



The Dark Triad and Organizational Citizenship Behaviors: the Moderating Role of High Involvement Management Climate

Brian D. Webster¹ · Mickey B. Smith²

Published online: 6 September 2018
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Abstract

The present study extends research related to the dark triad (DT) personality traits, Machiavellianism, narcissism, and psychopathy, by demonstrating a managerial action that mitigates negative behaviors traditionally associated with the DT. Drawing from self-determination theory, we suggest that a high involvement management climate acts as an important boundary condition influencing the relationship between subordinate DT personality traits and subordinate organizational citizenship behaviors (OCB). In a sample of 97 work groups, comprised of 298 employees, we find general support for our predictions that a high involvement management climate affects the rate at which Machiavellians and narcissists engage in OCB. Results from the present study are important for theory and practice alike because research has yet to identify actions managers can take to help combat detrimental effects of the DT in the workplace.

Keywords Machiavellianism · Narcissism · Psychopathy · High involvement management climate

Recent scholarly interest in the dark triad (DT) personality traits, Machiavellianism, narcissism, and psychopathy, suggests the DT is associated with undesirable workplace behaviors, such as deviance, lying, and less engagement in organizational citizenship behaviors (OCB) (Harms, Spain, & Hannah, 2011; Kashy & DePaulo, 1996; Kish-Gephart, Harrison, & Treviño, 2010; Zettler & Solga, 2013). However, recent calls within the DT literature stress a need to understand how such undesirable workplace behaviors can be alleviated (Spain, Harms, & Lebreton, 2014). Because managers can create a work context that influences employee behaviors (Bandura, 1986; Brown, Treviño, & Harrison, 2005; Wallace, Popp, & Mondore, 2006), managers likely

play a crucial role in mitigating the negative behavior associated with the DT. Surprisingly, the literature has been largely silent regarding managerial action aimed at affecting behaviors associated with the DT.

This omission in the literature is important to address as previous research has only recently proposed that managers may be able to take steps to minimize negative effects of the DT (e.g., Smith, Wallace, & Jordan, 2016) and contextual moderators may provide a better explanation of the effects between the DT and relevant organizational outcomes (O’Boyle, Forsyth, Banks, & McDaniel, 2012). To this end, we draw from self-determination theory (SDT) (Ryan & Deci, 2000a) to explain how a *high involvement management climate* operates as an important managerial practice that minimizes the negative relationship between the DT and OCB. In the present study, we devote attention not to counterproductive work behaviors but to OCB; a positive and discretionary “behavior that contributes indirectly to the organization through the maintenance of the organization’s social system” (LePine, Erez, & Johnson, 2002, p. 52; Organ, 1997). A high involvement management climate emphasizes organizational involvement, organizational knowledge, participative decision-making, and collaboration and allows employees autonomy in the workplace (Butts, Vandenberg, DeJoy, Schaffer, & Wilson, 2009; Lawler, 1986; Walton, 1985). The assumption behind high involvement management is that employees who

✉ Brian D. Webster
bdwebster2@bsu.edu

Mickey B. Smith
mbsmith@southalabama.edu

¹ Department of Management, Miller College of Business, Ball State University, 224 Whiting Business Building, Muncie, IN 47306, USA

² Department of Management, Mitchell College of Business, University of South Alabama, 347 Mitchell College of Business, Mobile, AL 36688, USA

are continually encouraged to be involved, participate, and collaborate will ultimately use their considerable workplace discretion to the benefit of the organization. SDT posits that all individuals have an inherent need for autonomy, competence, and relatedness—regardless of personality (Ryan & Deci, 2000a). The satisfaction of such needs facilitates social integration. Given that a high involvement management climate is characterized by themes of empowerment (i.e., autonomy), organizational knowledge (i.e., competence), and collaboration (i.e., relatedness), a high involvement manager continually reinforces and promotes themes that should satisfy inherent individual needs and signal to employees that helping and prosocial behaviors in the workplace are valued.

As an essential social component of the organization, OCB is important to study in relation to individuals high in the DT traits as these individuals have been suggested to engage in social strategies at work that prioritize personal goals at the expense of undermining the social balance necessary for smooth organizational functioning (O’Boyle et al., 2012). Indeed, many of the negative workplace behaviors typically associated with the DT are not performance-based (i.e., task performance) but rather socially based (Dahling, Whitaker, & Levy, 2009; Paulhus & Williams, 2002). Because OCB is a social and discretionary behavior that prioritizes others and the group over the self (LePine et al., 2002; Organ, 1997), it is important to understand how individuals high in the DT traits perform essential social behaviors such as OCB.

The current study contributes to the extant literature by extending existing research on the DT by integrating a SDT framework to explain how managers create an organizational context that satisfies the inherent needs of individuals high in DT traits. In doing so, we extend theory and research on the boundary conditions of the DT with the inclusion of high involvement management climate to offer a contextual moderator that adds nuance to the understanding of the relationship between the DT and OCB. This is important because research has yet to identify actions managers can take to help combat detrimental effects of the DT in the workplace.

We examine the DT from a multilevel approach by examining a high involvement management climate as a group-level construct. Although research has examined involvement-based concepts at both the group- and organizational-levels, these effects have mostly been studied in the context of positive personality facets (e.g., Big Five, regulatory focus) and work outcomes (e.g., Liao & Chuang, 2004; Wallace, Butts, Johnson, Stevens, & Smith, 2016). Few studies have examined group-level variables that may influence the behaviors associated with the DT. The study of a group-level high involvement management climate is a worthwhile extension of previous work on the DT to help answer the call for environmental features that influence DT behavior (O’Boyle et al., 2012).

We believe that the current study is important to researchers and practitioners alike. From a research perspective, the

literature has remained largely silent regarding how to minimize the deleterious effects of the DT in the workplace. This is surprising given the rise of the positive movement within the organizational behavior and psychology literatures (Seligman & Csikszentmihalyi, 2000). Scant understanding of how to curtail the damaging effects of the DT suggests that researchers have a limited understanding of the DT’s full impact in the workplace. In accordance with meta-analytic findings from O’Boyle et al. (2012), we acknowledge that the DT traits likely have more predictive power regarding negative workplace outcomes. To incorporate positive criteria into the study of the DT and answer the O’Boyle et al. (2012) call for contextual and environmental moderators that add to understanding of the DT, we include a managerial practice that may affect the behavior of individuals high in the DT: high involvement management climate. Although limited studies have examined some contextual moderators affecting the DT-counterproductive work behavior relationship (e.g., Palmer, Komaraju, Carter, & Karau, 2017), we are among the first to study a managerial action that acts as a moderator of the relationship between the DT and a desirable workplace behavior: OCB. We view the incorporation of managerial practices that aid in curtailing the negative effects of the DT as a worthwhile contribution answering the call for a better understanding of how the DT relates to employee behaviors that encourage, rather than hinder organizational functioning (Spain et al., 2014).

