

The Pennsylvania State University

The Graduate School

College of the Liberal Arts

**DOES THE BAD OUTWEIGH THE GOOD? AN EXAMINATION OF THE
EFFECTS OF TEAM MEMBER CITIZENSHIP BEHAVIOR AND
DEVIANCE ON TEAM PERFORMANCE**

A Thesis in

Psychology

by

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Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Doctor of Philosophy

May 2007

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ABSTRACT

Little research has considered team functioning, citizenship behavior, and deviance simultaneously or attempted to integrate these streams of research to better understand how to promote team effectiveness. Therefore, the purpose of the research was to examine organizational citizenship behavior and deviance in a nomological net of antecedents (personality) and outcomes (performance, satisfaction, and viability) at the team-level. Specifically, team member deviance and citizenship behavior were examined as both configural (aggregated via minimum, maximum, variance, mean) and shared (norms demonstrating within group agreement) properties in their relationship to team outcomes. By examining both constructs in the same study, the relative effects of citizenship and deviance could be explored. In addition, deviance was explored as a multidimensional construct at the team-level and found to have two dimensions: lack of effort and interpersonal deviance.

Results from a study of 56 student teams provided evidence that team member deviance and team member citizenship behavior are distinct constructs. Lack of effort (mean, maximum, variance) was negatively related to team grades, but only citizenship behaviors operationalized as the lowest scorer in the team was related to task performance. In contrast, citizenship behaviors (mean, maximum, minimum) demonstrated consistent positive relationships with both team satisfaction and viability, whereas team satisfaction was only found to relate to maximum lack of effort. Overall, team member deviance outweighed citizenship behavior as a predictor of task performance, but citizenship behavior outweighed deviance as a predictor of team satisfaction and viability. Citizenship norms were positively related and deviance norms were negatively related to team grade, team satisfaction and team viability. With the exception of a positive relationship between extraversion and minimum citizenship behavior, relationships between hypothesized Big Five personality traits and deviance, as well as citizenship behaviors, were not significant.

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ACKNOWLEDGEMENTS

This work would not have been possible without the support and assistance of many people. My advisor, Susan Mohammed, has been an integral part of this process, providing feedback, guidance and support throughout my graduate career. I would also like to thank my committee members, Jim Farr, Jan Cleveland, and Steve Sawyer for their thought provoking suggestions and guidance.

I am grateful for the moral support provided by my family and friends. My parents, Jerry and Carole, brothers, Jordan and Zachary, and my husband Dan have offered encouragement throughout my journey to this point and I am grateful for their unwavering belief in me. They offered support through the difficulties and celebrated the successes. I would not be where I am today without each of their contributions.

Thank you!

Chapter 1

INTRODUCTION

Organizations today face constant pressures to flatten the traditional hierarchy and maintain a structure that allows for continual adaptation to the changing business environment. One way in which firms have responded to these pressures is to increasingly make use of work teams (Kichuk & Wiesner, 1998). In fact, some have suggested that teams are replacing individuals as the basic building block of organizations (McShane, 1992). Because work is increasingly being assigned to teams instead of individuals, research that increases knowledge about how to promote team-level performance has increased in recent years (LePine, Hanson, Borman & Motowidlo, 2000). Given that members within a business unit should interact at varying levels of interdependence in order to achieve common objectives (Salas, Dickinson, Converse & Tannenbaum, 1992), overall business unit performance is likely to be strongly influenced not only by task performance, but also by non-task performance.

A recent review of the job performance literature indicates that there are three distinct components of work behaviors in the job performance sphere: task performance, organizational citizenship behavior (OCB), and workplace deviant behavior (WDB) (see Rotundo & Sackett, 2002 for a review). The importance of the two non-task behaviors (OCB and WDB) in determining overall job performance has been documented in the literature. For example, Motowidlo and Van Scotter (1994) found that OCB plays as important a role as task performance in determining an employee's overall job performance. Similar findings were reported recently by Rotundo and Sackett (2002) with respect to WDB. These studies suggest that the two types of work behaviors that do not directly contribute to the technical core of the job, figure prominently in determining overall job performance at the individual level. An

individual level focus for OCB and workplace deviance is reasonable in that decisions to exhibit any behavior, whether antisocial or prosocial, are made by individuals. However, additional insights might be acquired if these behaviors were examined within the social context of work groups (Robinson & O'Leary-Kelly, 1998).

The team literature has focused almost exclusively on task performance and has virtually ignored citizenship and deviance. Little research has considered team functioning, citizenship, and deviance simultaneously or attempted to integrate these streams of research in order to better understand how to promote team effectiveness (LePine, Hanson, Borman, and Motowidlo, 2000), or what implications OCB and WDB have to social surroundings in which core task activities should occur (e.g., Robinson & O'Leary-Kelly, 1998).

Consequently, the purpose of the proposed research is to examine more closely the inter-relationship between organizational citizenship behavior and workplace deviant behavior within a team context. One of the goals of the present research is to improve the conceptualization of team member deviance and team member citizenship in the team context. Existing research has examined them as shared group properties, but in this study they will be examined as both configural properties and shared properties. In addition, citizenship and deviance will be examined in a nomological net of antecedents (personality) and consequences (performance, satisfaction, viability). The proposed study will contribute to the literature by addressing several gaps in the study of citizenship behavior and deviance in a team setting. The team literature on citizenship behavior and deviance has only examined task performance; however, the present study includes affective outcomes variables (satisfaction and viability) as well. In addition, deviance at the team level has not explored dimensions other than Individual versus Organizational target. To address this gap, deviance is explored as a multidimensional construct

at the team level. A final contribution to the study of team member citizenship behavior and deviance is to examine the variables as both configural group properties and shared group properties. In addition, both team member deviance and team member citizenship behavior will be compared in the same study to examine whether they make individual contributions.

This study is organized as follows. First, the literatures on Organizational Citizenship Behavior and Workplace Deviance at the individual and team level of analysis are reviewed. Second, a model of the proposed relationships among the variables will be presented and the predictor and outcome variables are discussed. Third, after all of the key variables have been explored, hypotheses will be presented. Fourth, the methods for studying the proposed variables will be reviewed. Fifth the results will be presented and finally, the results will be discussed.

Organizational Citizenship Behavior

Terminology and Definitions

The concept of citizenship behavior has been examined under various titles in the literature, including: prosocial organizational behavior, organizational citizenship behavior, good soldier (soldier effectiveness) and contextual performance. Definitions for these different terms can be found in Table 1. One of the most commonly used definitions of organizational citizenship behavior is “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization” (Organ, 1988, p.4). Citizenship behavior involves behavioral patterns that support the psychological and social context in which task activities are performed. When employees help others complete a task, cooperate with their supervisors, or suggest ways to improve organizational processes, they are engaging in citizenship behavior. Citizenship behaviors are associated with interactions with coworkers, supervisors, or customers,

as well as behaviors that demonstrate self-discipline, persistence, and willingness to exert effort (Van Scotter, Motowidlo, & Cross, 2000). Most citizenship behavior is viewed as extra-role in that it cannot be explicitly required in advance for a given job (Werner, 1994). For contextual activities, the emphasis is not on the proficiency with which those tasks are carried out, but on the initiative taken to volunteer to carry them out or on extra effort shown in carrying them out with persistence or enthusiasm (Borman & Motowidlo, 1993).

Because work is increasingly being accomplished through interpersonal interaction, research on employees' contributions to the organization through activities that promote the smooth functioning of the social and psychological context has also increased in importance (LePine, Hanson, Borman & Motowidlo, 2000). As a result of this recent interest in the contextual side of performance, a considerable literature has accumulated in a relatively short period of time. From an organizational perspective, citizenship behavior has been more difficult to quantify because it technically is not considered part of the official job requirements. Individuals contribute to organizational effectiveness by doing things that are not main task functions but are important because they shape the organizational and social "context" that supports task activities (Borman & Motowidlo, 1993).

