arguments of Fleishman (1995, 1998) that the effects of consideration and structure on employee behavior may not be adequately represented by simple main effects alone. Through demonstrating significant associations between consideration and structure and previously unexamined perceptual and behavioral outcomes, we hope this study can help further energize research into these core dimensions of leadership behavior.

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DOI: 10.1002/job

Appendix

Leadership and Justice Scales

Leadership items and instructions. The employee-reported leadership instructions were adapted from the LBDQ—XII manual (Stogdill, 1963). Specifically, the instructions clarified the following: The next set of questions ask about the day-to-day behavior of your direct boss (supervisor). Each item describes a specific kind of behavior, but does not ask you to judge whether the behavior is desirable or undesirable. Although some items may appear similar, they express differences that are important in the description of leadership. This is not a test of ability or consistency in making answers. Its only purpose is to make it possible for you to describe, as accurately as you can, the behavior of your direct boss (supervisor).

Consideration (Stogdill, 1963)

1. Is your boss friendly and approachable?
2. Does your boss do little things to make it pleasant to be a member of the group?
3. Does your boss put suggestions made by the group into operation?
4. Does your boss treat all group members as equals?
5. Does your boss give advance notice of changes?
6. Does your boss keep to himself/herself?
7. Does your boss look out for the personal welfare of group members?
8. Is your boss willing to make changes?
9. Does your boss refuse to explain his/her actions?
10. Does your boss act without consulting the group?

Structure (Stogdill, 1963)

1. Does your boss let group members know what is expected of them?
2. Does your boss encourage the use of uniform procedures?
3. Does your boss try out his/her ideas in the group?
4. Does your boss make his/her attitudes clear to the group?
5. Does your boss decide what shall be done and how it shall be done?
6. Does your boss assign group members to particular tasks?
7. Does your boss make sure that his/her part in the group is understood by the group members?
8. Does your boss schedule the work to be done?
9. Does your boss maintain definite standards of performance?
10. Does your boss ask group members to follow standard rules and regulations?

Justice items and instructions. Consistent with Colquitt (2001), the instructions preceding the distributive justice items clarified that the items below refer to the outcomes you receive to your work outcomes such as pay, promotions, etc.

Distributive Justice (Colquitt, 2001)

1. Do your outcomes reflect the effort you have put into your work?
2. Are your outcomes appropriate for the work you have completed?
3. Do your outcomes reflect what you have contributed to the organization?
4. Are your outcomes justified, given your performance?

Instructions preceding the procedural justice items clarified that the next set of items would refer to the procedures their direct boss uses to arrive at the outcomes the respondents receive at work (e.g., pay and promotions).

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Procedural Justice (Colquitt, 2001)

1. Are you able to express your views and feelings during those procedures?
2. Do you have influence over the outcomes arrived at by those procedures?
3. Are those procedures applied consistently?
4. Are those procedures free of bias?
5. Are those procedures based on accurate information?
6. Are you able to appeal the outcomes arrived at by those procedures?
7. Do those procedures uphold ethical and moral standards?

Next, instructions clarified that the informational and interpersonal justice items were directed at the direct boss (who enacted the procedures considered earlier).

Informational Justice (Colquitt, 2001)

1. Is he/she candid in his/her communications with employees?
2. Does he/she explain procedures thoroughly?
3. Are his/her explanations regarding procedures reasonable?
4. Does he/she communicate details in a timely manner?
5. Does he/she seem to tailor his/her communications to individuals' specific needs?

Interpersonal Justice (Colquitt, 2001)

1. Does he/she treat people in a polite manner?
2. Does he/she treat employees with dignity?
3. Does he/she refrain from improper remarks or comments?
4. Does he/she treat people with respect?

DOI: 10.1002/job