From a practitioner perspective, it is important that managers understand how to work with employees with a high standing on one or more of the DT traits. Managers desire to employ individuals who freely help coworkers or engage in non-required behaviors that show concern for the organization. We acknowledge that prompting individuals high in the DT to freely engage in prosocial behavior toward colleagues and the organization is difficult. However, practitioners could benefit from understanding what managerial strategies may exist that help reduce the likelihood that high DT individuals abstain from engaging in OCB altogether. Because an estimated 10% of the population is classified as subclinical Machs, narcissists, and psychopaths (Gustafson & Ritzer, 1995; Pethman & Erlandsson, 2002), it is likely an ample portion of the workplace consists of individuals high in DT traits. Therefore, high involvement management may be a viable strategy available to managers when interacting with individuals high in the DT.

Theoretical Rationale and Hypotheses

The Dark Triad

DT personality traits, Machiavellianism, narcissism, and psychopathy, consist of subclinical undesirable behaviors that are socially aversive (Paulhus & Williams, 2002). In accordance

with terminology traditionally used in the literature (e.g., O’Boyle et al., 2012), the present study uses the terms “Machiavellians (Machs),” “narcissists,” and “psychopaths” to indicate those who are high in the trait. Individuals high in DT traits are malevolent and often engage in negative interpersonal relationships. For example, Machiavellians possess manipulative qualities and show little concern for others. Narcissists engage in grandiose thought and subscribe to entitlement and superiority strategies in social interactions. Psychopaths have the tendency to be impulsive and exhibit low empathy for others, which creates divisive interpersonal interactions. Although the DT traits share some behavioral tendencies (i.e., emotional coldness and deceitfulness), Paulhus and Williams (2002) demonstrated the DT traits to be distinct constructs.

The Dark Triad and OCB

Each of the DT traits has characterizations of poor interpersonal relationships (e.g., manipulating, low empathy, lying). Further, the DT traits prioritize the self over the group, creating a social imbalance between individuals high in the DT and their coworkers (O’Boyle et al., 2012). Because OCB is a social and discretionary behavior that prioritizes others and the group over the self (LePine et al., 2002; Organ, 1997), it is likely individuals high in the DT traits will be less likely to engage in OCB. Machs’ focus on manipulation and tendency to prioritize themselves, even at the expense of others (Dahling et al., 2009; Jones & Paulhus, 2009), make it likely that Machs engage in fewer OCB. Narcissists’ sense of entitlement (Paulhus & Williams, 2002; Raskin & Hall, 1979) may create the perception that their high self-standing precludes them from engaging in discretionary helping behaviors such as OCB. Psychopaths’ lack of concern for others (O’Boyle et al., 2012) should make it less likely that psychopaths engage in discretionary helping behaviors that promote the welfare of the organization and other coworkers. Thus, we hypothesize the following:

Hypothesis 1. Machiavellianism is negatively related to OCB.

Hypothesis 2. Narcissism is negatively related to OCB.

Hypothesis 3. Psychopathy is negatively related to OCB.

The Moderating Role of High Involvement Management

Although each of the DT traits are likely to prompt low levels of engagement in OCB, managers may help create environmental conditions that alter the extent to which employees high in each of the DT traits engage in OCB. Indeed, one’s immediate manager plays an important role in creating an organizational climate that affects employee behavior (Richardson & Vandenberg, 2005). We suggest one way

managers can combat the negative outcomes typically associated with the DT in the workplace is via the creation of a high involvement management climate. High involvement management is a practice that prioritizes participation, communication, involvement, and employee empowerment among employees (Butts et al., 2009; Lawler, 1986). High involvement management stresses the delegation of four primary elements in the workplace: power, information, rewards, and knowledge (Lawler, 1986; Riordan, Vandenberg, & Richardson, 2005). The delegation of power is a concentration on allowing employees to make decisions about their own work. In this manner, high involvement managers may design jobs or assign tasks that provide autonomy for individuals and allow for decision making by individuals. Information refers to keeping employees up-to-date on relevant organizational information so the employees can use their autonomy to make their own informed decisions. High involvement managers focus on rewarding employees who use their autonomy to take actions that align with organizational goals. In this regard, the manager ensures and makes clear that bonuses, promotions, or raises align with specific organizational goals rather than seniority or favoritism. Lastly, high involvement managers concentrate on knowledge by providing employees the opportunity to improve work-related skills. In the workplace, managers may concentrate on knowledge by frequently promoting training and development opportunities to employees. Managers emphasize these four elements in the workplace to produce employees who care for, are concerned about, and are more involved in their workplace. In turn, these employees are likely to exert more effort into their work (Lawler, 1986).

A high involvement management climate occurs when employees within a work unit or team commonly acknowledge they have the power to make decisions, access needed information, can increase their work-related knowledge, and are rewarded appropriately (Lawler, 1996; Richardson & Vandenberg, 2005; Riordan et al., 2005). Previous research has suggested that a high involvement management climate works at lower levels of the organization (e.g., individual, group) rather than higher levels (e.g., organization) (Smith, Wallace, Vandenberg, & Mondore, 2016). This is likely because the positive effects of a high involvement management climate often operate through unit level managers. Indeed, managers transform involvement policies into functional practices and thus likely have a sizable influence on the shared perceptions of high involvement management within a work group (Richardson & Vandenberg, 2005).