A central component of the explanation as to how citizenship behavior improves group and organizational effectiveness is that citizenship has a favorable effect on fellow employees' attitudes (Tepper, Duffy, Hoobler, & Ensley, 2004). While organizations' survival and health have always relied on employees who were willing to go beyond the minimum demands placed on them, this need is even more pronounced now, with the changing nature of work, and the increased quantitative and qualitative demands that have been placed on employees during the past decade (Barling, 1999). It has been noted that citizenship behaviors may increase

organizational performance because they (a) reduce the need to devote scarce resources to purely maintenance functions (b) free these resources up for more productive purposes (c) enhance coworker or managerial productivity (d) serve as an effective means of coordinating activities between team members and across work groups & (e) enhance the organization's ability to attract and retain the best people by making it a more attractive place to work (Podsakoff, Ahearne & MacKenzie, 1997).

Typologies of Citizenship Behavior

Smith, Organ, and Near (1983) proposed two dimensions of OCB: *altruism* and *generalized compliance*. In response to complaints that the Organ and colleagues (1983) scale was too vague, Organ (1988) proposed an expanded taxonomy of OCB. Dimensions included *altruism*, *conscientiousness*, *sportsmanship*, *courtesy*, and *civic virtue*. In 1991, Williams and Anderson used a two-dimension label to differentiate in-role and OCB behavior.

Drawing on theoretical and empirical work in organizational citizenship behavior (Organ, 1988), prosocial organizational behavior (Brief & Motowidlo, 1986), models of soldier effectiveness (Borman, Motowidlo, & Hanser, 1983; Campbell, 1990), and models of management effectiveness, Borman and Motowidlo (1993) identified five categories of contextual performance. These included: (a) volunteering to carry out task activities that are not formally part of the job; (b) persisting with extra enthusiasm when necessary to complete own task activities successfully; (c) helping and cooperating with others; (d) following organizational rules and procedures even when it is personally inconvenient; and (e) endorsing, supporting, and defending organizational objectives. Van Scotter & Motowidlo (1996) provided two new dimensions: *interpersonal facilitation* and *job dedication*. Coleman and Borman (2000) suggested three categories of behaviors that vary with respect to the beneficiary of the behavior:

interpersonal citizenship performance (OCB-I), organizational citizenship performance (OCB-O) and job-task citizenship performance.

Later, Podsakoff, MacKenzie, Paine & Bachrach (2000) summarized the existing literature on organizational citizenship behavior, and suggested that almost 30 potentially different forms of citizenship behavior have been identified. The authors identified 7 common themes or dimensions: (1) Helping behavior, (2) Sportsmanship, (3) Organizational loyalty, (4) Organizational Compliance, (5) Individual Initiative, (6) Civic Virtue, and (7) Self development.

LePine, Erez, and Johnson (2002) found that with the exception of sportsmanship, the behavioral dimensions (altruism, courtesy, civic virtue, and conscientiousness) were highly related to one another and that the relationships closely approached or exceeded the typical levels of reliability. LePine et al., (2002) also found that the relationship between certain predictors (satisfaction, commitment, fairness, leader support, and conscientiousness) did not depend on how OCB was behaviorally defined. Similarly, when using scales of OCB-I (OCB aimed at the individual) and OCB-O (OCB aimed at the organization), there were not differential relationships with predictors across dimensions of OCB. Predictive relationships with the broader OCB criteria were as good as, or superior to, those with the narrower dimensional criteria. Together, these results suggest that the five dimensions of OCB are equivalent indicators of OCB and that OCB may be a latent construct that should be redefined as a general tendency to be cooperative and helpful in organizational settings (LePine et al., 2002).

Measurement of Citizenship Behavior

Citizenship behavior has been measured in a variety of ways, and rarely using the same scale from study to study. However, a majority of the studies use a variation of the 16-item scale created by Smith, Organ and Near (1983) or a scale developed by Podsakoff, MacKenzie,

Moorman and Fetter (1990) (e.g., Moorman, 1993; Podsakoff and MacKenzie, 1993). Most of the research that examines citizenship behavior has used surveys to collect data (e.g., Smith et al., 1983; Bateman & Organ, 1983) and the measures have often been created for each specific study (e.g., Organ, 1988; Bettencourt, Gwinner, & Meuter, 2001). Data has been collected through participant self-report (e.g., Feather & Rauter, 2004; Bettencourt et al., 2001), supervisors ratings of subordinate citizenship behavior (e.g., Bateman & Organ, 1983; Smith et al., 1983; Moorman, 1993), or peer ratings of citizenship behavior (McNeely & Meglino, 1994). For the Smith et al. (1983) scale and variations of that scale, the two component factors of altruism and compliance were generally reported. More recent studies have investigated additional citizenship behavior factors as described in Organ (1988), including courtesy, sportsmanship and civic virtue.

Antecedents of Citizenship Behavior

Because citizenship behavior goes beyond formal role requirements, it is not easily enforced by the threat of sanctions. Much of what is called citizenship behavior is not easily governed by individual incentive schemes because such behavior is often subtle, difficult to measure, may contribute more to others' performance than one's own, and may even have the effect of sacrificing some portion of one's immediate individual output. Contextual performance consists of non-job-specific behaviors such as cooperating with coworkers and showing dedication, for which the primary antecedents are likely to be volition and personality. It seems unlikely that most of the variance in "good citizen" behavior is explained by the calculated anticipation that they will pay off in largesse for the person. A society functions for better or worse as a consequence of the frequency of many acts of citizenship that are either not required by law or are basically unenforceable by the usual incentives or sanctions. Therefore, it would be

worthwhile to inquire into the antecedents of such behavior in organizations (Smith, Organ & Near, 1983). The study of organizational citizenship behavior has led to the identification of a number of variables as potential antecedents, correlates, and outcome measures, including personality, commitment, affectivity, organizational justice, leader supportiveness, and job satisfaction.

Personality. Researchers (Borman & Motowidlo, 1993; Organ & Ryan, 1995) have argued that personality has a relatively strong influence on contextual performance. The personality construct that has received the most research attention in relation to citizenship behavior is conscientiousness. Organ and Ryan (1995) conducted a meta-analytic review of predictors of citizenship behavior and found that conscientiousness was positively correlated with altruism and generalized compliance. In a study that investigated the contribution of conscientiousness to organizational health, Miller, Griffin and Hart (1999) found that conscientiousness directly influenced citizenship behavior, but did not influence well-being or perceptions of the work environment. In an unpublished study done by Hense (2000), conscientiousness was found to correlate with citizenship behavior. Motowidlo and Van Scotter (1994) conducted a study with Air Force mechanics, testing the distinction between task performance and contextual performance and found that both task performance and contextual performance contributed independently to overall performance. Experience is more highly correlated with task performance than with contextual performance, and personality variables are more highly correlated with contextual performance than with task performance (Motowidlo & Van Scotter, 1994). Another study conducted by Van Scotter and Motowidlo (1996) found that extroversion and agreeableness were related to organizational citizenship behavior. Finally, McManus and Kelly (1999) found a correlation between citizenship behavior and four of the five

Big Five Personality measures (Emotional Stability, Agreeableness, Openness to Experience and Extraversion).

