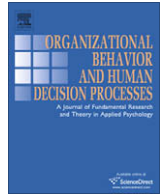




Contents lists available at ScienceDirect

Organizational Behavior and Human Decision Processes

journal homepage: www.elsevier.com/locate/obhdp

How low does ethical leadership flow? Test of a trickle-down model

David M. Mayer^{a,*}, Maribeth Kuenzi^b, Rebecca Greenbaum^a, Mary Barden^a, Rommel (Bombie) Salvador^c^a University of Central Florida, Department of Management, College of Business Administration, P.O. Box 161400, Orlando, FL 32816-1400, USA^b Southern Methodist University, USA^c University of Washington, Tacoma, USA

ARTICLE INFO

Article history:

Received 23 June 2007

Revised 3 April 2008

Accepted 14 April 2008

Available online 17 June 2008

Accepted by Paul Levy

Keywords:

Ethics

Leadership

Deviance

OCB

ABSTRACT

This research examines the relationships between top management and supervisory ethical leadership and group-level outcomes (e.g., deviance, OCB) and suggests that ethical leadership flows from one organizational level to the next. Drawing on social learning theory [Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.; Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall.] and social exchange theory [Blau, p. (1964). *Exchange and power in social life*. New York: John Wiley.], the results support our theoretical model using a sample of 904 employees and 195 managers in 195 departments. We find a direct negative relationship between both top management and supervisory ethical leadership and group-level deviance, and a positive relationship with group-level OCB. Finally, consistent with the proposed trickle-down model, the effects of top management ethical leadership on group-level deviance and OCB are mediated by supervisory ethical leadership.

© 2008 Elsevier Inc. All rights reserved.

The media's interest in recent corporate scandals highlights the importance society places on ethical behavior in organizations (Treviño, Weaver, & Reynolds, 2006). Although scholarly work on business ethics has traditionally been studied by philosophers and has taken a prescriptive approach, the emerging field of behavioral ethics takes a descriptive approach by focusing on empirical data collected from social scientists to understand what actually happens in organizations (Trevino, Brown, & Hartman, 2003). In an effort to explain why both (un)ethical and positive behavior occurs in organizations, behavioral ethics scholars have developed theory and provided empirical evidence suggesting that leaders play a prominent role in influencing employees' propensity to behave in a counterproductive or helpful manner (Brown & Treviño, 2006a; Davis & Rothstein, 2006; Dickson, Smith, Grojean, & Ehrhart, 2001; Grojean, Resick, Dickson, & Smith, 2004).

Although philosophers and theologians have long discussed the topic of ethical leadership, it is not until recently that social scientists have begun to empirically examine ethical aspects of leadership in organizations. Recently, Brown, Treviño, and Harrison (2005) conceptualized a new leadership construct, called *ethical leadership*, defined as, "the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making" (p. 120). This conceptualization of ethical leadership differs from other leadership

theories with ethical components on a couple of fronts. One way it differs is that while some leadership theories such as transformational leadership have an ethical component, the focus on ethics is ancillary and represents only one aspect of the leadership style. In contrast, ethical leadership, as conceptualized by Brown et al., has a sole and explicit focus on the ethical aspect of leadership. Another way that ethical leadership differs from related leadership constructs is that it highlights not only the traits (e.g., integrity, concern for others, just, trustworthy) of ethical leaders, but also draws on social learning theory (SLT; Bandura, 1977, 1986), which is a theory that highlights that people learn from reward and punishment and from modeling the behavior of attractive role models. Specifically with regard to ethical leadership, such leaders are expected to use transactional efforts (e.g., communicating, rewarding, punishing, emphasizing ethical standards) and modeling to influence their followers to behave in an ethical and positive manner (see Brown & Treviño, 2006a for a detailed explanation of how ethical leadership differs from related forms of leadership).

Given that empirical research on ethical leadership is still in its infancy, a number of significant questions remain. This research focuses on two key questions. First, does ethical leadership relate to important employee behaviors? At the core of this question is the issue of whether ethical leadership relates to both *counterproductive* and *positive* behaviors of employees, which is an issue that Brown and Treviño (2006b) suggest as an avenue of future research.

Second, how do different levels of ethical leadership relate to deviant and positive behaviors of employees? Currently, there are two schools of thought on this topic. Some scholars have argued

* Corresponding author. Fax: +1 407 823 3725.

E-mail address: dmayer@bus.ucf.edu (D.M. Mayer).

that “tone at the top” is critical and thus top management should have the strongest influence on employee behavior (Barney, 2005; Weaver, Treviño, & Agle, 2005). Proponents of this perspective highlight that top management conveys the ethical values of the organization and inspires employees to act accordingly (Grojean et al., 2004). This perspective has clearly leaked into popular sentiment as recent legislation such as the Sarbanes-Oxley Act tends to focus on top management (Schminke, Arnaud, & Kuenzi, 2007). A second perspective is that due to their proximity to employees and the intimacy of communication with employees, supervisors are most likely to serve as ethical role models. Further, their ability to dole out punishments and rewards suggests that supervisors should have the strongest influence on employee behaviors (Davis & Rothstein, 2006; Falkenberg & Herremans, 1995; Posner & Schmidt, 1984). In the present research, we do not take an either/or approach to resolving this apparent controversy. Instead, this study is premised on the notion that both levels of leadership are critical but that the influence of top management is indirect—the influence of top management is realized through supervisory leadership. This research meets a call for future research “to investigate potential differences between executive and supervisory ethical leadership” (Brown & Treviño, 2006a, p. 17).

The purpose of the present research is to test a trickle-down model to examine how ethical leadership flows from top levels of management to supervisors and eventuates in employee behavior. We draw on SLT (Bandura, 1977, 1986) and research on the “cascading effect” of leadership (Bass, Waldman, Avolio, & Webb, 1987), to suggest that through a role-modeling process, and because of rewards and punishment systems, top management ethical leadership is likely to be positively related to supervisory ethical leadership. Research on the cascading effect involves the question of whether or not leadership style “cascades” from one management level to another (Bass, 1990). The basic contention of this research is that followers will tend to mimic, or role-model, the behaviors of their superiors. Further drawing on SLT, as well as social exchange theory (SET; Blau, 1964), we posit that because lower-level employees emulate and imitate management behaviors, are rewarded and punished by management, and also feel a sense of indebtedness to ethical leaders because of their trustworthiness and fair nature, there is a negative relationship between ethical leadership and employee deviance and a positive relationship with OCB. Finally, we make the argument that both top management and supervisors are important determinants of employee behavior. However, we suggest that because social interactions between leaders and employees differ at varying levels of leadership, as do the distinct functions of leaders at different levels, the influence of top management will be mediated by supervisory ethical leadership.

In what follows, we supply a justification for our group-level perspective in this research, provide a background on the conceptualization and theoretical foundations of ethical leadership, and present a rationale for the study hypotheses.

Theoretical background and hypotheses

Work group level of analysis

Before delving into our theoretical model, it should be noted that we conceptualize leadership, deviance, and OCB at the work group level. By examining these constructs at the group level, the focus shifts to how the work group as a whole is perceived, or the standard way the unit or leader behaves. In other words, we treat each of these constructs as a “shared unit property” (Kozlowski & Klein, 2000). Kozlowski and Klein (2000) describe how group-level constructs emerge through a bottom-up process. They note that some constructs have “emergent properties that manifest at

higher levels.” These group-level constructs emerge through “social interaction, exchange, and amplification,” between employees in a work group (p. 15). Although we acknowledge that deviance and OCB are individual behaviors, because of the interactions that take place within the social context of a work group we expect deviance and OCB to operate as distinct constructs at the group level (Ehrhart & Naumann, 2004; Robinson & O’Leary-Kelly, 1998). Whereas some constructs are essentially the same when moved from the individual to group level (i.e., isomorphic; referred to as *composition*), it is important to note that scholars who have examined deviance and OCB as group-level constructs have conceptualized these variables as distinct from the individual-level variables (referred to as *compilation*; Chan, 1998). Below are a number of theories that help explain the factors that influence the interaction and exchanges between members of a work group that result in the emergence of group-level deviance and OCB.

There are several theories that help explain why these constructs emerge as a property of the group: (1) social information processing theory (Salancik & Pfeffer, 1978), (2) social learning theory (Bandura, 1977), and the (3) attraction-selection-attrition (ASA) model (Schneider, 1987). *Social information processing theory* suggests that individuals who work in the same environment will be exposed to similar cues from that environment. Work group members use information available in the immediate work context to interpret events and to develop expectations about the appropriate course of behavior and the consequences of such behavior. Thus, by observing cues from one’s environment regarding norms for appropriate behavior, employees will tend to behave in a fairly homogenous manner in terms of the display of deviant and helping behaviors.

Social learning theory suggests that when there are role models in the work environment, individuals will strive to emulate these models. Such role models include the leader and other employees in the work group. Further, employees in a work group are affected similarly as they witness sanctions for inappropriate behavior and rewards for positive behavior. Thus, employees will tend to model the behaviors of their supervisor and other employees to ensure that their behavior is in line with accepted behavioral norms in terms of deviant and helping behaviors.