Self-Determination Theory

The important impact a high involvement management climate has on individuals high in the DT traits is suggested by the principles of SDT (Ryan & Deci, 2000a). SDT provides an arena for investigating innate psychological needs

that serve as the basis for prompting behavior and personality integration (Ryan & Deci, 2000a). Needs are conceptualized as psychological “nutriments that are essential for optimal human development” (Gagné & Deci, 2005, p. 337; Ryan, Sheldon, Kasser, & Deci, 1996). The theory suggests that individuals have a natural need for autonomy, competence, and relatedness (Ryan & Deci, 2000a). Moreover, even individuals with dark side personalities possess the inherent needs posed by SDT (Ryan & Deci, 2000b). Autonomy refers to one’s volition. Relatedness regards the desire to feel connected to others via mutual respect, reliance, or caring (Baumeister & Leary, 1995; Harlow, 1958). Competence refers to an ability to affect one’s environment and obtain desired outcomes. SDT posits these needs are essential for all individuals, such needs are satisfied within one’s social environment, and the satisfaction of such needs facilitate social integration. Indeed, much of the research directed by SDT has studied environmental attributes that affect social functioning (e.g., Deci et al., 2001). We suggest a high involvement management climate acts as an important social environment that provides nutriment required to satisfy the human needs of autonomy, competence, and relatedness. Indeed, employees respond to the work environment based off their interpretation and perception of that environment (Campbell, Dunnette, Lawler, & Weick, 1970; Carr, Schmidt, Ford, & DeShon, 2003).

SDT suggests that when behaviors are not typically compelling to an individual, such as individuals high in DT traits engaging in OCB, the individual will act because the behavior has been prompted or modeled by a significant figure (Ryan & Deci, 2000a). One’s manager serves as a highly visible figure due to their formal position of authority (Brown et al., 2005; Mayer, Kuenzi, Greenbaum, Bardes, & Salvador, 2009). A high involvement manager creates a climate which influences employees to conform to themes of autonomy, knowledge (i.e., competence), and participation and collaboration (i.e., relatedness); all elements of helping behaviors, such as OCB. Moreover, all elements are inherent human needs posited by SDT. The high involvement management climate that permeates the work group should signal to employees that autonomous, participatory, and collaborative behaviors, such as OCB are valued. Individuals are more likely to mimic behaviors that are pertinent to relevant social groups (Ryan & Deci, 2000a). As a result of a high involvement management climate, employees and particularly individuals high in DT traits should perceive the satisfaction of their inherent needs and then recognize the importance and salience of OCB to the social fabric of their work group and engage in OCB. Below, we offer specific explanations detailing the effect a high involvement management climate should have on each of the three DT traits.

Machiavellianism

Although Machs are likely not naturally prone to engage in OCB, a high involvement management climate should act as an environmental condition that stimulates engagement in OCB by satisfying inherent needs. Machs prefer to work in less-structured settings (Dahling et al., 2009; Jones & Paulhus, 2009; O’Boyle et al., 2012). A key component of a high involvement management climate is a focus on allowing employees autonomy and empowerment in how they complete their work. Thus, Machs should respond favorably to an emphasis on empowerment and less structure as this is likely to satisfy their inherent need for autonomy. Because a high involvement management climate also stresses involvement, Machs are likely to be encouraged to engage with others. Empirical evidence indicates that Machs notice and are concerned about their social standing within organizations (Smith & Webster, 2017), particularly when social situations may have an effect on their workplace success (Christie & Geis, 1970). Thus, Machs are likely to pay attention to the workplace social situations created by a high involvement management climate. As Machs are continually encouraged to become involved with colleagues and engage in social situations, their need for relatedness is likely satisfied. In this manner, Machs are likely to recognize the social cue provided by managers that involvement with colleagues is a desired workplace behavior that has at least some impact on the Mach’s workplace success. Last, a high involvement manager strives to provide knowledge to increase the workplace skills of employees. Although Machs adhere to manipulative and deceptive workplace behaviors, these behaviors tend to be mild in nature as Machs tend to care about and enjoy somewhat successful careers (Jones & Paulhus, 2009). Because they care about their careers, Machs should perceive managerial efforts targeted toward improving workplace knowledge and skills as satisfying inherent needs for competency. Autonomy, competence, and relatedness are needs a high involvement management climate is likely to satisfy. In addition, all three needs are elements of OCB. Indeed, OCB are discretionary behaviors (i.e., autonomous), usually require some workplace knowledge base (i.e., competency), and benefit members of the group, whether it be an individual coworker or the organization as a whole (i.e., relatedness). Providing a meaningful reason for a behavior one finds uninteresting, along with support for autonomy and relatedness, tends to prompt the adoption of the behavior (Deci, Eghrari, Patrick, & Leone, 1994). Although a Mach may find OCB as uninteresting, the reasons for engaging in OCB provided by the high involvement manager should prompt the Mach’s tendency to engage in OCB. High involvement managers who encourage participation and collaboration highlight the benefits of engaging with others. Thus, we offer the following hypothesis:

Hypothesis 4. High involvement management climate moderates the relationship between Machiavellianism and OCB such that when high involvement management climate is high, the negative relationship between Machiavellianism and OCB is weakened.

Narcissism

Narcissists possess a sense of entitlement and believe they can make the best decisions for themselves (Paulhus & Williams, 2002; Raskin & Hall, 1979). Thus, narcissists should respond favorably to and have their inherent need for autonomy satisfied by a high involvement manager's effort to instill autonomy and decision making authority within employees. Narcissists also perceive their superiority in relation to those with which they interact and have an inflated sense of self (Paulhus & Williams, 2002). Thus, a narcissist's desire to become competent at work or at least appear competent at work should be satisfied by a high involvement manager's continual effort to provide employees knowledge and opportunity to improve work-related skills. Further, narcissists' tendency to engage in self-promotion and seek praise from others (Maccoby, 2000) should make them particularly attune to social situations in the work environment. As narcissists are encouraged to engage and become involved in social situations by the climate created by the high involvement manager, their need for relatedness and need to engage in self-promotion is likely satisfied. Engaging in observable helping behaviors for colleagues and the organization is not only an avenue by which narcissists satisfy their need for relatedness but also a likely outlet narcissists may choose to gain recognition and receive praise from coworkers (see Halbesleben, Bowler, Bolino, & Turnley, 2010). Therefore, we offer the following hypothesis:

Hypothesis 5. High involvement management climate moderates the relationship between narcissism and OCB such that when high involvement management climate is high, the negative relationship between narcissism and OCB is weakened.

Psychopathy

Psychopaths exhibit a lack of concern for authoritative structures and prefer autonomy (O'Boyle et al., 2012). A high involvement management climate, which stresses autonomy and decision-making by the individual employee, should signal to individuals high in psychopathy that managers are not attempting to be authoritarian but rather empowering. In this way, the individual need of autonomy should be satisfied and the salience of authority from the manager may be minimized; to which the individual high in psychopathy should respond more favorably. Additionally, individuals high in psychopathy are protective of their careers (de Silva, 2014). Thus,

individuals high in psychopathy should respond favorably to high involvement managers who create a climate that stresses the improvement of work-related knowledge and skills. By listening to the knowledge and information passed on by the high involvement manager, the individual high in psychopathy is likely to have his or her need for competency satisfied.