Affectivity. George (1992) suggested that employee affective state may influence the extent to which workers exhibit citizenship behavior. Several theoretical explanations have been suggested to account for why positive mood should foster citizenship behavior. An employee in a good mood may be more likely to perceive situations and other workers in a more positive light (George, 1991). In addition, positive affective states may lead to increased social awareness such that employees would be more willing to display prosocial behaviors (Isen & Baron, 1991). Williams and Shiaw (1999) found that the amount of positive affect currently experienced by an employee significantly influences the employee's intention of executing specific acts of citizenship behavior. They found that positive affectivity was significantly related to citizenship behavior. Employees who reported being in a good mood were more likely to express intentions of performing citizenship behaviors than employees in a more negative mood.

Organizational Justice. A study conducted by Moorman (1991) looked at the relationship between organizational justice and organizational citizenship behavior, and suggested that organizational justice is an antecedent of citizenship behavior. Specifically, interactional justice was found to significantly relate to four of the five dimensions of organizational citizenship behavior (altruism, courtesy, sportsmanship, and conscientiousness). Moorman (1991) proposed that equity theory may explain her results, and suggested that performing organizational citizenship behaviors may be a function of the degree to which an employee believes that he or she has been treated fairly by the organization. In a meta-analysis, Cohen-Charash and Spector (2001) found that levels of OCB were similarly predicted by measures of distributive and procedural justice. However, while they found significant relationships between procedural

justice and OCB-O, no significant relationships were found between procedural justice and OCB-I.

Correlates

Organizational Commitment. A number of studies have shown that employees with high levels of organizational commitment are most likely to exhibit citizenship behavior. For example, O'Reilly and Chatman (1986) examined the relationship between organizational commitment and citizenship behavior, and found that commitment based on internalization of values was significantly related to extra role behavior. They also found that commitment based on identification with the organization was significantly related to extra-role behavior. O'Reilly and Chatman also found that organizational commitment was positively correlated with OCB Altruism, Service Oriented OCBs, Service Delivery, and Participation, and across all measures of OCB, employees who were more committed to the organization performed more OCBs. A study done by Meyer, Stanley, Herscovitch, and Topolnytsky (2002) found that affective commitment and normative commitment were correlated positively with OCB.

Leader Supportiveness. Leadership behaviors have generally been found to be significantly related to citizenship behavior. For example, Podsakoff, et al. (2000) suggested that supportive behavior on the part of the leader was found to be strongly related to organizational citizenship behavior. Leader consideration was also found to be related to altruism and generalized compliance in Organ and Ryan's (1995) meta-analysis.

Job Satisfaction. Job satisfaction has typically been categorized as an antecedent of citizenship behavior. However, more recently it has been questioned whether job satisfaction is an antecedent or a consequence of performance (Judge, Thoresen, Bono, and Patton, 2001), and consequently it is listed here as a correlate.

Job satisfaction has been found to be the variable that is most consistently related to citizenship behavior (Organ, 1988, 1990). Organ and Konovsky (1989) have provided empirical evidence supporting a particular explanation of the satisfaction-citizenship relationship. According to this view, expressions of satisfaction reflect cognitive appraisals of the fairness or equity of the social exchange that the employee enjoys with the organization. It has been suggested that satisfaction has more bearing on the discretionary contributions of individuals than on task-based performance (Organ & Lingl, 1995). Bateman and Organ (1983) provided some rationale for expecting satisfaction to influence citizenship behavior. Based on social exchange theory, employees would be expected to reciprocate organizational officials who positively affect the employees' job satisfaction. Social psychological research indicates that people tend to engage in prosocial behavior when experiencing positive mood state. This positive affective state should be reflected in job satisfaction measures, as affect is considered to be one of the attitudinal components of satisfaction. Smith, Organ and Near (1983) tentatively proposed that job satisfaction, to the extent that it represents a characteristic or enduring positive mood state, would account for some portion of citizenship behavior.

The meta-analysis by Organ and Ryan (1995) also supports the conclusion that job attitudes are robust predictors of organizational citizenship behavior. In terms of OCBs, Organ and Ryan's meta-analysis suggested a moderate correlation between satisfaction and both altruism and compliance. Bettencourt, Gwinner, and Meuter (2001) found that both job satisfaction and perceived organizational support were predictors of loyalty OCBs in service-oriented industries.

Consequences

Although the majority of the early research efforts focused on the antecedents of citizenship behavior, more recent research has devoted some attention to the consequences of citizenship behavior. Recent research has emphasized two key issues: (a) the effects of citizenship behavior on managerial evaluations of performance and judgments regarding pay rates and promotions, and (b) the effects of citizenship behavior on organizational performance and success. Several reasons have been suggested for why managers value citizenship behaviors and take them into account when evaluating employee performance. Some empirical research has supported the idea that OCBs are important to overall performance evaluation in organizations. Avila, Fern and Mann (1988) found citizenship behavior contributed unique variance in overall evaluation for computer salespeople. MacKenzie, Podsakoff and Fetter (1993) and Motowidlo and Van Scotter (1994) found that citizenship behavior made a unique contribution to overall evaluation. A study by Allen and Rush (1998) found that citizenship behavior was significantly related to a manager's overall evaluation, as well as reward recommendations made by the manager.

In a recent study, Van Scotter, Motowidlo and Cross (2000) examined rewards as an outcome variable associated with contextual performance. They tested the relationships between contextual performance, informal rewards, service medals, promotion recommendations, and actual promotions received over a 2-year period. Contextual performance explained incremental variance in promotability ratings and informal rewards beyond what was explained by the task performance factor and by job experience.

Organizational Citizenship Behavior in Teams

Although citizenship behavior has been frequently examined in the literature, the majority of the existing research has been conducted at the individual level of analysis. OCB research at the group level of analysis is beginning to accumulate, but tends to lack a theoretical foundation (Ehrhart & Naumann, 2004). In the present study, team organizational citizenship behavior is defined as discretionary behavior, engaged in by individuals within a team that is not directly or explicitly recognized by the formal reward system, and promotes the efficient and effective functioning of the organization (Organ, 1988). Much like an organization, the effectiveness of a team depends not only on the prescribed behavior of its members, but also on extra-role behaviors (Tjosvold, Hui, Ding & Hu, 2003). There has been relatively little attention focused on how the construct of team-level citizenship behavior differs from individual level citizenship behavior. The studies discussed below begin to offer some preliminary understanding of team level citizenship behaviors.

Measurement of Team Citizenship Behavior. One of the major issues in studying citizenship behavior at the team level is how to conceptualize at the individual level versus at the team level. LePine et al. (2000) explain how to conceptualize the transfer from individual level citizenship behavior to team level citizenship behavior. They made a distinction between task-focused and socially-focused team processes, naming these processes, task work and teamwork. Teamwork is the equivalent to team-level citizenship behavior. By framing teamwork as an analog to contextual performance, they suggest it is reasonable to define teamwork as team-level activity that supports the social, organizational and psychological environment in which the system's technical work is accomplished. They also suggest that the research on contextual performance provides a basis for specifying a set of fairly broad teamwork dimensions that integrate those processes. LePine et al. (2000) suggest that three dimensions

make up teamwork: Interpersonal Teamwork, Organizational Teamwork, and Task Teamwork, which are based on the three dimensions suggested by Coleman and Borman (1999) (Interpersonal Citizenship Performance, Organizational Citizenship Performance and Job/Task Citizenship Performance). Interpersonal Teamwork is activity among team members reflecting mutual assistance, support, cooperation, and mutual facilitation. Organizational Teamwork is activities that demonstrate commitment to the team and organization through allegiance and loyalty to the team and its objectives, and compliance with team norms, rules, policies, and procedures. Task Teamwork are activities that go beyond requirements, demonstrating dedication and extra effort in the course of task performance and the desire to maximize the team's performance. These three dimensions show how to conceptualize citizenship behavior at the team level, based on what is known about citizenship behavior at the individual level.