Finally, *the attraction-selection attrition (ASA) model* suggests that people are attracted to and selected into organizations and/or work groups based on the fit between their personal preferences and characteristics and the attributes of the organization/group. Within the context of work groups, individuals who have tendencies to be deviant or helpful will be likely to be selected into groups that they fit (i.e., the supervisor has a similar orientation), will remain as long as their behavioral tendencies fit with other group members, and those that do not fit will turnover. The result is a homogenous work group in which members have a similar orientation regarding appropriate norms of behavior. Although the underlying processes vary across these theoretical frameworks, each predicts the emergence of deviance and OCB as distinct group-level constructs.

In addition to this theoretical support for the emergence of deviance and OCB as group-level constructs distinct from their individual-level counterparts, there is mounting empirical research supporting the examination of these variables at the group level. In terms of *deviance*, empirical research has examined deviance as a group-level construct (e.g., Brown & Treviño, 2006a; Robinson & O’Leary-Kelly, 1998). This research has found that employees tend to have a shared perception regarding the level of deviance in a work group. Such research has examined antecedents (e.g., socialized charismatic leadership, value congruence) and consequences (e.g., individual-level deviance, aggression, satisfaction, and turnover intentions) of group-level deviance. Similarly, a number of empirical papers have examined OCB at the group level (Ehrhart,

2004; Ehrhart, Bliese, & Thomas, 2006; Podsakoff, Ahearne, & MacKenzie, 1997; Schneider, Ehrhart, Mayer, Saltz, & Niles-Jolly, 2005). This research finds support for a shared perception among work group members regarding OCB, that supervisors are able to rate the level of OCB in the work group, and has found support for antecedents (e.g., servant-leadership) and consequences (e.g., group effectiveness, group-level customer satisfaction) of group-level OCB. Thus, there is strong theoretical and empirical support for examining deviance and OCB as group-level constructs.

Conceptualization of ethical leadership

Ethical leadership, as conceptualized by Brown et al. (2005), differs from related forms of leadership with an ethical component such as transformational (Burns, 1978), authentic (Luthans & Avolio, 2003), and spiritual (Fry, 2003) leadership. Indeed, all of these forms of leadership include attributes such as integrity, trustworthiness, fairness, concern for others, and behaving ethically, which are characteristics that Treviño and colleagues (Treviño et al., 2003; Treviño, Hartman, & Brown, 2000) refer to as the *moral person* aspect of ethical leadership. However, these attributes describe only part of ethical leadership. A second important aspect of ethical leadership, termed by Treviño et al. as the *moral manager*, focuses on more transactional efforts to influence the ethical behavior of followers. Thus, ethical leaders communicate the importance of ethics to subordinates, use rewards and punishments to encourage desired behavior, and serve as ethical role models for followers.

Theoretical foundations of ethical leadership

Two primary theories can be used to understand the influence of ethical leaders on their followers: SLT and SET. SLT posits that individuals learn by witnessing and then striving to duplicate the values and behaviors of models deemed credible and attractive (Bandura, 1977, 1986). In organizations, leaders often serve as role models for determining acceptable and appropriate behavior. The role of leaders in conveying organizational ethics is particularly important because individuals come to understand what is expected of them and how to behave not only through direct experience, but also by observing others (Bandura, 1977, 1986). Consistent with SLT, ethical leaders influence their followers to act ethically in at least two ways. First, to the extent that the decision-making processes and actions of leaders are visible to others in the organization, by virtue of their position, leaders serve as legitimate models of behavior (ethical or otherwise) to followers. Leaders' behaviors are observed by subordinates and serve as cues for appropriate ethical behavior. In this context, leaders who demonstrate ethical behaviors provide examples of ethical behaviors that subordinates emulate. Likewise, leaders who display unethical behaviors are likely to have employees who also engage in unethical behaviors. Second, to the extent that leaders reward helpful behaviors and/or punish unethical behaviors, they influence their followers to behave in ethical (or unethical) ways. When subordinates learn over time that positive behaviors are valued and rewarded, and unethical behaviors are punished, they are more likely to engage in, or refrain from, such behaviors (Brown et al., 2005; Treviño et al., 2000).

Ethical leadership is also expected to affect subordinates through social exchange processes (Blau, 1964). Social exchange is based on the norm of reciprocity (Gouldner, 1960), which posits that if one exchange partner does something beneficial for the other, that generates an obligation to reciprocate good faith behavior (Cropanzano & Mitchell, 2005). Blau (1964) distinction between social exchange that is transactional (i.e., based on economic exchanges such as money and/or resources) or socioemotional (i.e., based on the exchange of interpersonal treatment such as trust

and fairness) is important for understanding how social exchange processes are relevant for ethical leadership. Ethical leadership is expected to affect the behaviors of employees in a work group through socioemotional exchange because ethical leaders are likely to engender high levels of trust and to be perceived as fair (Brown & Treviño, 2006a). Because employees know that they can count on ethical leaders and because ethical leaders treat employees in a fair manner, they are more likely to reciprocate such treatment by behaving in ways that benefit the entire work group and by refraining from behaviors that would be detrimental to the supervisor, work group, and/or organization.

Relationship between top management and supervisory ethical leadership

Drawing on SLT (Bandura, 1977, 1986), a premise of the ethical leadership construct is that management's ethical behavior is reproduced by followers. The term "follower" refers to any employee at a lower level in the organization who is under the jurisdiction of a higher-level manager. Thus, in this context, lower-level managers are followers to the extent that they are accountable to top management. This role-modeling process has been referred to as the "cascading effect" (Bass, 1990; Bass et al., 1987) in the leadership literature. The primary assertion in this approach is that followers, through imitation and observational learning, act in a manner similar to that of their leaders (Brown et al., 2005).

Thus, we hypothesize that role-modeling, or the cascading effect, is likely to occur between top management and immediate supervisors. Supervisors look to higher levels in the organization for the appropriate way to behave. Given that supervisors likely deem themselves as extensions of top management, they will be prone to emulate and imitate the behaviors of top management such that ethical behaviors of leaders will cascade (or flow) down to supervisors. In addition, given that top management likely has power over promotion decisions, supervisors are expected to follow the party line as part of the management team. In sum, we predict:

Hypothesis 1: Top management ethical leadership will be positively related to supervisory ethical leadership.

Ethical leadership and employee behaviors

Group deviance

Group deviance is defined as voluntary behavior by members of a work group in the aggregate that violates the norms of the work group and threatens the well-being of the work group (Robinson & Bennett, 1995, 1997). It is the normative level of deviant behaviors exhibited within the work group. We focus specifically on organizational deviance as opposed to interpersonal deviance because ethical leadership focuses more on broad ethical principles rather than interpersonal interactions. For example, the fact that ethical leaders discuss business ethics with employees and communicate about how to make ethical decisions suggests that ethical leadership should be more strongly related to organizational-referenced unethical behavior as opposed to interpersonal interactions between employees.

SLT and SET both provide a theoretical rationale for why ethical leadership should be negatively related to group deviance. Further, they both operate at the group level by affecting the perceived norms of the group (e.g., Cropanzano & Mitchell, 2005; Robinson & O'Leary-Kelly, 1998). In terms of SLT, one way that employees learn appropriate norms of acceptable behavior is through punishment and reward systems (Bandura, 1977, 1986). It should be noted that an important aspect of SLT is that employees do not have to personally be punished or rewarded but that they also learn vicariously—meaning that they learn about appropriate

behavior by witnessing or hearing about the consequences of behaviors performed by other members of the work group (Bandura, 1977, 1986). Thus, individuals will learn from their own punishments for deviant behavior, as well as those of their group members. In turn, norms become established for how the work unit as a whole should behave. Specifically, ethical leaders are more likely to punish and discipline employees who violate ethical standards such as taking property without permission, falsifying expense reports, or not following a leader's prescribed instruction for personal conduct. In addition, ethical leaders are unlikely to reward employees who use unethical practices to achieve success. The use of punishments and rewards are a critical means utilized by ethical leaders to discourage deviant behavior by establishing norms for the work unit.

SET also provides support for the link between ethical leadership and group deviance. Ethical leaders are expected to influence their employees' behavior through a social exchange process. According to Gouldner (1960), individuals engage in reciprocity where obligations are created by exchanges or favors among individuals; when something is given to someone it generates an obligation to return an equivalent gesture. These norms of reciprocity are suggested "to provide the mechanisms through which the stability of the social system is maintained" (Uhl-Bien & Maslyn, 2003, p. 512). We typically think of reciprocity in terms of positive behaviors; however, negative norms of reciprocity also exist. These negative norms result in "sentiments of retaliation where the emphasis is placed not on the return of benefits but on the return of injuries" (Gouldner, 1960, p. 172).

These exchange relationships have mainly been examined at the individual level, although, researchers suggest that members of the same unit can experience intra-team exchange relationships and have common shared perceptual agreements regarding exchange relationships (e.g., Ekeh, 1974; Ford & Seers, 2006; Uehara, 1990). Thus, it follows that if unethical leaders are exhibiting or "exchanging" negative behaviors to subordinates, the subordinates are likely to exchange negative behaviors in return. However, often times subordinates are restricted in the types of behaviors they can return back to the supervisor for fear of being fired. Therefore, they may exhibit deviant organizational behaviors in the work unit. In turn, norms for deviance develop in the work unit and results in increased deviance in the work unit.