Individuals high in psychopathy are politically astute and can exhibit strong communication skills in social settings (Babiak & Hare, 2006). High involvement management climates that signal involvement among colleagues should signal to individuals high in psychopathy that relating with others and helping others is socially and politically advantageous. Thus, the need for relatedness is satisfied within the psychopathic individual. Further, a likely way to remain socially and politically relevant among coworkers is to engage in helping behaviors that promote goodwill. Indeed, OCB is an important behavior that facilitates the organization's social system (LePine et al., 2002); thus, engagement in OCB is a manner in which the individual high in psychopathy can act upon the social cues sent by the high involvement management climate. Therefore, we offer the following hypothesis:

Hypothesis 6. High involvement management climate moderates the relationship between psychopathy and OCB such that when high involvement management climate is high, the negative relationship between psychopathy and OCB is weakened.

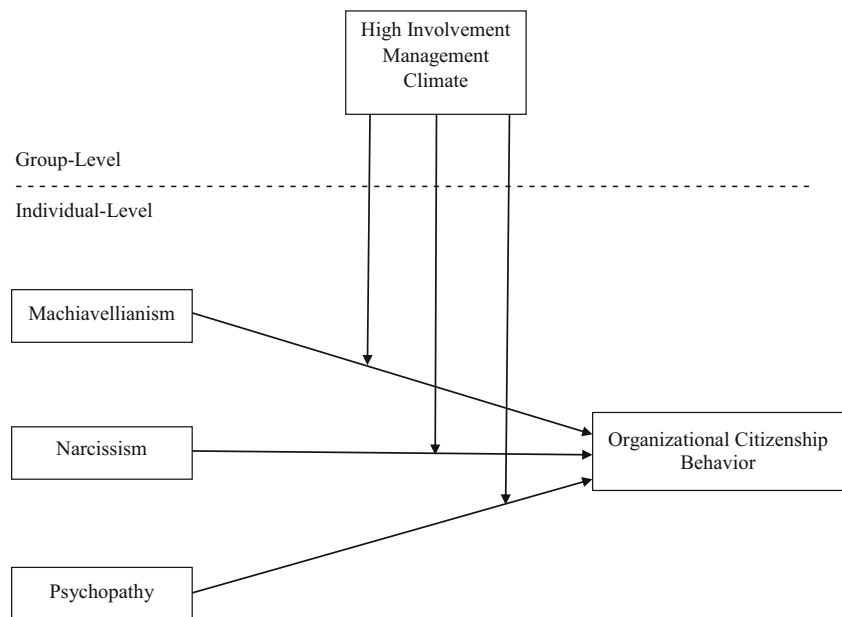
For a depiction of our theoretical model, please refer to Fig. 1.

Method

Participants and Procedures

The sample included 298 employees who reported to 97 unique supervisors from the USA. For the purposes of multi-level modeling, we designated groups as employees reporting to the same supervisor with each workgroup consisting of at least three employees. Students from two large universities (one in the Midwestern and one in the Southeastern United States) received extra credit in an undergraduate business class for recruiting someone with whom they were familiar to act as an organizational contact. Students were not allowed to participate in the study but could recruit others in their organizations to participate. Students were instructed to contact the individual directly and manually deliver an envelope containing six recruitment invitations for the participant and her/his coworkers and one recruitment invitation for their direct supervisor. Additionally, there was an instruction sheet in the envelope explaining how and to whom the recruitment flyers were to be delivered. The recruited employee was specifically instructed to only disseminate the other employee invitations to coworkers reporting to the same direct supervisor as her/

Fig. 1 Theoretical model



him. In addition, the participant was instructed to deliver the supervisor recruitment invitation to his/her direct supervisor. The recruitment invitations provided general information about the study and a link to access an online survey. A number of researchers (e.g., Grant & Mayer, 2009; Smith & Webster, 2017) have successfully used similar recruitment procedures.

The surveys were then administered to participants using a secure online survey platform. We allowed a period of 3 weeks to complete the surveys from the initial date the packets were delivered to the students to the date the surveys closed. To maintain the quality of the data, we requested each employee to enter her or his name. This was necessary such that we could match supervisor ratings of OCB. Supervisors were tracked using a unique ID number attached to each packet of invitations. Additional actions were taken to insure data quality that follow techniques from prior work using this sampling technique (e.g., Mayer, Aquino, Greenbaum, & Kuenzi, 2012; Quade, Greenbaum, & Petrenko, 2017; Smith & Webster, 2017). Employees responded to self-report measures of the DT traits along with their perceptions of high involvement management in reference to their manager. Supervisors reported OCB for each employee under their supervision.

We released 442 packets to students and received an initial response of 387 employees and 154 supervisors for a response rate of 35%. Because we were interested in cross-level effects, we limited our sample to groups comprised of at least three subordinates per supervisor. In doing so, the final sample include 298 employees within 97 workgroups (final response rate of 22%), which is well above the suggested minimum level 2 sample size of at least 30 groups for analyzing cross-level interactions (e.g., Scherbaum & Ferreter, 2009). The group sizes ranged from three-to-six ($M = 3.1$, $SD = .5$). The

employee sample was 40.2% female with an average age of 33.6 years ($SD = 12.5$) and self-reported most commonly as 20.9% African American/Black, 73.1% Caucasian, and 2.3% Hispanic/Latina(o). The supervisor sample was 42.4% female with an average age of 42.8 years ($SD = 11.5$) and self-reported most commonly as 19% African American/Black, 73% Caucasian, and 3% Hispanic/Latina(o). Employees had an average organizational tenure of 5.80 years ($SD = 7.26$) and had worked with their supervisor for an average of 3.23 years ($SD = 4.14$). Employees came from a variety of industries such as entertainment, health care, manufacturing, and retail.

Variables and Measures

Please see the [Appendix](#) for the items used to measure each variable.

Dark Triad Each of the DT traits was measured using four-item subscales from the Dirty Dozen (Jonason & Webster, 2010). Several scholars have argued for the validity of the Dirty Dozen Scale in measuring each of the DT traits (e.g., Jonason & Luévano, 2013). Participants were asked to indicate the extent to which the statements describe themselves on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*). Cronbach's alpha for employee Mach scores was .83. Cronbach's alpha for narcissism was .87. Cronbach's alpha for psychopathy was .88.