After the conceptual issue of citizenship behavior has been dealt with, the next issue is how to statistically measure team level citizenship behavior. As with individual-level citizenship behavior studies, there is no standardized measurement approach, but many team-level studies are generally based on the conceptual work of Organ (1988, 1990) or previous scales developed by Podsakoff et al. (1990) (e.g., Podsakoff et al., 1997; Tjosvold et al., 2003). Team level studies have used mainly supervisor ratings to measure team citizenship behavior (e.g., Bommer, Miles, & Grover, 2003; Pearce & Herbik, 2004; Motowidlo & Van Scotter, 1994), but a few studies have also used self report (e.g., Podsakoff et al., 1997; George and Bettenhausen, 1990) or peer report (e.g., Mohammed, Mathieu, & Bartlett, 2002) measures. Studies vary between the use of a team referent (Podsakoff et al., 1997) and an individual referent (Mohammed et al., 2002). One study that did not use the typical scale approach was done by Rotundo and Sackett (2002).

Participants completed a survey that contained 34 hypothetical profiles and were asked to rate the overall job performance of the employee depicted within the profile.

Another statistical issue in the study of citizenship behavior at the team level is how to aggregate data collected from individuals to the team level. The most frequently used method of aggregation is the group mean. Research using group mean is generally based on the assumption that the aggregated characteristic operates the same way at the team-level as it does at the individual level. When using individual level scales to evaluate team-level variables, it is important to know how individual level information is aggregated to the team level and how this aggregation is justified. Podsakoff et al. (1997) aggregated the crew members' assessments of their crews' helping behavior, civic virtue, and sportsmanship by averaging the citizenship behaviors across crew members at the work group level. They then used an analysis of variance test to indicate whether there was significantly greater variance between the work crews than within them. In order to justify aggregation to the team level, Pearce and Herbig (2004) examined the r_{wg} score and eta-square statistics to ascertain the amount of variation that was present between teams relative to the variation within teams.

Antecedents of Team Citizenship Behavior. Just as with individual-level citizenship research, the majority of the team level citizenship behavior studies have concentrated on antecedents. The variables studied include leadership (e.g., George & Bettenhausen, 1992; Pearce & Herbig, 2004), commitment (Pearce & Herbig, 2004), and personality (Mohammed et al., 2002).

George and Bettenhausen (1992) found that group cohesiveness and the emphasis placed on prosocial behavior during initial socialization were positively related to the group's performance of prosocial behavior. This suggests that in situations in which it is desirable that

groups display relatively high levels of prosocial behavior, initial training and socialization into the group should emphasize these behaviors, and relatively high levels of group cohesiveness should be maintained.

Leadership variables have been the focus in several studies and have been found to be antecedents of team citizenship behavior. For example, George and Bettenhausen (1992) found that the leader's positive mood was significantly and positively related to a group's performance of prosocial behavior. Pearce and Herbig (2004) found that leader encouragement of teamwork had a positive effect on team citizenship behavior.

Pearce and Herbig (2004) studied additional antecedent variables and found that team member commitment and perceptions that the team is well supported by management had a positive effect on team citizenship behavior. Mohammed, et al. (2002) found that team-related composition variables (team experience, neuroticism) played an important role in the prediction of contextual performance, but agreeableness was the primary driver.

Consequences of Team Citizenship Behavior. There are few studies of the consequences of team level citizenship in the literature. Two exceptions are Podsakoff, Ahearne and MacKenzie (1997) and George and Bettenhausen (1992). Podsakoff et al. (1997) studied teams in a paper mill and found that sportsmanship and helping behavior in a team had significant positive relationships with the quantity of output. Their data also indicated that helping behavior was negatively related to the percentage of paper produced that was rejected. The implication was that machine crews that helped each other by giving time to crew members who have work-related problems, sharing their expertise with each other, taking steps to try to prevent problems with each other, and touching base with each other before taking actions that might affect other crew members are more productive than work crews that do not exhibit such helping behavior.

Similarly, George and Bettenhausen (1992) found that group performance of prosocial behavior in a service context was significantly and positively related to group sales performance.

Workplace Deviance

Almost daily, there are media reports of workplace deviance, such as corruption among police officers, violence in the post office, or illegal activity on Wall Street (Robinson & Bennett, 1995). Organizations and their members are often faced with acts that are clearly damaging to their goals. These counterproductive acts can take many forms: theft, fraud, absenteeism, physical and verbal aggression, or substance use, to name only a few. Counterproductive behaviors vary in severity, and can involve both acts of commission (e.g., stealing from the organization, gossiping about its leaders, or acts of psychological or physical aggression) and omission (e.g., deliberately not passing on telephone messages) (Kelloway, Loughlin, Barling and Nault, 2002). Although workplace deviance is prevalent in organizations, relatively little empirical research has directly addressed the darker side of employee behavior until the mid to late 90's (Vardi & Wiener, 1996). In recent years there has been an increase of interest in counterproductive work behaviors (CWB) among organizational researchers such as aggression, interpersonal conflict, sabotage, and theft (Fox, Spector & Miles, 2001). Robinson and Bennett (1995) suggest that the prevalence of workplace deviance and its associated organizational costs necessitates a specific, systematic, theoretically focused program of study into this behavior.

Workplace deviance is a pervasive and expensive problem for organizations (Bennett & Robinson, 2000). The annual cost of workplace deviance is estimated to be as high as \$4.2 billion for workplace violence alone (Bensimon, 1994), \$40 to \$120 billion for theft (Buss, 1993; Camara & Schneider, 1994), and \$6 to \$200 billion for a wide range of delinquent organizational

behavior (Murphy, 1993). The direct impact of counterproductive behaviors other than violence or theft is more difficult to measure, but estimates include \$28 billion annually lost as a result of on-the-job substance abuse (Jones & Wuebker, 1985) and 50 hours per employee per year lost from unauthorized extensions of work breaks (Jones, 1983). Liao, Joshi and Chuang (2004) suggest that the prevalence and costs of employee deviance warrant research effort to understand why, when, and how employees engage in deviance.

Terminology and Definitions of Deviance

The bulk of research on counterproductive behaviors has treated each form as a different phenomenon, which leads to a division in the literature, making it difficult to consolidate the work done on these different types of negative behavior. At the most general level, all acts of counterproductive behavior share the common feature of violating the legitimate interests of an organization (Sackett & DeVore, 2002) by being potentially harmful to its members or to the organization as a whole. Table 2 reviews distinct terms that have been used to refer to the same general negative behavioral domain, summarized by Robinson and Greenberg (1998). The common theme is that these behaviors are harmful to the organization by directly affecting its functioning or property, or by harming employees in a way that will reduce their effectiveness. Robinson & Bennett (1995) define employee deviance as “voluntary behavior that violates significant organizational norms, and in so doing, threatens the well-being of an organization, its members or both” (pp. 556). Employee deviance is voluntary in that employees either lack the motivation to conform to normative expectations of the social context or become motivated to violate those expectations (Kaplan, 1975). Because Robinson and Bennett’s (1995) definition of deviance encompasses other terms in the literature and is the most often cited, this broad term will be used throughout the paper to refer to any negative workplace behavior.

Typologies of Deviance

Over time, deviance in the workplace has been categorized in multiple ways. Wheeler (1976), examining how arbitrators should punish rule-breaking behavior, classified forms of organizational rule-breaking into serious offenses and non-serious offenses. Hollinger and Clark (1982) categorized employee deviance into property deviance (acquiring or damaging property belonging to one's employer), and production deviance (violating organizational norms regarding the quantity and quality of work performed). Mangione and Quinn (1974) suggested two similar categories of deviance: counterproductive behavior (purposely damaging employers' property) and doing little (producing output of poor quality or low quantity).