On the other hand, ethical leaders have the best interests of employees in mind and try to "walk the talk" in terms of behaving consistently with their convictions. Here they create positive exchanges, which create an obligation in the work unit to return positive behaviors. This also creates an atmosphere where leaders are likely to be trusted by their employees. Because employees know that ethical leaders can be trusted, they feel less of a need to do anything deviant to improve their performance. Further, ethical leaders make balanced decisions and provide the opportunity for employees to voice their opinions, and thus they are likely to be perceived as fair. When employees in a work group perceive their leader to be fair, they are likely to feel a sense of obligation to reciprocate in ways that are desirable to one's leader and coworkers (e.g., refraining from deviant behavior). The norms of reciprocity for the group are positive. In addition, because employees feel fairly treated and know that they can trust their leader to do the right thing, there is less of a desire to punish one's leader or the organization by coming late to work, dragging out work to get overtime, or taking excessively long breaks.

There is some empirical research that lends support for this relationship between leadership and group deviance. For example, Brown and Treviño (2006a) found that socialized charismatic leadership, which focuses on the ethical aspect of charisma, was negatively related to group deviance. In sum, we predict:

Hypothesis 2a: Top management and supervisory ethical leadership will be negatively related to group deviance.

Group OCB

OCB is defined as "behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (Organ, 1988, p. 4). Group-level OCB is defined as the normative level of OCB performed within the work group (Ehrhart, 2004). We focus specifically on the helping dimension of OCB for a number of reasons. First, we focus on helping behavior because ethical leaders encourage appropriate and positive conduct by showing concern for others and communicating the importance of work group members, thus encouraging employees to help one another for the good of the group. Second, helping is the most commonly studied dimension of OCB, and it has been identified as an important aspect of OCB by essentially all scholars doing work in this domain (Podsakoff et al., 1997). Third, a recent meta-analysis (LePine, Erez, & Johnson, 2002) found that the different OCB dimensions are strongly related to one another and have similar relationships to commonly studied outcomes. Finally, studies examining OCB as a group-level construct typically use the helping dimension of OCB (Ehrhart, 2004; Ehrhart et al., 2006).

Similar to our discussion of the relationship between leadership and group deviance, SLT and SET are relevant for understanding the relationship between ethical leadership and group OCB. Again, we suggest that both SLT and SET operate at the group level by affecting the perceived norms of the group. In terms of SLT, leaders serve as role models for subordinates. Given that ethical leaders seek to live their lives in an ethical manner and set an example of appropriate behavior, it is likely that ethical leaders will be deemed credible and attractive role models. Ethical leaders set an example for the appropriate way to behave and demonstrate concern for members of the work group. Thus, it is likely that such positive behaviors displayed by ethical leaders will be modeled by employees in the work group. In addition, because ethical leaders are likely to reward positive behaviors such as engaging in behaviors to help fellow employees, employees will be more likely to provide aid to other members of the work group when assistance is needed.

In addition, we can draw on the work of Ehrhart and Naumann (2004), who theorize about how group norms affect unit-level OCB in organizations. They suggest that there is a cyclical relationship between individual- and group-level processes that explains how OCB norms are established and maintained in work units. They posit that group norms develop in work groups through the interaction of group members and eventually become informally agreed on by group members. There are different mechanisms through which these norms influence group behavior. First, *descriptive norms* develop as individuals watch what management does in specific situations. When management is perceived as supporting helpful behaviors, these behaviors are more likely to be exhibited. Second, *injunctive norms* can develop as members of a work group conform to receive social approval. Such norms develop from the rewards and punishments provided by management for correct and incorrect behavior. Thus, the theoretical work on group-level OCB makes parallel arguments as SLT to explain how the norms prescribed by management translate into OCB in the work group (Ehrhart & Naumann, 2004).

Social exchange processes should also help explain the association between ethical leadership and group OCB. Again, Gouldner (1960) suggests that individuals engage in reciprocity where obligations are created by exchanges or favors among individuals. Thus, individuals will respond to positive exchanges within the group with more positive behaviors to the group as a whole. In turn, this leads to norms developing regarding the display of positive behaviors in the group. In addition, because ethical leaders are

trustworthy, employees know that if they help their fellow group members, in exchange, they are likely to be rewarded for such behavior in the future. Further, because ethical leaders are perceived as fair, employees will feel a sense of obligation to behave in ways that they know their leaders value—such as helping their group members (Moorman & Byrne, 2005). They are motivated to assist other work group members because it will help attain outcomes that are valuable to the leader (e.g., group performance or effectiveness). Much of the literature on OCB takes a social exchange perspective and links social exchange variables such as trust and fairness to OCB (Cropanzano and Mitchell, 2005).

There is also some empirical research linking leadership and group OCB. For example, Ehrhart (2004) found that servant-leadership was positively associated with group OCB focused on helping employees in work groups. Similarly, Schneider et al. (2005) found that leaders that behaved in ways to support customer service tended to lead groups that engage in more customer-directed OCB. In sum, we predict:

Hypothesis 2b: Top management and supervisory ethical leadership will be positively related to group OCB.

Supervisory ethical leadership as a mediator

This brings us to the question, how do leaders at different hierarchical levels, such as top management and immediate supervisors, impact employees' behaviors? Research is mixed on whether top management or supervisory leadership has a greater effect on employee behavior. For instance, Schneider, Goldstein, and Smith (1995) suggest that organizations are a reflection of their top managers. Also, some researchers suggest that top managers are more transformational and charismatic than supervisors, providing them with greater influence over subordinates (e.g., Grojean et al., 2004; Katz & Kahn, 1966; Lowe, Kroeck, & Sivasubramaniam, 1996). On the other hand, others suggest that immediate supervisors have a greater influence on employee behaviors because they interpret policies and have more direct contact with employees (e.g., Brandes, Dharwadkar, & Wheatley, 2004; Likert, 1967; Zierden, 1980). This apparent controversy has yet to be resolved in the literature in part because scholars rarely assess both top management and supervisory leadership simultaneously.

We believe that *both* top management and supervisory ethical leaders will have an effect on employee behavior; however, how they influence employee behavior will differ. Leaders at different organizational levels have different roles and rely on different mechanisms to transmit values and expectations, which impacts employee behaviors. For instance, top management sets the more global tone for the organization, but it is the immediate supervisors who take this global information and filter, interpret, and implement it for employees. Thus, we suggest a trickle-down effect of ethical leadership such that the influence of top management on employee behavior is indirect, flowing through supervisory leadership. Specifically, we focus on (1) the different types of *interactions* employees have with top management and immediate supervisors, and (2) the different *functions* top management and immediate supervisors serve in organizations to formulate our hypothesis.

First, employees may interact differently with top management and immediate supervisors. According to Lewin's field theory (1943), psychologically proximal factors will have a more dominant effect on behavior than those that are less proximate. Research has found support that employees interact with their supervisors more often and more intimately than with top management and because of this, the supervisor is more effective than top management in monitoring, rewarding, and influencing employee behavior (e.g., Becker, Billings, Eveleth, & Gilbert, 1996; Brandes et al., 2004; Meglino, Ravlin, & Adkins, 1989). Other

research specific to ethics suggests that, while leaders in general are a primary influence on individual ethical behavior, the behavior of direct managers and supervisors has the strongest influence (Davis & Rothstein, 2006; Falkenberg & Herremans, 1995; Posner & Schmidt, 1984).

Second, leaders at different hierarchical levels (e.g., top management versus immediate supervisors) serve different functions in organizations. For instance, top management, or strategic leaders, focus more on formulating broad policies and objectives (Barnard, 1938), planning (Page & Tornow, 1987), and providing a strategic vision for the organization (Smidt, 1998). They establish and communicate the organization's ethical value system and develop new leaders (House & Aditya, 1997; Ireland & Hitt, 1999). On the other hand, supervisors, or direct leaders, are the link between top management and employees. The supervisors coordinate daily operations and provide day-to-day direction and mentoring to organizational members (Smidt, 1998). First, supervisors play a critical role in determining the degree to which organizational policies are enacted throughout the organization. Further, when ethical ambiguity exists in the policies, the supervisor's personal actions can serve as the standard or model of what behavior is considered appropriate in the organization (Andrews, 1989; Posner & Schmidt, 1984). Finally, supervisors are also typically the most direct and immediate judge of employee behavior and provide coaching, feedback, support, recognition, rewards, and punishments to employees. Research indicates that the informal incentives given by supervisors, such as personal attention and recognition, provide an equal or stronger reinforcement than delayed formal rewards (e.g., bonuses, pay raises, promotions) (Stajkovic & Luthans, 2001).

Thus, top management has a broader impact on the organization as a whole; top management can be seen as having an influence on both immediate supervisors and lower-level employees. However, because immediate supervisors tend to have more proximal and intimate relationships with lower-level employees, the effects that top managers have on employees at the lowest level will be realized through the influence they have on managers at the supervisory level. This logic suggests a mediating role of supervisory ethical leadership as a mechanism by which top management ethical leadership relates to the behaviors of employees.