High Involvement Management Climate High involvement management climate was measured using a scale developed and validated by Smith, Wallace, Vandenberg, and Mondore (2016). The 15-item scale asked participants to select the degree to which they agreed with statements concerning their

direct supervisor (1 = *strongly disagree*; 5 = *strongly agree*). Cronbach's alpha for high involvement management climate was .95.

OCB OCB was measured using the 16-item measure developed and validated by Lee and Allen (2002). Supervisors responded to the scale in relation to each employee under their direct supervision, which meant that supervisors rated between three-and-six employees' OCB. Supervisors rated employee OCB using a 7-point scale (1 = *never*; 7 = *always*). Cronbach's alpha for OCB was .95.

Results

Confirmatory Factor Analysis

We conducted a confirmatory factor analysis to assess the factor structure of our study variables. Because we hypothesized cross-level effects, we tested a multilevel measurement model where all study variables were entered at the individual level, and high involvement management climate was also entered at the group level. Thus, we loaded the corresponding items onto Mach, narcissism, psychopathy, high involvement management climate, and OCB at the individual level (level 1). To maintain a desirable indicator-to-sample size ratio, four parcels were created to measure OCB (cf. Bagozzi & Edwards, 1998; Little, Cunningham, Shahar, & Widaman, 2002). We also loaded aggregated high involvement management climate items onto a factor at the group level (level 2). We tested model fit via Mplus 7.4 (Muthén & Muthén, 1998–2015) allowing for variance in intercepts at the individual level (i.e., random intercepts).

Results from the confirmatory factor analysis suggested satisfactory fit, $\chi^2(486) = 935.72$, comparative fit index = .91, root mean square error of approximation = .06, and standard root mean square residual = .06. We also tested an additional model to address concerns regarding potential redundancy among the DT traits (e.g., O'Boyle, Forsyth, Banks, Story, & White, 2015) by loading all 12 DT items onto one factor. The fit indices provided in this measurement model offered further support for our conceptualized use of three separate DT factors, $\chi^2(493) = 1223.80$, comparative fit index = .85, root mean square error of approximation = .07, and standard root mean square residual = .06. Therefore, we proceeded to test cross-level interactions among each of the DT traits and high involvement management climate onto OCB.

Aggregation of High Involvement Management Climate

Our decision to aggregate high involvement management climate to the group level was predicated on two notions.

Empirically, our sample consisted of employees nested within supervisors, dictating a multilevel analysis. From a theoretical viewpoint, measuring high involvement management climate at the group level allows us to assess the accuracy of employee perceptions of a high involvement management climate, more so than simply the perception of a general concept of high involvement management. By obtaining multiple ratings of the same manager, we obtained a robust assessment of the degree to which the manager truly acts as a high involvement manager. To justify aggregating high involvement management climate to the group level, we followed the suggestions of prior researchers (e.g., Bliese, 2000; Chan, 1998; James, Demaree, & Wolf, 1993). More specifically, we took steps to determine the viability of aggregation concerning within-group homogeneity, between-group heterogeneity, and the natural occurrence of the work groups. The groups were naturally occurring because each group was defined by a unique supervisor and multiple employees who reported to that supervisor. Thus, we assessed within-group homogeneity and between-group heterogeneity using statistical metrics. First, we calculated the $r_{wg(j)}$ statistic (James et al., 1993) to assess within-group homogeneity. The average values using uniform null and normal distributions were .90 (median = .97) and .74 (median = .93), respectively. Second, we calculated ICC(1) to assess the proportion of variance in high involvement management climate caused by group membership. The value for ICC(1) was .31. Finally, we calculated ICC(2), which assesses the extent to which group means are reliably different. The value for ICC(2) was .58 ($F = 2.37$, $p < .05$). Based upon established recommendations (Bliese, 2002), these findings supported the aggregation of high involvement management climate to the group level.

Analyses and Hypothesis Tests

Prior to conducting the multilevel moderation analyses, we assessed the overall nature of our data—primarily investigating the existence and potential impacts of outliers across the DT. Dark personality traits are usually considered to be low threshold variables in that a small portion of people typically score in the moderate-to-high ranges (e.g., approximately 10% in Mach, Hunt & Chonko, 1984). Thus, we expected and subsequently found a floor effect for each of the DT traits by plotting the raw data. The data was skewed, so we assessed the data for point outliers by standardizing the data as assessing z -score values. There were a few scores that were above three standard deviations from the mean score, so we decided to do two things. First, we ran multilevel moderated regression analyses using transformed data to address the skewed nature of the DT. Also, we conducted regressions excluding the potential outliers, in both normal and transformed regressions. The pattern of effects did not differ when

using transformed data or removing the outliers from the multilevel moderated regressions using observed data.

We made special considerations for the nested nature of the data as well as the multilevel moderation hypotheses we proposed. Cross-level interactions imply that group-level variables influence the effects between individual-level independent variables and dependent variables. Thus, single-level moderation analysis using OLS is not appropriate in our context. Instead, we followed the recommendations of prior researchers for assessing cross-level interactions using random slopes and random intercepts within two-level analyses (e.g., Aguinis, Gottfredson, & Culpepper, 2013; Snijders & Bosker, 2012). We conducted these analyses using maximum likelihood estimation in Mplus 7.4 (Muthén & Muthén, 1998–2015). Means, standard deviations, and bivariate correlations are depicted in Table 1.

In Hypotheses 1–3, we predicted that each of the DT traits would negatively relate to OCB. The correlations demonstrated that all three traits were negatively and significantly related to OCB. Thus, we found support for Hypotheses 1–3.

In Hypotheses 4–6, we predicted cross-level interactions in which high involvement management climate (level 2) would influence the relationships among the DT traits and OCB (level 1). To assess cross-level interactions, we ran a series of regressions for each DT trait—high involvement management climate interaction. We followed recommended procedures for calculating cross-level interactions using multilevel modeling (e.g., Aguinis et al., 2013) and conducted two-level random slope and intercept models for each set of interactions. We modeled random intercepts in which each DT trait was entered as a level 1 variable and aggregated high involvement management climate scores were entered at level 2. We grand-mean centered high involvement management climate at level 2 (Snijders & Bosker, 2012). Finally, we created interaction terms and modeled them at both level 1 and level 2.