Robinson and Bennett (1995) have created the most comprehensive framework for workplace deviance behaviors by integrating numerous deviant workplace behaviors into a parsimonious 2 X 2 typology. In this typology, workplace deviance varies along two dimensions (seriousness of the deviance and target of the behavior) and can be classified into four types (property deviance, production deviance, political deviance and personal aggression). Property deviance is defined as instances where employees acquire or damage the tangible property or assets of the work organization without authorization. Production deviance is behaviors that violate the formally proscribed norms delineating the minimal quality and quantity of work to be accomplished. Political deviance is engagement in social interaction that puts others at a personal or political disadvantage. Personal aggression is behaving in an aggressive or hostile manner toward other individuals.

Theoretical Basis for Deviance

Studies have used a handful of theories on which to base their propositions, but there is no overarching theory to explain deviant behavior. For example, bonding theory (e.g. Bennett &

Robinson, 2000), social control models of deviance (Bennett & Robinson, 2000) and social exchange theory (Colbert et al., 2004) have been used to suggest an attachment to a group affects whether people engage in deviance. Justice theories such as equity theory suggest that people engage in deviance based on reactions to treatment they have received (e.g. Folger & Skarlicki, 1997). A final group of theories that are used to explain deviance behavior are social theories such as social processing and social learning theories which suggest that individuals take cues from their surroundings (group members) to learn how to behave correctly (e.g., Robinson & O'Leary-Kelly, 1998). These theories are used to suggest a plethora of different factors as antecedents, correlates and outcomes of deviance.

Measurement of Deviance

Most of the research that examines workplace deviance have used surveys to collect data (e.g., Lee & Allen, 2002; Lee, Ashton & Shin, 2005; Fox & Spector, 1999; Hollinger & Clark, 1983) and the measures have often been created for a specific study and are frequently not replicated in later studies (Hollinger & Clark, 1983; Mikulay, Neuman & Finkelstein, 2001). Participants are generally asked to self-report their involvement in a number of property theft activities within the employment setting (Hollinger & Clark, 1983) or use forms or checklists to identify deviant behavior (Kelloway, Loughlin, Barling, & Nault, 2002).

The only validated scale that has been used in the literature was developed by Bennett and Robinson (2000), based on their earlier 1995 typology. The 19 item scale of workplace deviance consists of two factors: interpersonal deviance and organizational deviance. These two factors are consistent with prior conceptual approaches that have suggested two distinct forms of workplace deviance, one directed at the organization itself and one directed at its members. This

scale has been used in several empirical studies, regardless of the label used to study deviance (e.g., Lee & Allen, 2002; Lee, Ashton & Shin, 2005).

There are a few studies that have deviated from the common method of using surveys or self reports to collect deviance data. Mikulay, Neuman and Finkelstein (2001) presented participants with vignettes designed to measure their perceptions of the situation, their likelihood of committing 1 of 4 counterproductive behaviors (absence, tardiness, theft and vandalism), and their integrity. Skarlicki and Folger (1997) had peers rate their coworkers' deviance by means of a behavioral observation scale developed for their study.

Antecedents

Fox and Spector (1999) proposed a categorization scheme for looking at antecedents of deviance broadly classified as dispositional, affective and situational. This categorization can be applied to correlates as well as outcomes of deviance. Research suggests a wide range of reasons why employees engage in deviant behavior including reactions to perceived injustice (Skarlicki & Folger, 1997), personality (Lee, Ashton & Shin, 2005), and organizational policies (Hollinger & Clark, 1983). Broadly, Robinson & Bennett (1997) proposed that deviant behavior is often the result of "a perceived specific event(s) that triggers or provokes the employee to take a specific action." These events include employee perceptions of financial pressures, social pressures, unfair treatment, poor work conditions, organizational changes, or other stressors that lead employees to feel a sense of disparity, a sense of outrage, or both. The possible antecedents of workplace deviance are explored below.

Affective Antecedents. The most researched affective antecedent is perceptions of justice or fairness in the organization, which deals with how feelings of injustice can lead to employees' reacting in deviant ways. The earlier studies of justice were initiated by Greenberg. For example,

Greenberg (1990) found that when explanations were given for decreases in pay, perceived “adequate” explanations decrease considerably moderated restitution behavior (deviance), compared to explanations which were perceived as inadequate. Greenberg (1993) established that participants perceiving inequity were much less likely to steal if they received more information about the reason for an inequity, and received it in a manner which was high in sensitivity and compassion for the employee. Greenberg (1994) suggested that it was possible to separate restitution and retaliation and explore the effects of each. The greatest restitution behavior (defined as the amount of money taken from the employer) occurred when subjects had been under-compensated for a task, were given inadequate information about why they had been under compensated, and when this information was presented to them with low sensitivity (low concern for the dignity and respect of the employee). In contrast, the greatest retaliatory behavior (stealing a commodity which would have no benefit to the employee but could harm the employer) occurred only when the subjects were not treated with dignity and respect in the way that information was presented back to them.

Baron, Neuman, and Geddes (1999) conducted a study where subjects were asked to rate the frequency with which they had been the victims of a wide range of aggressive actions at work, and also to rate the frequency with which they themselves had aggressed against others in their workplaces. They found that the greater the perceived injustice reported by employees, the greater their tendency to engage in workplace aggression.

Hollinger, Slora and Terris (1992) explored the relationship between perceived unfairness and the willingness to commit property deviance, altruistic property deviance and production deviance in fast food restaurants. They found that perceived unfairness was the primary motivator for production deviance. If employees felt unfairly treated, they were significantly

more likely to engage in actions such as coming to work late, leaving work early, being absent without an excuse, faking illness, doing slow or sloppy work on purpose, or using alcohol or drugs in ways that impaired effective job performance.

The previously described research focused on feelings of inequity, but other research has addressed specific types of justice such as distributive justice, procedural justice and interactional justice. Skarlicki and Folger (1997) investigated the relationship between organizational justice and organizational retaliation behavior (ORB), defined as adverse reactions to perceived unfairness by disgruntled employees toward their employer. They found that ORB was predicted by the three-way interaction among distributive, procedural, and interactional justice, and suggested that feelings of justice by an employee can predict whether organizational retaliatory behaviors will occur.

Aquino, Lewis and Bradfield (1999) provided some evidence supporting differential relationships, showing that although interactional justice was negatively related to both organizational and interpersonal deviance, distributive justice was negatively related only to interpersonal deviance. They argued that distributive justice was more strongly related to interpersonal deviance than organizational deviance because people are more likely to blame individuals than systems when making attributions for unfair outcomes.

Situational Antecedents. In addition to justice and equity perceptions, other research has focused on situational antecedents of deviance such as social control devices, and the likelihood of punishment. For example, Hollinger and Clark (1983) examined the conditions under which employees commit theft, and the deterrent capacity of certainty and severity of sanction on employee theft. They found that the strongest predictor of theft involvement was the employee's perception of the certainty of being detected and the severity of punishment for theft activity.

Greenberg (2002) also addressed the importance of situational antecedents for explaining unethical behavior. To test the significance of the situation, Greenberg created a study in which customer service representatives were underpaid for completing an hour-long questionnaire after working hours. Participants were told that the payment came either from the company itself or from a group of individual managers. Participants were then given an opportunity to steal by being allowed to take their payment from a bowl of pennies under conditions in which they believed that the actual amount they took could not be detected. It was found that participants who believed that the money came from individual managers refrained from stealing under any conditions. This suggests that employees who have been underpaid steal when they have an opportunity to take company funds without being caught, when no formal admonitions against employee theft exist, and when they have failed to attain a level of moral development that would discourage them from stealing. Greenberg suggested that employers can inhibit theft by openly communicating with employees the costs of stealing.