Empirical research in a number of areas of management lends support to this idea. For instance, Zohar and Luria (2005) found support for a model linking top management safety leadership to employee safety outcomes through the mediating mechanism of supervisor safety leadership. Drawing on the deviance literature, Tepper and Taylor (2003) found that supervisors' mentoring behavior mediates the relationship between supervisors' procedural justice perceptions and subordinates' organizational citizenship behavior. They suggest a causal chain of variables that lead to subordinates' OCB stating, "Apparently, the treatment supervisors experience trickles down to their subordinates" (p. 103). Finally, Shanock and Eisenberger (2006) found that subordinates' perceptions of support from the supervisor mediated positive relationships of supervisors' perceived organizational support (POS) with subordinates' performance. Thus, we predict a *trickle-down model* (e.g., Aryee, Chen, Sun, & Debrah, 2007) of ethical leadership in which top management ethical leadership influences the ethical leadership of supervisors who, in turn, influence behaviors of the groups they supervise (i.e., deviance, OCB). It should be noted that we did not think there was sufficient theoretical support for predicting either partial or full mediation so we instead hypothesize mediation and test for both partial and full mediation in the results section. In sum, we predict:

Hypothesis 3: Supervisory ethical leadership mediates the relationship between top management ethical leadership and (a) group deviance and (b) group OCB.

Method

Sample and procedure

We collected data from 195 units from 160 different organizations in the southeast U.S. including technology, government, insurance, financial, food service, retail, manufacturing, and medical organizations. A contact person was identified by the researchers within each organization. The contact person was asked to hand-deliver survey packets to five employees and the supervisor in the department. Respondents were assured of the confidentiality of their responses. We included a postage paid envelope in the packet to return the survey.

We received and tabulated a total of 904 employees' responses out of 1915 surveys (47.2%) and 195 supervisors' responses out of 383 surveys (50.9%). One hundred and thirty-two departments yielded five or more surveys, 40 returned four, and 23 returned three. Previous research suggests that three responses is a sufficient number to aggregate measures to the group level (Colquitt, Noe, & Jackson, 2002; Richardson & Vandenberg, 2005; Schneider, White, & Paul, 1998; Tracey & Tews, 2005). Eight departments from eight organizations yielded only one or two responses and were eliminated from the sample. Thus, our final sample consisted of 891 employees and 195 supervisors from 195 departments in 160 organizations. The employee respondents were 46.2% male and 54.3% Caucasian (13.8% Hispanic and 10.6% African-American). They averaged 29.7 years of age with 3.9 years of experience in the organization and 3.01 years in the department. The supervisor respondents were 54% male and 70.5% Caucasian (8.4% Hispanic and 7.3% African-American). They averaged 37.7 years of age with 8.57 years of experience in the organization and 6.12 years in the department.

The employee survey contained measures of top management and supervisory ethical leadership, group deviance, group OCB, and demographic questions. The supervisor survey contained scales measuring group deviance, group OCB, questions assessing the size of the department and organization in terms of the number of employees, and demographic questions.

Measures

Ethical leadership

We assessed supervisory and top management ethical leadership from employees. *Top management ethical leadership* was measured with the ten-item ethical leadership scale developed by Brown et al. (2005) using "Top Management" as the referent. Employees were asked to rate the extent to which they agreed with statements such as "Top management talks about the importance of ethics," and "Top management sets an example of how to do things the right way in terms of ethics," using a five-point response format (1 = strongly disagree, 5 = strongly agree). We also measured *supervisory ethical leadership* using the same 10-item scale, this time using "My Department Manager" as the referent. We aggregated the mean scores of individuals within the same department to generate indices of group-level top management and supervisory ethical leadership.

To ensure that the top management and supervisory ethical leadership measures were distinct, we conducted a confirmatory factor analysis. We first examined the fit of a two-factor model, which assumed distinct top management and supervisory ethical leadership factors. The two-factor model indicated an adequate fit with the data ($\chi^2 = 1489$, $df = 169$, $p < .001$; CFI = .91; RMSEA = .09; SRMR = .04) (Hox, 2002). We compared the fit of this two-factor model with that of the one-factor model. The one-factor model, which combined top management and supervisory ethical

leadership into a single factor, fit the data poorly ($\chi^2 = 4638$, $df = 170$, $p < .001$; CFI = .71; RMSEA = .18; SRMR = .11). A change in χ^2 test indicated that the two-factor model represented a significantly better fit than the one-factor model (χ^2 difference = 3149, $df = 1$, $p < .001$). Thus, the ethical leadership measures at the two different management levels were analyzed separately in testing the study hypotheses.

Group deviance

We measured the deviant behavior of the department using Bennett and Robinson's (2000) 12-item Organizational Deviance Scale (ODS). Employees and supervisors rated the extent to which employees, as a whole, engaged in various deviant behaviors within the past year on a seven-point response format (1 = never, 2 = once, 3 = a few times, 4 = several times, 5 = monthly, 6 = weekly, 7 = daily). Example behaviors included in the scale were taking property from work without permission and coming in late to work without permission.

Group organizational citizenship behavior (OCB)

We measured the organizational citizenship behavior of each group using five items measuring helping behavior, adapted from the scale developed by Smith, Organ, and Near (1983). Employees and supervisors rated the extent to which they agreed with statements such as "Employees in my department help out others who have been absent and return to work," and "Employees in my department are always ready to lend a helping hand to other employees around them," on a five-point response format (1 = strongly disagree, 5 = strongly agree).

Control variables

We included several control variables for each hypothesis. Consistent with prescriptions from Becker (2005), we provide a rationale for the inclusion of these variables. In testing Hypothesis 1, we controlled for group-level employee tenure with the group (mean of the employee group tenure), group-level employee organization tenure (mean of the employee organization tenure), group size, and organizational size.¹ First, we controlled for employee tenure because previous research has demonstrated that it is related to group deviance (Robinson & O'Leary-Kelly, 1998). We also controlled for group size because group size may influence group dynamics (Li & Hambrick, 2005), and it has the potential to impact the overall level of helping behavior in the work group (Sparrow, Soetjijto, & Kraimer, 2006). Finally, we controlled for organizational size because larger organizations may be more bureaucratic (Robbins, 1990) and rely more heavily on hierarchical authority (Daft, 1998). Consequently, organizational size can affect the types of leader-follower relationships that form and the amount of interpersonal contact between managers and subordinates.

In testing hypotheses 2a, 2b, 3a, and 3b, we controlled for the same variables mentioned above, as well as variables such as full-time/part-time status (mean of full-time/part-time status), supervisor sex, supervisor group tenure, supervisor organization tenure, and employee (mean of employees) and supervisor social desirability bias (10 items from the short-form Crowne-Marlowe scale; Strahan & Gerbasi, 1972). We controlled for the full-time/part-time status of employees in the group because previous research has indicated it affects helping behavior (Stamper & Van Dyne, 2001). We controlled for sex because it has been suggested to affect an individual's perceptions of others' ethics (Schminke, Ambrose, & Miles, 2003). Finally, reports of deviance may be sensitive to social desirability bias (Aquino, Galperin, & Bennett, 2004;

¹ Because of the skewed nature of the organizational size and group size variables, we conducted a log transformation on these data so that the variables could be accurately estimated by the statistical packages used in this research.

Lucas & Friedrich, 2005), so we included social desirability as a control variable.

Data aggregation

We generated ethical leadership scores of top management as well as ethical leadership scores of supervisors by aggregating subordinate ratings to the group level. Following previous research, in order to ensure adequate aggregation statistics, we used only groups including three or more employees ($M = 4.45$; see Colquitt et al., 2002; Richardson & Vandenberg, 2005; Schneider et al., 1998; Tracey & Tews, 2005). First, we assessed the degree of department employee agreement regarding top management and supervisory ethical leadership, and deviance and OCB by calculating the r_{wg} statistic (George & James, 1993). The r_{wg} statistic is used to determine interrater agreement. The mean r_{wg} statistic for top management and supervisory ethical leadership were .94 and .92, respectively. The mean r_{wg} statistic for deviance and OCB are .91 and .92, respectively. While considerable debate exists regarding the adequate “cutoff” for r_{wg} values (see Lance, Butts, & Michels, 2006 for a useful review), these values are greater than the generally accepted .70 value. In addition, we computed intraclass correlations (ICCs) to determine the reliability of both ethical leadership measures (Bliese, 2000). We used the ICC(1) to examine the degree of variability in responses at the individual level that is attributed to being part of the group. The ICC(1) for top management ethical leadership was .04, $F(202,889) = 2.78$, $p < .001$ and for supervisory ethical leadership was .07, $F(202,889) = 2.46$, $p < .001$. In addition, the ICC(1) for deviance was .03, $F(202,883) = 2.96$, $p < .001$ and for OCB was .11, $F(202,893) = 1.95$, $p < .001$. Although the ICC(1) values are low, because all the ICC(1) values are statistically significant, aggregation is justified (Bliese, 2000). We used the ICC(2) coefficient to examine the reliability of the group means. The ICC(2) for top management and supervisory ethical leadership were .23 and .38, respectively. Additionally, the ICC(2) for deviance and OCB were .14 and .75, respectively. These ICC(2) values are generally lower than the .70 criteria recommended by researchers (Bliese, Halverson, & Schriesheim, 2002). However, ICC(2) is a function of size (Bliese, 1998), and the average group size in this study was smaller than the studies used in recommending cutoff criteria. Ultimately, although the between-group variability was low, the r_{wg} values were high indicating that there was high within-group agreement and thus providing support for aggregation.