For Hypothesis 4, we assessed the cross-level interactions between Mach and high involvement management climate on OCB. The interaction between individual-level Mach and group-level high involvement management climate was

significant for OCB ($\beta = .14, p = .00$). Coefficients, significance levels, and 95% confidence intervals for the final model are presented in Table 2. To aid in interpreting the results, we plotted the interactions (Fig. 2). Based upon these results, high involvement management climate weakened the negative relationship between Mach and OCB such that Mach group members working in a high involvement management climate were no different in their engagement in OCB from their coworkers low in the trait. Upon further inspection, we also found through simple slopes analysis that the slope of the Mach-OCB relationship was significant at both low levels of high involvement management climate (e.g., $-1 SD$; raw value = 3.39) and high levels of high involvement management climate (e.g., $1 SD$; raw value = 4.47). The slope gradient was negative at low levels of high involvement management climate and positive at high levels of high involvement management climate. Thus, Hypothesis 4 was supported.

We conducted the same analyses for the narcissism—high involvement management climate interactions on OCB (Hypothesis 5). We found a significant interaction effect on OCB ($\beta = .10, p = .04$). Coefficients, significance levels, and 95% confidence intervals for the regression analysis are provided in Table 3. We also plotted the interaction for OCB, which is shown in Fig. 3. Our results demonstrate that similar to Mach, high involvement management climate appears to mitigate the negative relationship between narcissism and OCB. This was further supported by an analysis of simple slopes, in which the slope gradient was significant for the narcissism-OCB relationship when high involvement management climate was low (e.g., $-1 SD$; raw score = 3.39) but not when high involvement management climate was high (e.g., $1 SD$).

Finally, we assessed the effect of the interaction between psychopathy and high involvement management climate on OCB. The results from the regression analyses are provided in Table 4. Contrary to the effects found for Mach and narcissism, the interaction of psychopathy and high involvement management climate did not produce significant effects for OCB ($\beta = .05, p = .45$). These results suggest that high

Table 1 Means, standard deviations, and correlations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Machiavellianism (L1)	1.85	0.86	.83				
2. Narcissism (L1)	2.26	1.05	.65**	.87			
3. Psychopathy (L1)	1.61	0.81	.68**	.61**	.88		
4. HIM (L2)	3.93	0.54	-.16**	-.18**	-.29**	.95	
5. OCB (L1)	3.97	0.70	-.20**	-.16**	-.24**	.19**	.95

Note: $N = 298, k = 97$. HIM = aggregated high involvement management climate, Mach = Machiavellianism, OCB = organizational citizenship behavior, L1 = level 1 variable, L2 = level 2 variable

* $p < .05$

** $p < .01$

Table 2 Regression results for the Machiavellianism-HIM interaction on OCB

Variable	OCB			
	β	SE	p value	95% CI
Intercept	3.97	.05	.00	.09, .24
1. Mach (L1)	-.03	.04	.49	-.12, .06
2. HIM (L2)	.22**	.05	.00	.11, .33
3. Mach * HIM	.14**	.05	.00	.05, .24

Note: $N = 298$, $k = 97$. HIM = aggregated high involvement management climate, Mach = Machiavellianism, OCB = organizational citizenship behavior, L1 = level 1 variable, L2 = level 2 variable, CI = confidence interval

* $p < .05$

** $p < .01$

involvement management climate does not weaken the negative relationship between psychopathy and OCB. Thus, we do not find support for Hypothesis 6.

Discussion

Theoretical Implications

To date, research on managerial actions that mitigate the workplace effects of DT traits is limited. To advance the conversation regarding what managers can do to combat the detrimental effects of the DT, we sought to investigate how a high involvement management climate influenced the DT-OCB relationships. We first contributed to the literature by showing how the organizational context created by managers can affect the behaviors adopted by individuals high in DT traits. Although previous research has proposed that managers may be able to help minimize negative outcomes associated with the DT (e.g., Smith, Wallace, & Jordan, 2016), the present

study is among the first to empirically test such a notion. The incorporation of high involvement management climate as a group-level variable affecting the relationship between the DT and OCB extends theory and research on the boundary conditions of the DT. Importantly, our research demonstrates that a high involvement management climate can help certain high DT individuals (i.e., Machs and narcissists) engage in rates of OCB approximately equal to employees low in the DT trait. Although it is prudent to acknowledge, the mean levels of each of the DT traits in our sample were generally low. Thus, readers should be aware of what constitutes a “high DT individual” in our sample. Nevertheless, these findings serve as an initial indication that the negative workplace effects associated with DT traits may be mitigated with managerial action.

Previous research (O’Boyle et al., 2012) laments the fact that a wealth of research neglects to report on the relationship between dimension-level elements of the DT and work behaviors. By extricating the three DT traits, we provide a better understanding as to each of the DT traits’ relationship with OCB. We showed that Machs and narcissists seem to respond “best” to a high involvement management climate as a high involvement management climate moderated the relationship between both Mach and narcissism with OCB. However, a high involvement management climate did not significantly affect psychopaths’ levels of OCB. We believe our significant findings regarding Machs and narcissists are in line with prior research in that some evidence exists that these two traits can and do exhibit somewhat desirable behaviors in the workplace in terms of performance (Smith & Webster, 2017), career success (Jones & Paulhus, 2009), or innovativeness (Smith & Webster, 2018). Although speculative, there does seem to be some indication that Machs and narcissists may be more apt to engage in positive organizational behaviors when compared to individuals high in psychopathy.

These findings highlight the importance of understanding each of the DT traits together and individually. Although the

Fig. 2 Interaction plot for Machiavellianism * HIM on OCB

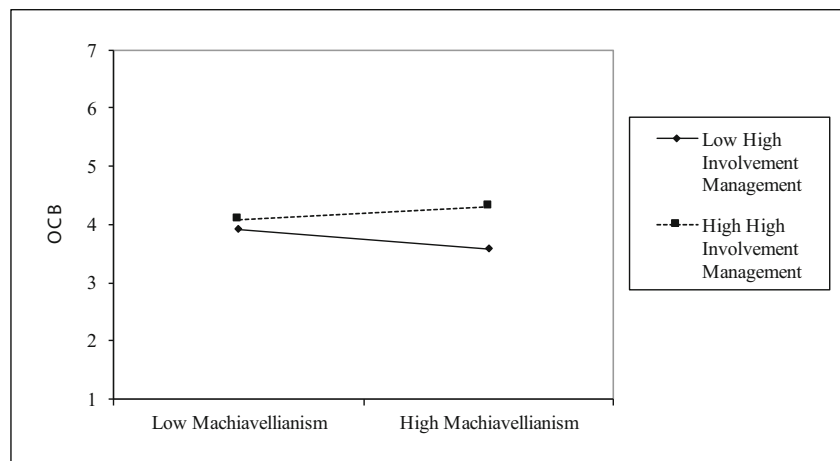


Table 3 Regression Results for the narcissism-HIM Interaction on OCB

Variable	OCB			
	β	SE	<i>p</i> value	95% CI
Intercept	3.98	.05	.00	3.90, 4.08
1. Narc (L1)	-.05	.04	.26	-.13, .04
2. HIM (L2)	.23**	.06	.00	.12, .35
3. Narc * HIM	.10*	.05	.04	.01, .19