Dispositional Antecedents. Personality has been the main dispositional antecedent of deviance researched. Baron, Neuman, and Geddes (1999) looked at individuals who have a Type A personality. They found that the higher the individual scores on a measure of the Type A behavior pattern, the greater their reported frequency of engaging in various forms of workplace aggression. Giacalone and Knouse (1990) found that personality factors can affect the justification of wrongful employee acts. Subjects with high hostility scores were more apt to justify methods of sabotage involving profits and production, and information manipulation and control.

Lee, Ashton and Shin (2005) investigated the relationship between workplace deviance and higher-order personality traits. Deviance was conceptualized as having two dimensions:

deviance directed against individuals and deviance directed against the organization. Personality was assessed using adjective measures of the Big Five factors (neuroticism, openness to experience, conscientiousness, extraversion, agreeableness) and of a sixth factor, Honesty-Humility (Ashton & Lee, 2001). Honesty-Humility and Extraversion played prominent roles in predicting both deviance against individuals and deviance against the organization. In addition, Agreeableness was related to deviance against individuals, whereas Conscientiousness was related to deviance against the organization. The results of this study suggest that personality is an important predictor of deviance, but certain personality characteristics are better predictors of different facets of deviance than others.

Fox and Spector (1999) chose to investigate all three antecedent categories (situational, dispositional, and affective) of deviant behavior in their study. A positive relationship was found between employees' experience of situational constraints and personal and organizational aggression, mediated by affective reactions to frustration. Trait anger, trait anxiety, Work Locus of Control, and estimation of the likelihood of punishment were strongly associated with affective and behavioral responses. Fox and Spector (1999) also found that locus of control, trait anxiety, and trait anger correlated significantly with self-reports of deviance.

Correlates of Deviance

In the studies described below, there are clear relationships between deviance and other variables, but causality is not clear. The same classification of affective, situational and dispositional factors will be used as was used with antecedents.

Affective Correlates. In order to look at affective correlates of deviance, Fox, Spector and Miles (2001) examined the relationships among job stressors, perceived justice, negative emotional reactions to work, deviance, autonomy, and affective traits. They found that conflict,

organizational constraints, distributive justice, procedural justice and negative emotions were all related to organizational deviance. They found similar results for interpersonal deviance, except that there was no relationship with distributive justice.

Situational and Dispositional Correlates. Mikulay, Neuman and Finkelstein (2001) examined the relationship between personal integrity (dispositional variable), situational factors and counterproductive workplace behaviors. They found that the integrity of participants had a consistent impact on the likelihood of deviant behaviors. In addition, they found that employees in settings where deviance is more desirable are more likely to be absent, tardy, and to engage in vandalism than employees in settings where deviance is undesirable. In addition, Mikulay et al. (2001) found that a work setting that presented decreased risk detection produced an increased likelihood of absenteeism, tardiness, and theft.

Colbert, Mount, Harter, Witt and Barrick (2004) also focused on both dispositional and situational variables. However, these researchers concentrated on personality and perceptions of the work situation. They found that perceptions of the developmental environment were negatively related to withholding effort, and perceived organizational support was negatively related to interpersonal deviance. They also found that conscientiousness, emotional stability and agreeableness moderated the relationship between perceptions of the work environment and workplace deviance. These results are consistent with predictions made by social exchange theorists, who have viewed employment as the exchange of effort and loyalty for tangible benefits and social rewards. This research suggests that when personality traits are highly relevant to criteria being investigated, they can constrain or moderate the relationship between perceptions of the work situation and the criteria.

Outcomes of Deviance

In deviance research, emphasis has been given to the antecedents and correlates of deviance. However, work done by LeBlanc and Kelloway (2002) and Rogers and Kelloway (1997) focused instead on outcomes of deviance. Rogers and Kelloway (1997) found that workplace violence predicted commitment, turnover intentions, mental health and physical symptoms (sleep disturbances, headaches, and digestive problems).

LeBlanc and Kelloway (2002), using an instrument designed to measure risk for workplace violence on the basis of job characteristics, found that coworker-initiated aggression, public-initiated aggression, and violence were differentially associated with outcomes. Coworker-initiated aggression negatively affected the outcome variables of emotional well-being, psychosomatic well-being, and affective commitment. Public-initiated violence and public-initiated aggression predicted perceptions of likelihood of future violence, but coworker-initiated aggression did not predict perceptions of likelihood of future violence.

Deviance in Teams

To date, deviance has predominately been examined as an individual-level phenomenon. This focus is reasonable in that decisions to exhibit any behavior, whether antisocial or prosocial, are made by individuals. However, Robinson and O'Leary-Kelly (1998) suggested that additional insights might be acquired if these behaviors were examined within the social context of work groups. In the context of an increasingly diverse workforce, organizations are faced with the task of creating a work environment where employees with diverse traits and perspectives can perform effectively and contribute to organizational goals. Few researchers have examined the extent to which an employee's work unit can influence his or her deviant behavior, with the exception of Robinson and O'Leary-Kelly (1998) and Glomb and Liao (2003). Both of these

studies found a pattern of negative behaviors in work groups, which emphasize the importance of examining the influence of work group characteristics on employee deviance. Deviance in the present study is different than individual deviance because the deviance is engaged in by team members, directed towards team members, and has consequences for the team. As defined in this study, team member deviance is voluntary behavior involving deliberate actions that violate significant team norms, policies, rules and procedures and, in so doing, threatens the well-being of the team as a whole, its members or both.

Methods/Measurement. All of the team level studies of deviance reported below have used self-report methods to collect information. For example, Liao, Joshi, and Chuang (2004) and Dunlop and Lee (2004) used Bennett and Robinson's (2000) scale of individual level workplace deviance to measure deviance in their team level studies. Robinson and O'Leary-Kelly (1998) used a combination of Robinson and Bennett's (1995) typology and behaviors described by Skarlicki and Folger (1997).

When using individual level scales to evaluate team-level variables, researchers need to be able to justify their aggregation from the individual level to the team-level. Robinson and O'Leary-Kelly (1998) assessed the appropriateness of aggregating to the group level using two different procedures: between-group analysis of variance (ANOVA) and r_{wg} , a meaningful indicator of within-group agreement. Dunlop and Lee (2004) aggregated individual member responses using a 'Direct-Consensus' composition model, which involves taking the means of the individual scores for each business unit. A test of the statistical justification of this aggregation was conducted by performing one-way ANOVAs on the four independent measures (two workplace deviance variables and two organizational citizenship variables). Pearce and Giacalone (2003) justified aggregation of the data to the team level of analysis through assessing

within-group agreement on multi-item scales using the r_{wg} coefficient. They also examined the eta-squared to assess the amount of variation that is present between teams, relative to the variation within teams.