Results

Descriptive statistics

The means, standard deviations, reliabilities, and intercorrelations among the key variables are presented in Table 1.

Hypotheses tests

Hypothesis 1 predicted that top management ethical leadership is positively related to supervisory ethical leadership. Regression analyses revealed a positive relationship between top management and supervisory ethical leadership ($\beta = .72$, $p < .001$). See Table 2 for the complete results.

Because top management and supervisory ethical leadership were assessed by the same source, we also tested hypothesis 1 using the sample-splitting technique described by Ostroff, Kinicki, and Clark (2002) and used by other scholars (e.g., Ehrhart, 2004; Schneider et al., 2005). Specifically, using only departments of four or more employees ($n_{groups} = 172$), we aggregated top management

ethical leadership from half of the employees (randomly selected), and supervisory ethical leadership from the other half of department employees. Controlling for the same variables as the original analysis, there was a significant relationship between top management and supervisory ethical leadership ($\beta = .36$, $p < .001$). Thus, hypothesis 1 was supported.

Hypothesis 2 predicted that both top management and supervisory ethical leadership are related to (a) group deviance and (b) group OCB. Regression analyses revealed a direct negative relationship between top management ($\beta = -.18$, $p < .05$) and supervisory ($\beta = -.34$, $p < .001$) ethical leadership on group deviance measured by the supervisor, and a direct negative relationship between top management ($\beta = -.31$, $p < .001$) and supervisory ($\beta = -.44$, $p < .001$) ethical leadership on group deviance measured by the employees. In addition, regression analyses revealed a direct positive relationship between top management ($\beta = .26$, $p < .001$) and supervisory ($\beta = .34$, $p < .001$) ethical leadership on group OCB measured by the supervisor, and a direct positive relationship between top management ($\beta = .44$, $p < .001$) and supervisory ($\beta = .42$, $p < .001$) ethical leadership on group OCB measured by the employees. Thus, hypotheses 2a and 2b were supported. See Table 3 for the complete results for hypotheses 2a and 2b.

Hypothesis 3 predicted that supervisory ethical leadership mediates the relationship between top management ethical leadership and (a) group deviance and (b) group OCB. To test hypotheses 3a and 3b, we followed procedures recommended by MacKinnon, Lockwood, Hoffman, West, and Sheets (2002) to test for mediation. MacKinnon et al. suggest that for mediation to occur, two conditions must be met. First, the antecedent variable must predict the mediator. Second, the mediator must predict the outcome variable, while controlling for the antecedent variables.

The first step was to regress the mediator (i.e., supervisory ethical leadership) on the antecedent variable (i.e., top management ethical leadership). Results revealed a significant direct relationship between top management and supervisory ethical leadership ($\beta = .72$, $p < .001$). Next, we regressed the outcome variables (i.e., group deviance, group OCB) on the mediator (i.e., supervisory ethical leadership) while controlling for the antecedent variable (i.e., top management ethical leadership). Supervisory ethical leadership was significantly related to group deviance measured by the supervisor ($\beta = -.43$, $p < .001$) and the employees ($\beta = -.44$, $p < .001$), and group OCB measured by the supervisor ($\beta = .31$, $p < .001$) and the employees ($\beta = .23$, $p < .001$). These results provide evidence for mediation. We also conducted mediation analyses to test hypotheses 3a and 3b using the split-sample ethical leadership scores. Results revealed a similar pattern using the split-sample scores such that supervisory ethical leadership mediated the relationship between top management ethical leadership and all of the dependent variables. Thus, hypotheses 3a and 3b were supported. See Table 4 for the complete results for hypotheses 3a and 3b.

To explore the issue of full versus partial mediation, we conducted Sobel tests. In MacKinnon et al. (2002), comparisons are made between 14 methods for assessing mediation effects, and they argue that the Sobel test (and its variants) is superior in terms of power and intuitive appeal (Preacher & Hayes, 2004). Based on the Sobel tests, we found that supervisory ethical leadership fully mediated the relationship between top management ethical leadership and deviance rated by supervisors ($z = -4.13$, $p < .001$) and employees ($z = -4.19$, $p < .001$), and OCB rated by supervisors ($z = 3.10$, $p < .001$) and employees ($z = 2.59$, $p < .001$).

Discussion

The purpose of this research was to test a trickle-down model of how ethical leadership flows through multiple levels of manage-

Table 1
Descriptive statistics

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Top management ethical leadership	3.57	.58	(.95)															
2. Supervisory ethical leadership	3.72	.51	.72***	(.95)														
3. Group deviance (Supervisor)	2.28	1.06	-.18*	-.35***	(.92)													
4. Group deviance (Employee)	2.37	.92	-.32***	-.43***	.52***	(.95)												
5. Group OCB (Supervisor)	4.03	.58	.24**	.34***	-.37***	-.19**	(.86)											
6. Group OCB (Employee)	3.76	.47	.48***	.49***	-.18*	-.27***	.24**	(.91)										
7. Group size (log)	2.76	1.21	-.09	-.03	-.02	.08	.06	-.09										
8. Organization size (log)	5.75	2.96	-.14	-.05	-.06	.03	.16*	-.02	.54***									
9. Supervisor sex	.57	.50	.08	.03	.12	.16*	-.06	-.06	-.05	-.03								
10. Supervisor group tenure	5.94	6.42	-.01	-.06	-.10	.08	.03	.06	-.11	-.17*	.08							
11. Supervisor organization tenure	8.26	7.55	.00	-.03	-.08	.07	.14	.09	-.04	-.05	.02	.75***						
12. Supervisor social desirability	3.37	.58	.07	.11	-.23**	-.09	.29***	.08	.16*	.19*	.02	.09	.08	(.76)				
13. Employee social desirability	3.32	.37	.19**	.24**	-.04	-.11	.17*	.38***	-.01	.11	-.05	.08	.16*	.28***	(.77)			
14. Employee FT/PT status mean	.63	.36	-.11	-.04	-.08	-.03	-.02	.04	-.03	.08	-.03	.22*	.28***	.06	.17*			
15. Employee group tenure mean	3.00	2.74	-.01	.08	-.07	-.01	.01	.06	.05	.01	.08	.42***	.45***	.06	.17*	.36***		
16. Employee organization tenure mean	3.85	3.75	-.04	.04	-.12	-.05	.07	.06	.08	.07	.07	.30***	.50***	.07	.24**	.42***	.81***	

Note. Numbers in parentheses are coefficient alphas. $n = 195$.

* $p < .05$.
 ** $p < .01$.
 *** $p < .001$.

Table 2
The relationship between top management and supervisory ethical leadership (hypothesis 1)

Variable	Supervisory ethical leadership	
	Step 1	Step 2
Group FT/PT status	-.05	.01
Group tenure	.13	.09
Group organization tenure	-.04	-.02
Group size (log)	.01	.02
Organization size (log)	-.05	.03
Top management ethical leadership		.72***
R^2	.01	.52
ΔR^2		.50***
F	.46	31.92***

Note. Standardized regression coefficients (betas) are shown.

* $p < .05$.
 ** $p < .01$.
 *** $p < .001$.

ment and ultimately influences employee behavior. Consistent with the hypotheses derived from social learning theory (SLT; Bandura, 1977, 1986) and social exchange theory (SET; Blau, 1964), we found that supervisory ethical leadership mediates the relationship between top management ethical leadership and group deviance and OCB. Thus, this research addresses the conflicting perspectives on whether it is top management (e.g., Barney, 2005; Schminke et al., 2007) or supervisors (Davis & Rothstein, 2006; Falkenberg & Herremans, 1995; Posner & Schmidt, 1984) who have a more direct influence on employee behavior. Indeed, Katz and Kahn (1966, p. 318) argued that employees view their immediate supervisor as

“very human and very fallible,” but that top levels of management are distant, which allows for a “simplified and magical image,” and this helps develop “an emotional tie, which is not accessible to lower levels of supervision.” Our results counter this perspective to some degree as we find that both levels of leadership matter—but that top management influences employee behavior *indirectly* through supervisory leadership.

Further, that we were able to link ethical leadership to unethical behaviors is important. The only other study to examine ethical leadership and unethical behavior is Detert, Treviño, Burris, and Andiappen (2007), and they did not find a significant relationship between ethical leadership and store-level counterproductivity (operationalized as the amount of food loss that compares actual food costs with expected food costs). One explanation for these contradictory results is the context studied in the Detert et al., study. Detert et al. suggest that their results may be related to the low-pay and low-skill nature of the organization they sampled and the fact the restaurant environment is relatively unambiguous related to ethical issues. Future research should continue to examine the effects of ethical leadership on a variety of different measures of unethical or deviant behaviors.