Note: $N = 298$, $k = 97$. HIM = aggregated high involvement management climate, OCB = organizational citizenship behavior, L1 = level 1 variable, L2 = level 2 variable, CI = confidence interval

* $p < .05$

** $p < .01$

DT traits are distinct constructs, they do share considerable theoretical overlap and correlate significantly. This begs the question as to why a high involvement management climate does not seem to have the impact on psychopathy that it does on Mach and narcissism. This could be due to the unique factors that describe individuals high in psychopathy (e.g., anti-authority and callousness; Hare, 1982, 1996). Given psychopathy's lack of concern and empathy for others (O'Boyle et al., 2012), the odds of engaging in OCB is likely low to begin with. Coupled with psychopathy's noted lack of concern for authority (Hare, 1996), high involvement management may then be less salient and impactful for psychopaths. Thus, the needs of psychopaths in the workplace may be satisfied differently from the needs of Machs and narcissists. However, this notion is speculative and should be confirmed or refuted in future research.

Finally, we examined the DT within a multilevel context by examining high involvement management climate as a group-level construct. Group-level approaches to studying the DT are uncommon, yet involvement-based contexts have been shown to explain a wealth of individual-level behaviors (e.g., Liao & Chuang, 2004; Wallace et al., 2016). This

multilevel approach extends the literature on SDT by providing insights into how employees high in DT traits can be influenced to engage in OCB at a rate similar to employees low in DT traits by observing social cues in the workplace environment that satisfy their inherent needs. Thus, the present study highlights an important group-level variable, high involvement management climate, which acts as a buffer between the DT and low engagement in OCB. In this regard, we answer calls in the literature to further understand contextual moderators that affect DT behavior (O'Boyle et al., 2012).

Practical Implications

Our research apprises managers that high involvement managerial practices can influence an employee high in DT traits' willingness to engage in OCB. This is important as our research provides managers a tool to use when confronted with difficult-to-manage DT employees, at least Machs and narcissists. High involvement management can be learned and implemented through training and development (Lawler, 1986). Indeed, high involvement management is a common organizational practice used to positively affect a variety of organizational outcomes, such as employee attitudes (Butts et al., 2009), employee innovation (Wallace et al., 2016), and sustained job performance during layoffs (Zatzick & Iverson, 2006). In fact, high involvement management climate had a significant, main effect relationship with OCB in each regression. Thus, a high involvement management climate appears to be a significant driver of OCB altogether. Although previous research has identified high involvement management's relationship with desirable workplace outcomes, our study is among the first to show that a high involvement management climate also helps buffer the negative effects of an undesirable individual disposition (i.e., DT). Thus, organizations may be more inclined to encourage their managers to implement a high involvement managerial style when appropriate.

Fig. 3 Interaction plot for narcissism * HIM on OCB

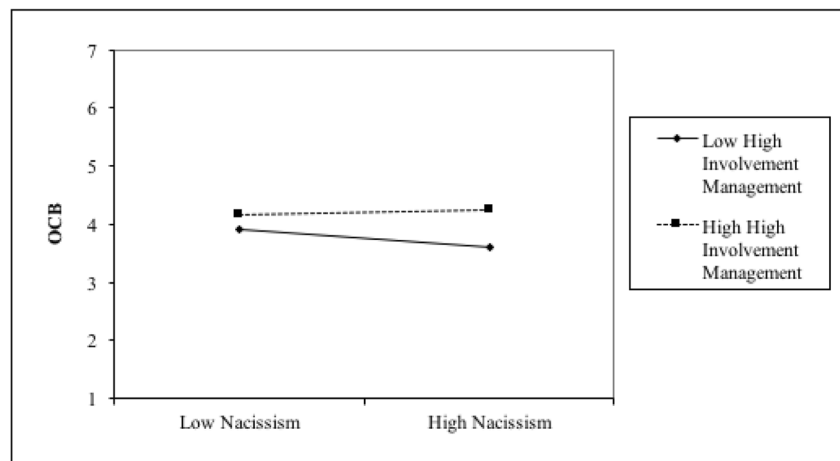


Table 4 Regression results for the psychopathy-HIM interaction on OCB

Variable	OCB			
	β	SE	<i>p</i> value	95% CI
Intercept	3.93	.05	.00	3.82, 4.03
1. Psy (L1)	−.06	.05	.24	−.17, .04
2. HIM (L2)	.22**	.05	.00	.11, .34
3. Psy * HIM	.05	.07	.45	−.04, .14

Note: $N = 298$, $k = 97$. HIM = aggregated high involvement management climate, OCB = organizational citizenship behavior, L1 = level 1 variable, L2 = level 2 variable, CI = confidence interval

* $p < .05$

** $p < .01$

Another practical implication of the present study is in regard to generally accepted notions regarding the job performance of individuals high in the DT traits. Traditionally, researchers have admitted there is little reason to think individuals high in the DT traits are incapable of performing required job tasks; however, most researchers believe individuals high in DT traits negatively impact organizations in the realm of extra-role behaviors by engaging in counterproductive work behaviors (Wu & LeBreton, 2011). Our research is among the first to show a condition under which DT employees (i.e., Machs and narcissists) are able to maintain “acceptable” levels of extra-role behaviors (at least compared to individuals low in DT traits), in the form of OCB.