Empirical Results. As noted, the few studies that have looked at deviance aggregated to the team level differ in the variables that they studied, including deviance predictors as well as deviance outcome variables. Robinson and O’Leary-Kelly (1998) and Liao, Joshi and Chuang (2004) studied predictors of deviance at the team level. Robinson and O’Leary-Kelly (1998) examined how individuals’ antisocial behaviors at work are shaped by the antisocial behavior of their coworkers. It was found that even with many other explanatory variables controlled (close supervision, likelihood of punishment, job satisfaction, and perceived control), the antisocial behavior displayed by a work group was a significant predictor of an individual’s antisocial behavior at work. The influence of a group’s antisocial behavior on an individual’s antisocial behavior strengthened as the individual’s time in the group increased. They also found that when group members had to rely upon each other for task accomplishment (task interdependence high), individual behavior was more strongly related to the level of antisocial behavior exhibited by the group. These findings offer preliminary support for the idea that a group-level focus is appropriate and important for understanding behavior in work settings (Robinson & O’Leary-Kelly, 1998). Liao, et al. (2004) examined demographic- based and personality-based employee dissimilarities as predictors of organizational and interpersonal deviant behaviors. Results showed that organizational deviance was predicted by dissimilarity in ethnicity, agreeableness, openness to experience, neuroticism, perceived organizational support and coworker satisfaction. Interpersonal deviance was predicted by dissimilarity in conscientiousness, extraversion, organizational commitment and coworker satisfaction.

Pearce and Giacalone (2003) focused on correlates of team anti-citizenship behavior, including team leader solecism (a component of team leader behavior that focuses on errors and mistakes), team commitment and team size. They found that leader solecism was positively related to all four sub-measures of deviance (defiance, complaining, avoiding the job, and avoiding work) and team commitment was negatively related to all but complaining behavior. Perceived organizational support was negatively related to avoiding the job and avoiding work.

Dunlop & Lee (2004) chose to focus on the effects of team OCB and team WDB on business unit effectiveness. This is the only team level WDB study to focus on the consequences of team deviance. Results showed that the unit level of WDB strongly correlated with supervisor ratings of business unit staff performance. Unit-level WDB was also positively associated with drive-through service times and the unexplained food figures. The results showed that OCB failed to contribute to the prediction of business unit performance beyond that contributed by WDB. In fact, the presence of deviant employees among business units appears to have a negative effect upon the performance of the business unit as a whole, whereas OCBs had comparatively little effect. An important implication of this study is that there may be more than 'monetary' costs of deviance behavior. These results suggest that there may be a considerable amount of 'hidden costs' because of a loss of efficiency in team performance when deviance is present (Dunlop & Lee, 2004).

Model

The purpose of the current research was to examine more closely the inter-relationship of organizational citizenship behavior and workplace deviant behavior within a team context. The goal was to determine the effects that both team OCB and team deviance have on the performance, satisfaction, and viability of the team. The variables of interest are displayed in Figure 1. Personality was proposed as an antecedent of team level OCB and team level deviance. OCB and deviance were predicted antecedents of team outcomes, with the relationship moderated by task interdependence.

Levels of Analysis Issues

The team level studies described in the previous sections tend to measure at the individual level and then aggregate to the team level, often using the average of the teams' responses (e.g., Podsakoff, et al., 1997; Pearce & Giacalone, 2003). Although team properties can be global, shared, or configural (Klein & Kozlowski, 2000), this is rarely discussed in team citizenship and team deviance studies (e.g., Dunlop & Lee, 2004; Podsakoff, Ahearne & MacKenzie, 1997). Therefore, a discussion of team-level analysis is relevant here.

Global team properties are relatively objective, descriptive, and easily observable team characteristics, which characterize the team as a whole (e.g., group size and unit function). Because they do not emerge from the characteristics of individual team members, there is no need to collect data from all of the members of a team to assess a global team property (Klein & Kozlowski, 2000). Since deviance and citizenship derive from the characteristics of individual team members, they would not be considered global team properties.

In contrast to global team properties, many occurrences in organizations have their foundation in the cognition, affect, behavior, and characteristics of individuals (Kozlowski &

Klein, 2000). Through social interaction and exchange, many higher level constructs represent the aggregate influence of individuals. Shared properties of a team emerge from individual members' shared perceptions, attitudes, experiences, responses, values, cognitions, or behaviors (Kozlowski & Klein, 2000). Bottom-up processes describe the manner in which lower-level properties emerge to form group constructs. Composition is a type of emergence that describes phenomena that are essentially the same as they emerge upward across levels (e.g., organizational climate, collective efficacy, group norms) (Kozlowski & Klein, 2000).

Composition can also be termed Convergent Emergence, which is based on the assumption that individuals contribute the same type and amount of essential content (Kozlowski & Klein, 2000). Therefore, the phenomenon comes together around a common point that can be represented as a mean or a sum. For example, the performance of a crew rowing a scull is dependent on each individual providing the same amount and type of physical thrust at precisely the same time (Kozlowski & Klein, 2000). The most common operationalization of team composition is to calculate a mean score for the individual measures (e.g., Heskin, 1964; LePine et al., 2000; Williams & Sternberg, 1988). This approach assumes that the amount of a characteristic possessed by each individual member increases the collective pool of that characteristic. That is, more of a trait is always better or worse, regardless of how that characteristic is distributed among team members. Research using group mean is generally based on the assumption that the aggregated characteristic operates the same way at the team-level as it does at the individual-level.

Steiner (1972) developed a taxonomy to help determine how task type might influence decisions about the appropriate method for operationalizing team composition. Two task types would apply to shared properties: additive and compensatory models. Additive models require

the summing of resources for performance (e.g., moving a heavy object) and compensatory models require that individual inputs be averaged together to arrive at a team outcome (e.g., forecasting sales for a new product). An example of when the mean would be an appropriate team composition measure is when physical strength is important for the team. The contribution of each team member is important in the overall physical strength that a team displays when engaging in a group task such as lifting a heavy object. Team efficacy can also be used to illustrate what makes a construct a shared team property because team efficacy is a result of team interactions and shared experiences leading team members to agree in their perceptions of the team's ability (Klein & Kozlowski, 2000).

In order to aggregate to the team level it is necessary to justify the aggregation both conceptually and analytically. Conceptually it must be explained how and why team members' perceptions are or are not shared within the team (Klein & Kozlowski, 2000). Analytically, the data must reveal substantial within-group agreement and between-group variability (Klein & Kozlowski, 2000). The mean score of individual measures is, however, potentially problematic in some instances because aggregation can mask important information when individual characteristics do not combine additively to form a collective resource pool (Barrick, Stewart, Neubert & Mount, 1998). If half of the members of a team are very high in cognitive ability and the other half of the members are low in cognitive ability, taking the mean would not show this variability and would obscure what is really happening in the team.

Like shared properties, configural team properties originate or emerge from individual team members' experiences, attitudes, perceptions, values, cognitions or behaviors (Klein & Kozlowski, 2000). Unlike shared team properties, however, configural team properties are not assumed to coalesce and converge among the members of a unit. Instead, they capture the array,

pattern or variability of individual characteristics within a team. In a configural property, researchers do not make the assumption that the individual characteristics of interest (e.g. personality, age) are held in common by the members of the team, but that individual contributions are distinctly different. When operationalizing a variable as a configural property, the goal is to capture the array or configuration of these individual characteristics within the team. Examples of configural team properties include constructs such as team interpersonal network density (Brass & Burkhardt, 1993), team personality composition (Barry & Stewart, 1997) and team age diversity (Tsui, Egan & O'Reilly, 1992).

As the contributions of the individuals become more varied, the type of emergence moves from composition toward compilation. Compilation describes phenomena that comprise a common domain but are distinctively different as they emerge across levels (e.g., demographic diversity, team member ability, personality). It is based on the widest variability in the type and amount of elemental contribution, and in the patterns by which those differences combine to represent emergent phenomena. Configural properties emerge from individuals, but do not coalesce as shared properties do. Individual data are critical for measuring both configural and shared team properties, but only shared team properties require the demonstration of within group consensus or consistency. Thus a researcher, in operationalizing the configural properties of a unit, need not evaluate consensus, similarity, or agreement among individual members except to rule out coalescence (Kozlowski & Klein, 2000). This model of compilation incorporates the assumption that emergence may show itself as different forms, and it views non-uniform patterns of dispersion as meaningful (Kozlowski & Klein, 2000). Compilation encompasses different types of emergence such as minimum, maximum and variance.