Theoretical implications

The present research has a number of theoretical implications regarding ethical leadership. One theoretical implication is that SLT and SET appear to serve as useful theoretical lenses to understand why ethical leadership relates to employee behavior in work groups. Consistent with SLT, our findings suggest that followers’

Table 3

The relationship between ethical leadership and the group-level outcomes (hypotheses 2a/2b)

Variable	Group deviance (Supervisor)		Group deviance (Employee)		Group OCB (Supervisor)		Group OCB (Employee)	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Employee FT/PT mean	.02	.01			-.08	-.06		
Employee group tenure mean	.20	.20			-.11	-.12		
Employee organization tenure mean	-.28*	-.29*			.12	.14		
Group size (log)	.05	.05			-.09	-.09		
Organization size (log)	-.06	-.09			.14	.18*		
Supervisor sex	.14	.16*			-.08	-.11		
Supervisor group tenure	-.22	-.23			-.07	-.05		
Supervisor organization tenure	.15	.17			.17	.14		
Supervisor social desirability	-.21**	-.19*			.26**	.24**		
Top management ethical leadership		-.18*				.26***		
R ²	.10	.13			.12	.18		
ΔR ²		.03*				.07***		
F	1.93*	2.35*			2.47*	3.67***		
Employee FT/PT mean			-.01	-.04			-.03	.02
Employee group tenure mean			.11	.13			.03	.00
Employee organization tenure mean			-.11	-.14			-.05	-.01
Group size (log)			.04	.05			-.04	-.05
Organization size (log)			.04	-.01			-.04	.03
Employee social desirability			-.12	-.04			.42***	.31***
Top management ethical leadership				-.31***				.44***
R ²			.03	.11			.17	.34
ΔR ²				.09**				.18***
F			.76	3.19***			6.00***	13.28***
Employee FT/PT mean	.02	.01			-.08	-.07		
Employee group tenure mean	.20	.25			-.11	-.16		
Employee organization tenure mean	-.28	-.31*			.12	.14		
Group size (log)	.05	.06			-.09	-.10		
Organization size (log)	-.06	-.10			.14	.17*		
Supervisor sex	.14	.15*			-.08	-.09		
Supervisor group tenure	-.22	-.27*			-.07	-.02		
Supervisor organization tenure	.15	.17			.17	.15		
Supervisor social desirability	-.21**	-.17*			.26**	.22**		
Supervisory ethical leadership		-.34***				.34***		
R ²	.10	.21			.12	.23		
ΔR ²		.12***				.11***		
F	1.93*	4.35***			2.47*	4.92***		
Employee FT/PT mean			-.01	-.04			-.03	.00
Employee group tenure mean			.11	.18			.03	-.03
Employee organization tenure mean			-.11	-.16			-.05	-.01
Group size (log)			.04	.06			-.04	-.06
Organization size (log)			.04	-.01			-.04	.00
Employee social desirability			-.12	.01			.42***	.29***
Supervisory ethical leadership				-.44***				.42***
R ²			.03	.20			.17	.33
ΔR ²				.18***				.16***
F			.76	6.42***			6.00***	12.56***

Note. Standardized regression coefficients (betas) are shown. (Supervisor) refers to dependent variables assessed by the supervisor and (Employee) refers to dependent variables assessed by employees and aggregated to the group level.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

behavior is influenced through both a modeling process in which employees imitate the behavior of their leaders and because leaders have the authority to reward and punish employee behavior. In addition, the findings support predictions derived from SET suggesting that because ethical leaders are deemed trustworthy and fair, employees will be motivated to behave in ways that are desired by their leader. Specifically, they will aim to reciprocate obligations to their leader because they have received fair treatment and they know that engaging in behaviors in line with their manager will ultimately be rewarded. Thus, our findings are consistent with the central tenets of SLT and SET.

A second implication of this research is that it is important to extend theory on ethical leadership by incorporating managerial hierarchy (e.g., Brown et al., 2005). Consistent with SLT (Bandura, 1977, 1986), specifically the cascading effect of leadership (Bass

et al., 1987), we find a positive relationship between top management and supervisory ethical leadership (even when using the split sample analyses). In addition, we found that top management and supervisors are both important determinants of employee behaviors but that supervisors mediate the relationship between top management and employee behaviors. Although the data are cross-sectional, the results suggest that ethical leadership may flow, or cascade, from the top level of management, to immediate supervisors, and ultimately to employees (Bass et al., 1987). In sum, our results are consistent with Weaver et al. (2005) who stated, "The ethical influence of top executives may not be so much through their formal pronouncements as through a 'trickle-down' effect—provided, of course, that senior executives make the effort to see that what 'trickles down' is truly representative of their presumably good ethical intentions" (p. 324).

Table 4
Supervisory ethical leadership as a mediator of top management ethical leadership to group-level outcomes (hypotheses 3a/3b)

Variable	Group deviance (Supervisor)		Group deviance (Employee)		Group OCB (Supervisor)		Group OCB (Employee)	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Employee FT/PT mean	.02	.02			-.08	-.07		
Employee group tenure mean	.20	.25*			-.11	-.16		
Employee organization tenure mean	-.28*	-.30*			.12	.14		
Group size (log)	.05	.06			-.09	-.10		
Organization size (log)	-.06	-.09			.14	.18*		
Supervisor sex	.14	.14*			-.08	-.10		
Supervisor group tenure	-.22	-.27*			-.07	-.02		
Supervisor organization tenure	.15	.17			.17	.15		
Supervisor social desirability	-.21**	-.17*			.26**	.22**		
Supervisory ethical leadership		-.43***				.31***		
Top management ethical leadership		.12				.04		
R ²	.10	.22			.12	.23		
ΔR ²		.12***				.11***		
F	1.93*	4.10***			2.47*	4.47***		
Employee FT/PT mean			-.01	-.04			-.03	.02
Employee group tenure mean			.11	.18			.03	-.02
Employee organization tenure mean			-.11	-.16			-.05	.00
Group size (log)			.04	.06			-.04	-.06
Organization size (log)			.04	-.01			-.04	.03
Employee social desirability			-.12	.01			.42***	.28***
Supervisory ethical leadership				-.44***				.23**
Top management ethical leadership				-.01				.28**
R ²			.03	.20			.17	.37
ΔR ²				.17***				.20***
F			.80	5.58***			6.00***	12.87***

Note. Standardized regression coefficients (betas) are shown.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Practical implications

The findings from this research have a number of practical implications. Given that ethical leadership is associated with valued organizational outcomes, organizational efforts to foster ethical leadership should prove fruitful. Our results indicate that leaders play an important role in the occurrence of both dysfunctional and positive behaviors of employees in organizations through processes such as modeling behavior and creating, interpreting and enforcing of policies. Thus, organizations may want to consider options such as trying to hire more ethical leaders and providing training to existing leaders. For example, organizations may want to employ selection methods for management at multiple levels that include assessments of integrity, moral standards, and concern for others. Using integrity tests, structured interview questions, and in-basket exercises that focus specifically on ethical dilemmas could increase the likelihood that ethical leaders will be selected into an organization.

A second option for organizations is to invest in ethics training programs to teach management how to improve ethical behavior. Organizations often focus training efforts on employees and focus less attention on training managers at different levels of an organization (Weaver, Treviño, & Cochran, 1999). Training topics could include things like communicating the importance of ethics, rewarding and supporting employees who behave ethically, and serving as ethical role models. Indeed, training on the key components of SLT is likely to prove useful. However, it is important to note that, based on the results of this research, ethics training programs provided solely to top management are unlikely to have as strong an effect on employees. Although ethics training is expected to trickle-down from top management to employees, this relationship will likely be strongest when immediate supervisors display ethical behavior. Thus, training interventions should include ethics programs for both top management and supervisory positions—but

training geared at supervisors and middle managers will likely have the most direct effect on employees, while training at the top management level will have the most direct effect on supervisors. Perhaps organizations might even get more out of their training dollars by focusing efforts on ethics training for supervisors and middle managers. In sum, ethical training for leaders is important because research has shown that whereas formal codes of ethics do not have a strong influence on employee behaviors, day-to-day interactions with managers do (Treviño et al., 2006).

Another implication of our research relates directly to executives or top managers. Previous research has shown that some executives assume that they are always on display and do not see the need for deliberate ethical modeling (Trevino et al., 2003). To further complicate matters, Weaver et al. (2005) conducted interviews with managers and found that many of the ethical leaders were reluctant to identify themselves as ethical role models, but rather talked about just doing what they believed in or emulating their own role models. Thus, our research may serve as a wake-up call to executives about the importance of their modeling behavior to the managers that look up to them.

Strengths and limitations

This research has a number of strengths. First, whereas past research has generally focused on ethical forms of leadership and outcomes at the individual level, we examine the relationship between ethical leadership and group-level outcomes (for an exception see Brown & Treviño, 2006b). Second, we examine the effects of leadership at two levels of the organizational hierarchy to test our trickle-down model. Third, there is little response bias in testing the hypothesized relationships. We assessed top management and supervisory ethical leadership from employees and we assessed group deviance and OCB from supervisors. In addition, when we tested the relationships between top management and

supervisory ethical leadership, we presented split-sample analyses that did not have response bias. Fourth, we found consistent results using both employee and supervisor reports of group deviance and group OCB. These analyses are useful because scholars have long noted the difficulty in collecting data on sensitive behaviors such as deviance (Dalton & Metzger, 1992; Wimbush & Dalton, 1997), and collecting data from supervisors about their work groups helps address the issue of socially desirable responding. Fifth, while researchers "...have rarely addressed both types [counterproductive and positive] of behavior in a single study," (Brown & Treviño, 2006a, p. 975) we examine both types of outcomes in our research. Sixth, we found significant results even with the low ICC values for the group-level constructs. These low ICC values indicate that even though there was high within-group agreement (i.e., r_{wg} values), there was low between-group variability and thus we provide a conservative test of the study's hypotheses. Even with this conservative test, our results were supportive of our theoretical model. In sum, there are a number of theoretical and methodological strengths of this research.