Limitations and Future Directions

Our study is not without limitations that should be acknowledged. First, the cross-sectional nature of our data collection procedures could lead to concerns of common method variance (CMV). To mitigate against concerns of CMV, we obtained multiple sources of data as recommended by Podsakoff, MacKenzie, Lee, and Podsakoff (2003): individual ratings of each DT trait, supervisor ratings of OCB, and a group-level measure of high involvement management climate. In addition to the cross-sectional nature of our data, we sought to acquire a large enough sample size to yield sufficient statistical power to our analyses. Based upon prior recommendations concerning power to detect cross-level interactions (Mathieu, Aguinis, Culpepper, & Chen, 2012; Scherbaum & Ferreter, 2009), we found the power of our study to hover around generally accepted cutoffs for sufficient power (e.g., .8). We encourage future researchers to seek opportunities to acquire larger sample sizes at both the individual and group level to improve power to detect cross-level interaction among personality traits and management climates, such as high involvement.

Second, some researchers may have concerns with using student-recruited participants. We should note that our

recruitment procedures are in line with previous studies using students to recruit working adults to complete surveys (e.g., Grant & Mayer, 2009). Further, drawing employees from a diverse array of occupations and industries strengthens the generalizability of our findings. Additionally, meta-analytic evidence demonstrated that student-recruited samples do not markedly differ from non-student-recruited samples (Wheeler, Shanine, Leon, & Whitman, 2014). Nevertheless, future research may benefit from a replication of our work using a different recruitment method or organizational context.

Third, researchers have discussed concerns with self-report measures of dark personality traits (Wu & LeBreton, 2011) due to their socially undesirable nature. Despite this concern, our measures of the DT traits are validated (Jonason & Webster, 2010), have been used in recent DT research (Smith, Wallace, & Jordan, 2016), and demonstrated psychometrically sound properties in our study. Additionally, self-report measures of personality and individual difference variables have long been regarded as acceptable and the norm in personality research (e.g., Gosling, Rentfrow, & Swann, 2003). Despite this, constructive replication of our work using different DT measures or other sources to measure the DT may be of value. Relatedly, there is growing debate concerning the true uniqueness of the DT traits and dark traits more generally (see Smith, Hill, Wallace, Recendes, & Judge, 2018). We found each of the traits to be moderately related to the others, which has been observed elsewhere (e.g., Paulhus & Williams, 2002), and some have called for the practice of studying a higher order factor of dark personality or simply capturing the traits with the low end of normal range traits (e.g., O’Boyle et al., 2015). We suggest that subsequent researchers attend to the potential overlap concerning the DT and other dark traits in relation to each other and normal range traits.

One last opportunity for future researchers is to focus on outliers in this line of study. We noted that we assessed the nature of the data and identified and accounted for outliers in supplemental analyses (with no discernable change in the pattern of effects). However, those outliers may in themselves carry really interesting effects. In other words, considering the low baseline typically observed in dark personality research, it would be prudent for future researchers to narrow their focus to those who score highest in the DT traits.

Conclusion

A substantial amount of attention has been given to the study of the DT and counterproductive work behaviors. However, the present study answered the call to examine how the DT relates to desirable workplace behaviors (Spain et al., 2014). Further, we responded to research requesting an analysis of contextual moderators that provides a more nuanced view of the relationship between the DT and organizational outcomes (O’Boyle et al., 2012). Results from our study contribute to the literature by providing organizations and managers an

actionable approach, in the form of a high involvement management climate, to help combat the often-detrimental workplace effects associated with the DT. Given that an estimated 10% of the population is classified as subclinical Machs, narcissists, and psychopaths (Gustafson & Ritzer, 1995; Pethman & Erlandsson, 2002), we believe our study has important implications for both research and practice alike.

Appendix

Scales from the study.

Dirty Dozen (Jonason & Webster, 2010)

Instructions: How much do you agree or disagree with the following items?

(1—strongly disagree, 5—strongly agree: M = Mach, P = psychopathy, N = narcissism)

1. I tend to manipulate others to get my way. (M)
2. I have used deceit or lied to get my way. (M)
3. I have used flattery to get my way. (M)
4. I tend to exploit others towards my own end. (M)
5. I tend to lack remorse. (P)
6. I tend to be unconcerned with the morality of my actions. (P)
7. I tend to be callous or insensitive. (P)
8. I tend to be cynical. (P)
9. I tend to want others to admire me. (N)
10. I tend to want others to pay attention to me. (N)
11. I tend to seek prestige or status. (N)
12. I tend to expect special favors from others. (N)

High involvement management (Smith et al., 2016)

Instructions: Think of your current immediate manager (or supervisor) when stating your agreement or disagreement with the next set of statements.

(1 = strongly disagree, 5 = strongly agree)

1. My manager encourages employees to set goals above their past performance accomplishments.
2. My manager encourages employees to regularly record their performance accomplishments.
3. My manager provides updates regarding the status of the ideas that they have represented to upper-management.
4. My manager encourages employees to present contradicting opinions during meetings.
5. My manager sets goals with work unit members during performance evaluations.
6. My manager encourages the free exchange of ideas and opinions within my work unit.
7. My manager teaches employees how to evaluate their own performance.

8. My manager promotes open discussion of all issues that are raised at work unit meetings.
9. When dealing with upper-management, my manager relates what he/she learned to my work unit.
10. When an employee questions organizational policy, my manager relays his/her concerns to upper management.
11. My manager provides upper = management feedback to employees as soon as he/she receives it.
12. My manager keeps track of individual employee's performance in order to facilitate personal goal-setting.
13. When assigning projects, my manager states upper-management's expectations.
14. When conflicts arise within my work unit, my manager acts as a mediator.
15. My manager encourages employee questions in work unit meetings.

Organizational citizenship behavior (Lee & Allen, 2002)

Instructions: Please rate [employee's name] in terms of their engagement in the following behaviors.

(1—never, 7—always)

1. This employee helps others who have been absent.
2. This employee is willing to give her/his time to help others who have work-related problems.
3. This employee adjusts her/his work schedule to accommodate other employee's requests for time off.
4. This employee goes out of her/his way to make newer employees feel welcome in the work group.
5. This employee shows genuine concern and courtesy toward coworkers, even under the most trying business or personal situations.
6. This employee gives up time to help others who have work or non-work problems.
7. This employee assists others with their duties.
8. This employee shares personal property with others to help their work.
9. This employee attends functions that are not required but that help the organization's image.
10. This employee keeps up with developments in the organization.
11. This employee defends the organization when other employees criticize it.
12. This employee shows pride when representing the organization in public.
13. This employee offers ideas to improve the functioning of the organization.
14. This employee expresses loyalty toward the organization.
15. This employee takes action to protect the organization from potential problems.
16. This employee demonstrates concern about the image of the organization.

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