Despite these strengths, there are also some limitations of this research. One limitation is that all data are cross-sectional. Thus, while our theory suggests that ethical leadership flows down from top management to immediate supervisors to employees, it is difficult to make a definitive conclusion regarding causality given the cross-sectional nature of the data. However, our results are consistent with extant theory and research that top management leadership cascades down to employees (Bass, 1990; Bass et al., 1987). A second limitation is that there was some response bias. Although, as mentioned above, we sought to address this potential limitation by collecting data from multiple sources, aggregating leadership data, and using a split-sample technique. A third limitation of this research is that all the dependent variables were self-report. While deviance and OCB have been linked to important outcomes such as performance (see Dalal, 2005), future research should examine objective measures of individual and group performance.

Future directions

Given that research on ethical leadership is still in its early stages of development, the present study provides important insights into some key issues. However, this study perhaps spurs more questions than it answers. One important future direction is to actually measure the theoretical mechanisms described in this research. For example, while we draw on SLT and SET to make predictions about the relationships between ethical leadership and employee outcomes, we did not measure whether employees actually witnessed and imitated management behavior, nor did we measure any social exchange mediators such as trust and organizational justice. Future research should measure such variables to determine whether there is more definitive support for SLT and SET within this context.

In addition, to examining the underlying mechanism for ethical leadership effects, it is important to examine boundary conditions of such relationships. For example, during times of uncertainty or ambiguity, employees may be more apt to look to their leader for guidance on how to behave (Brown et al., 2005). Brown et al. note that, "...in situations that are ill-defined, and standards of practice are not well-established, the ethical guidance of leaders should be more important" (p. 132). Ethical leadership might also be more important in organic versus mechanistic organizations given that organic organizations are characterized by more ambiguity and change; therefore, subordinates are more likely to rely on their leader for ethical guidance. In addition, the role of the top manager may be more influential in flatter organizations where fewer layers separate

top managers from lower-level employees. Aside from contextual moderators, there may also be individual difference moderators. For example, the effect of ethical leadership on subordinate behavior might be moderated by whether the subordinate is low or high in moral development. More specifically, employees high in moral development may be more satisfied and committed to an ethical leader (Schminke, Ambrose, & Neubaum, 2005), but employees low in moral development may be more strongly influenced to behave ethically when they have an ethical leader. Other boundary conditions that would be interesting to examine include whether the results of this study would hold in international contexts and whether there are different patterns of relationships in different industries.

Still another issue that this study prompts is whether formal leadership (top management and supervisors) tends to have the strongest influence on employee ethical behavior or whether coworkers exert a stronger influence. Given that the beneficial effects of modeling ethical behaviors is most likely to occur when others are closer in proximity, it could be that coworkers' behaviors have the stronger effect on employees (Zey-Ferrell & Ferrell, 1982). Future research should examine the impact of coworkers on ethical behavior in organizations. In line with the notion that coworkers may also influence employee behavior, it would be interesting to examine the influence of multiple determinants of employee counterproductive and positive behaviors such as codes of ethics, individual differences, and ethical leadership simultaneously.

A final issue that would be interesting to examine is the relationship between ethical leadership and ethical climate (Victor & Cullen, 1988). Although there has been a considerable amount of work on ethical climate, there is a dearth of research examining how behaviors of leaders influence an ethical climate (Grojean et al., 2004). It would be interesting to examine ethical leadership as an antecedent of ethical climate in future research.

Conclusions

Given the number of corporate scandals in recent years, employers are increasingly interested in the ethical behavior of their employees. The present study suggests that ethical leadership is associated with less counterproductive behavior and more positive behavior. An important caveat of this study is that while ethical leadership at all organizational levels is important, immediate supervisors are the lens through which employees see what the organization values and therefore they likely have the most direct influence on employee ethical behavior.

References

- Andrews, K. (1989). Ethics in practice. *Harvard Business Review*, 67, 99–104.
- Aquino, K., Galperin, B., & Bennett, R. (2004). Social status and aggressiveness as moderators of the relationship between interactional justice and workplace deviance. *Journal of Applied Social Psychology*, 34, 1001–1029.
- Aryee, S., Chen, Z., Sun, L., & Debrah, Y. (2007). Antecedents and outcomes of abusive supervision: Test of a trickle-down model. *Journal of Applied Psychology*, 92, 191–201.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1986). *Social foundations of thought & action*. Englewood Cliffs, NJ: Prentice-Hall.
- Barnard, C. (1938). *The functions of the executive*. Cambridge: Harvard University Press.
- Barney, J. B. (2005). Should strategic management research engage public policy debates? *Academy of Management Journal*, 48, 945–948.
- Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, 18, 19–31.
- Bass, B. M., Waldman, D. A., Avolio, B. J., & Webb, M. (1987). Transformational leadership and the falling dominoes effect. *Group and Organization Studies*, 12, 73–87.
- Becker, T. E. (2005). Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations. *Organizational Research Methods*, 8, 274–289.

- Becker, T., Billings, R., Eveleth, D., & Gilbert, N. (1996). Foci and bases of employee commitment: Implications for job performance. *Academy of Management Journal*, 39, 464–482.
- Bennett, R., & Robinson, S. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology*, 85, 349–360.
- Blau, P. (1964). *Exchange and power in social life*. New York: John Wiley.
- Ekeh, P. P. (1974). *Social exchange theory: The two traditions*. Cambridge, MA: Harvard University Press.
- Bliese, P. (1998). Group size, ICC values, and group-level correlations: A simulation. *Organizational Research Methods*, 1, 355–373.
- Bliese, P. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research and methods in organizations* (pp. 512–556). San Francisco: Jossey-Bass.
- Bliese, P., Halverson, R., & Schriesheim, C. (2002). Benchmarking multilevel methods in leadership: The articles, the model, the dataset. *Leadership Quarterly*, 13, 3–14.
- Brandes, P., Dharwadkar, R., & Wheatley, K. (2004). Social exchanges within organizations and work outcomes: The importance of local and global relationships. *Group and Organization Management*, 29, 276–301.
- Brown, M. E., & Treviño, L. K. (2006a). Ethical leadership: A review and future directions. *The Leadership Quarterly*, 17, 595–616.
- Brown, M. E., & Treviño, L. K. (2006b). Socialized charismatic leadership, values congruence, and deviance in work groups. *Journal of Applied Psychology*, 91, 954–962.
- Brown, M. E., Treviño, L. K., & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes*, 97, 117–134.
- Burns, J. M. (1978). *Leadership*. New York: Harper Row.
- Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology*, 83, 234–246.
- Colquitt, J., Noe, R., & Jackson, C. (2002). Justice in teams: Antecedents and consequences of procedural justice climate. *Personnel Psychology*, 55, 83–109.
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31, 874–900.
- Daft, R. (1998). *Organization theory and design* (6th ed.). Cincinnati, OH: South-Western College Publishing.
- Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology*, 90, 1241–1255.
- Dalton, D. R., & Metzger, M. B. (1992). Towards candor, cooperation, & privacy in applied business ethics research: The randomized response technique (RRT). *Business Ethics Quarterly*, 2, 207–221.
- Davis, A., & Rothstein, H. (2006). The effects of the perceived behavioral integrity of managers on employee attitudes: A meta-analysis. *Journal of Business Ethics*, 67, 407–419.
- Detert, J. R., Treviño, L. K., Burris, E. R., & Andiappen, M. (2007). Managerial models of influence and counterproductivity in organizations: A longitudinal business-unit level investigation. *Journal of Applied Psychology*, 92, 993–1005.
- Dickson, M., Smith, D. B., Grojean, M., & Ehrhart, M. (2001). An organizational climate regarding ethics: The outcome of leader values and the practices that reflect them. *Leadership Quarterly*, 12, 197–218.
- Ehrhart, M. G. (2004). Leadership and procedural justice climate as antecedents of unit-level organizational citizenship behavior. *Personnel Psychology*, 57, 61–94.
- Ehrhart, M. G., Bliese, P. D., & Thomas, J. L. (2006). Unit-level OCB and unit effectiveness: Examining the incremental effect of helping behavior. *Human Performance*, 19, 159–173.
- Ehrhart, M. G., & Naumann, S. E. (2004). Organizational citizenship behavior in work groups: A group norms approach. *Journal of Applied Psychology*, 89, 960–974.
- Falkenberg, L., & Herremans, I. (1995). Ethical behaviours in organisations: Directed by the formal or informal system. *Journal of Business Ethics*, 14, 133–143.
- Ford, L. R., & Seers, A. (2006). Relational leadership and team climates: Pitting differentiation versus agreement. *Leadership Quarterly*, 17, 258–270.
- Fry, L. W. (2003). Toward a theory of spiritual leadership. *Leadership Quarterly*, 14, 693–727.
- George, J. M., & James, L. R. (1993). Personality, affect, and behavior in groups revisited: Comment on aggregation, level of analysis, and a recent application of within and between analysis. *Journal of Applied Psychology*, 78, 798–804.
- Gouldner, A. W. (1960). *The psychology of behavioral exchange*. Reading, MA: Addison-Wesley.
- Grojean, M., Resick, C., Dickson, M., & Smith, D. B. (2004). Leaders, values, and organizational climate: Examining leadership strategies for establishing an organizational climate regarding ethics. *Journal of Business Ethics*, 55, 223–241.
- House, R., & Aditya, R. (1997). The social scientific study of leadership: Quo Vadis? *Journal of Management*, 23, 409–474.
- Hox, J. (2002). *Multilevel analyses: Techniques and applications*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Ireland, R., & Hitt, M. (1999). Achieving and maintaining strategic competitiveness in the 21st century: The role of strategic leadership. *Academy of Management Executive*, 13, 43–57.
- Katz, D., & Kahn, R. L. (1966). *The social psychology of organizations*. New York: Wiley.
- Li, J., & Hambrick, D. (2005). Factional groups: A new vantage on demographic faultlines, conflict, and disintegration in work teams. *Academy of Management Journal*, 48, 794–813.
- Kozlowski, S., & Klein, K. (2000). A multilevel approach to theory and research in organizations: Contextual, temporal, and emergent processes. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations* (pp. 3–90). San Francisco: Jossey-Bass.
- Lance, C. E., Butts, M. M., & Michels, L. C. (2006). The sources of four commonly reported cutoff criteria: What did they really say? *Organizational Research Methods*, 9, 202–220.
- LePine, J. A., Erez, A., & Johnson, D. E. (2002). The nature and dimensionality of organizational citizenship behavior: a critical review and meta-analysis. *Journal of Applied Psychology*, 87, 52–65.
- Lewin, L. (1943). Defining the “field at a given time”. *Psychological Review*, 50, 292–310.
- Likert, R. (1967). *The human organization*. New York: McGraw-Hill.
- Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *Leadership Quarterly*, 7, 385–425.
- Lucas, G., & Friedrich, J. (2005). Individual differences in workplace deviance and integrity as predictors of academic dishonesty. *Ethics and Behavior*, 15, 15–35.
- Luthans, F., & Avolio, B. (2003). Authentic leadership: A positive development approach. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship*. San Francisco: Berrett-Koehler.
- MacKinnon, D. P., Lockwood, C. M., Hoffmann, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, 7, 83–104.
- Meglino, B., Ravlin, E., & Adkins, C. (1989). A work values approach to corporate culture: A field test of the value congruence process and its relationship to individual outcomes. *Journal of Applied Psychology*, 74, 424–432.
- Moorman, R., & Byrne, Z. S. (2005). What is the role of justice in promoting organizational citizenship behavior? In J. Greenberg & J. A. Colquitt (Eds.), *Handbook of organizational justice: Fundamental questions about fairness in the workplace* (pp. 355–382). Mahwah, NJ: Lawrence Erlbaum Associates.
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.
- Ostroff, C., Kinicki, A., & Clark, M. (2002). Substantive and operational issues of response bias across levels of analysis: An example of climate-satisfaction relationships. *Journal of Applied Psychology*, 87, 355–368.
- Page, R., & Tornow, W. (1987). Managerial job analysis: Are we further along? Paper presented at the annual conference of the Society for Industrial and Organizational Psychology, Atlanta, GA.
- Podsakoff, P. M., Ahearne, M., & MacKenzie, S. B. (1997). Organizational citizenship behavior and the quantity and quality of work group performance. *Journal of Applied Psychology*, 82, 262–270.
- Posner, B., & Schmidt, W. (1984). Values and the American manager: An update. *California Management Review*, XXVI, 202–216.
- Preacher, K., & Hayes, A. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods Instrument and Computers*, 36, 717–731.
- Richardson, H., & Vandenberg, R. (2005). Integrating managerial perceptions and transformational leadership into a work-unit level model of employee involvement. *Journal of Organizational Behavior*, 26, 561–589.
- Robbins, S. (1990). *Organizational theory: Structure, design, and applications* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.
- Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of Management Journal*, 38, 555–572.
- Robinson, S. L., & Bennett, R. J. (1997). Workplace deviance: Its definition, its manifestations, and its causes. *Research on Negotiations in Organizations*, 6, 3–27.
- Robinson, S., & O’Leary-Kelly, A. (1998). Monkey see, monkey do: The influence of work groups on the antisocial behavior of employees. *Academy of Management Journal*, 41, 658–672.
- Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. *Administrative Science Quarterly*, 23, 224–253.
- Schminke, M., Ambrose, A., & Miles, J. (2003). The impact of gender and setting on perceptions of others’ ethics. *Sex Roles*, 48, 361–375.
- Schminke, M., Ambrose, A., & Neubaum, D. (2005). The effect of leader moral development on ethical climate and employee attitudes. *Organizational Behavior and Human Decision Processes*, 97, 135–151.
- Schminke, M., Arnaud, A., & Kuenzi (2007). The power of ethical work climates. *Organizational Dynamics*, 36, 171–186.
- Schneider, B. (1987). The people make the place. *Personnel Psychology*, 40, 437–453.
- Schneider, B., Ehrhart, M., Mayer, D., Saltz, J., & Niles-Jolly, K. (2005). Understanding organization–customer links in service settings. *Academy of Management Journal*, 48, 1017–1032.
- Schneider, B., Goldstein, H. W., & Smith, D. B. (1995). The ASA framework: An update. *Personnel Psychology*, 48, 747–773.
- Schneider, B., White, S., & Paul, M. (1998). Linking service climate and customer perceptions of service quality: Test of a causal model. *Journal of Applied Psychology*, 83, 150–163.
- Shanock, L., & Eisenberger, R. (2006). When supervisors feel supported: Relationships with subordinates’ perceived supervisor support, perceived organizational support, and performance. *Journal of Applied Psychology*, 91, 689–695.
- Smidt, J. (1998). Army leadership: Doctrine and the new FM 22–100. *Military Review*, 78, 83–86.
- Smith, C. A., Organ, D., & Near, J. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology*, 68, 653–663.

- Sparrow, R., Soetjijto, B., & Kraimer, M. (2006). Do leaders' influence tactics relate to members' helping behavior? It depends on the quality of the relationship. *Academy of Management Journal*, 49, 1194–1208.
- Stamper, C., & Van Dyne, L. (2001). Work status and organizational citizenship behavior: A field study of restaurant employees. *Journal of Organizational Behavior*, 22, 517–536.
- Strahan, R., & Gerbasi, K. (1972). Short, homogeneous versions of the Marlow–Crowne social desirability scale. *Journal of Clinical Psychology*, 28, 191–193.
- Stajkovic, A., & Luthans, F. (2001). Differential effects of incentive motivators on work performance. *Academy of Management Journal*, 40, 1122–1149.
- Tepper, B., & Taylor, E. (2003). Relationships among supervisors' and subordinates' procedural justice perceptions and organizational citizenship behaviors. *Academy of Management Journal*, 46, 97–105.
- Tracey, J. B., & Tews, M. (2005). Construct validity of a general training climate scale. *Organizational Research Methods*, 8, 353–374.
- Trevino, L. K., Brown, M. E., & Hartman, L. P. (2003). A qualitative investigation of perceived executive ethical leadership: Perceptions from inside and outside the executive suite. *Human Relations*, 56, 5–38.
- Treviño, L. K., Hartman, L., & Brown, M. (2000). Moral person and moral manager: How executives develop a reputation for ethical leadership. *California Management Review*, 42, 128–142.
- Treviño, L. K., Weaver, G. R., & Reynolds, S. J. (2006). Behavioral ethics in organizations: A review. *Journal of Management*, 6, 951–990.
- Uehara, E. S. (1990). Dual exchange theory, social networks, and informal social support. *American Journal of Sociology*, 96, 521–558.
- Uhl-Bien, M., & Maslyn, J. M. (2003). Leader-member exchange and its dimensions: Effects of self doubt and other's effort on relationship quality. *Journal of Management*, 29, 511–532.
- Victor, B., & Cullen, J. B. (1988). The organizational bases of ethical work climates. *Administrative Science Quarterly*, 33, 101–125.
- Weaver, G. R., Treviño, L. K., & Agle, B. (2005). Somebody I look up to: Ethical role models in organizations. *Organizational Dynamics*, 34, 313–330.
- Weaver, G. R., Treviño, L. K., & Cochran, P. L. (1999). Corporate ethics programs as control systems: Influences of executive commitment and environmental factors. *Academy of Management Journal*, 42, 41–57.
- Wimbush, J. C., & Dalton, D. R. (1997). Base rate for employee theft: Convergence of multiple methods. *Journal of Applied Psychology*, 5, 756–763.
- Zey-Ferrell, M., & Ferrell, O. C. (1982). Role-set configuration and opportunity as predictors of unethical behavior in organizations. *Human Relations*, 35, 587–604.
- Zierden, W. (1980). Needed: Top management attention to the role of the first-line supervisor. S.A.M. *Advanced Management Journal*, summer, 18–25.
- Zohar, D., & Luria, G. (2005). A multilevel model of safety climate: Cross-level relationships between organization and group-level outcomes. *Journal of Applied Psychology*, 90, 616–628.