Minimum/Maximum Emergence is based on the assumption that the pattern across individuals is discontinuous. The standing of one individual on the construct in question determines the standing of the team. This is a conjunctive (minimum) or disjunctive (maximum) model, in which the highest or lowest value for an individual in the group sets the value of the collective attribute (Steiner, 1972). In a conjunctive model, each group member must perform at a minimally acceptable level for the team to succeed (e.g., assembly lines), and in a disjunctive model only one team member must perform well in order for the team to succeed (e.g., problem solving) (Steiner, 1972). The minimum method and the maximum method focus on the lowest and highest individual-trait score for the team, respectively. Using the minimum or maximum method is based on research that suggests that a single individual can significantly affect a group (Kenrick & Funder, 1988). Focusing on the highest or lowest individual-trait score of team members is appropriate in situations where one person has an inordinate effect on team success.

The Variance Form of Emergence captures dispersion within the group. Individuals may make contributions that are similar or different, but the major focus is on the variance of contribution (Roberts, Hulin, & Rousseau, 1978). Operationalizing team composition as the variability/variation of individual characteristics captures differences in team composition that are masked by the mean. These differences can provide information about fit among team members (e.g., Chatman, 1991; Schneider, 1987), as well as provide insight about the variety of inputs that team members are expected to bring to the team. Therefore, a focus on the variance of traits is appropriate when the goal is to understand the relationship of team composition heterogeneity to team process and outcomes. For example, in a team, it may be important to have all members be high in conscientiousness. If some members are high in conscientiousness and some are low in conscientiousness, taking the mean or the maximum would hide what is really

happening in the team. In this case, it would be important to examine the variance in conscientiousness to understand the team dynamics.

Based on the assumptions underlying shared team properties and configural team properties, it is likely that citizenship behavior and deviance contain elements of both. Citizenship or deviance in a team setting may be contagious, so if the majority of the team members are engaging in either citizenship or deviance, the remainder of the team might be influenced to behave similarly (LePine et al., 2000). If all of the team members are encouraged to behave alike, norms for certain behaviors may emerge. Therefore, team level citizenship behavior and team level deviance will be examined as both shared and configural team properties in the present study.

Citizenship and Deviance as Shared Properties

Citizenship behavior and deviance will be examined as shared properties through the measurement of norms. Norms develop when shared beliefs are held by members of a team. Norms are behavioral expectations that may occur at various levels, including societies, industries, or teams. Norms specify acceptable behaviors as well as suggest which behaviors are deviant (Ouchi, 1979). Their purpose is to maintain the relationship between involved parties (Macneil, 1980). Group norms develop through interactions among group members, are informally agreed on by group members (Cialdini & Trost, 1998) and influence how a group's members perceive and interact with one another, approach decisions, and solve problems (Bettenhausen & Murnighan, 1991). Some are actively transmitted, whereas others are passively transmitted. In addition, any punishments for not complying with norms come from social networks as opposed to formal systems established by the organization (Ehrhart & Naumann, 2004).

The method through which norms influence group behavior depends on whether norms are descriptive or injunctive (Cialdini, Kallgren, & Reno, 1991). Descriptive norms develop from watching what other group members do in certain situations. The more a group behaves the same way in a given situation, the more group members will tend to view that behavior as appropriate (Thibaut & Kelley, 1959). The basis for descriptive citizenship and deviance norms are individual citizenship and deviance. When a certain number of people in the group perform citizenship behaviors or deviant behaviors, the behavior becomes recognized as normative and thus descriptive norms for citizenship or deviance are established. In other words, there is a shared recognition in the group that citizenship or deviance is considered to be standard, or “correct,” within the group. Unlike descriptive norms, injunctive norms develop through normative influence, or when group members conform in order to receive social approval (Deutsch & Gerard, 1955). These norms go further than describing appropriate behavior to recommending it, as well as inhibiting inappropriate behavior (Cialdini & Trost, 1998). An example of this can be seen in work done by Robinson and O’Leary-Kelly (1998), which examined how individuals’ antisocial behaviors at work are shaped by the antisocial behavior of their coworkers. Even with many other explanatory variables controlled (close supervision, likelihood of punishment, job satisfaction, and perceived control), the antisocial behavior displayed by a work group was a significant predictor of an individual’s antisocial behavior at work. The influence of a group’s antisocial behavior on an individual’s antisocial behavior strengthened as the individual’s time in the group increased. They also found that when group members had to rely upon each other for task accomplishment (task interdependence high), individual behavior was more strongly related to the level of antisocial behavior exhibited by the group. These findings offer preliminary support for the idea that a group-level focus is

appropriate and important for understanding behavior in work settings (Robinson & O'Leary-Kelly, 1998).

In order to examine citizenship and deviance norms, the measures for configural citizenship and deviance cannot be used; a separate scale must be employed. Although information about the group's norms is often collected from individual group members, the construct itself resides at the group level of analysis (Ehrhart & Naumann, 2004). Norms are a shared property of the group, therefore, there must be agreement within the team that indeed, engaging in either citizenship or deviance, represents the team as a whole (Kozlowski & Klein, 2000). The method that has been used to measure unit-level citizenship behavior, and will likely continue to be the most popular approach in measuring citizenship norms, involves collecting survey data from individual group members and aggregating these data at the group level of analysis (Ehrhart & Naumann, 2004). When measuring descriptive citizenship norms, the survey questions should ask about the individual's perceptions of the overall group's performance of citizenship behaviors. Although this method has mainly been used in measuring citizenship norms (Ehrhart & Naumann, 2004), the same process can be applied to examining deviance norms. Inherent in the definition of group norms is the premise that group members must be in agreement about expected standards (Forsyth, 1994; Levine & Moreland, 1990; Shaw, 1981). In other words, for norms to exist, group members must possess shared beliefs.

Citizenship and Deviance as Configural Properties

Looking at team level citizenship and deviance as configural properties suggests that there is not necessarily agreement within the team about a consistent display of the variable by each member of the team (Klein & Kozlowski, 2000). Operationalizing a variable as a configural property allows for the possibility that members of the team each engage in differing levels and

types of citizenship or deviance. In order to examine citizenship and deviance as configural properties, several possible operationalizations can be employed, including the sum of individual team member values (mean), indices of variability among team member values (variance), and the minimum or maximum value among a team's members (Klein & Kozlowski, 2000).

Although team level citizenship and deviance have not previously been examined as configural, work examining personality as a configural property has been done by Barrick et al. (1998). They explored the relationship between the different methods of operationalization of personality (minimum, maximum, mean and variance) and team effectiveness. This study was one of the first to examine different methods of operationalizing team composition variables and found that the highest correlations were generally reported between different methods of operationalizing the same trait, but these correlations were only moderate in strength. The moderate relationships suggest that, although the various measures are somewhat related, they do operationalize team level traits differently (Barrick et al., 1998). They found that conscientiousness (mean, variance, and minimum) agreeableness (mean) and emotional stability (mean) were related to performance. When team viability was the outcome variable, extraversion (mean and minimum) and emotional stability (mean method), were predictors. Another study that demonstrates the use of various operationalizations of a configural property was done by Neuman and Wright (1999), who found that team performance was predicted by the lowest member's score (minimum) on agreeableness and conscientiousness. Neither the mean score nor the maximum score for personality characteristics predicted performance. These studies demonstrate how various operationalizations of a configural property can affect outcomes differently and contribute uniquely to multiple outcome variables. The methods demonstrated in

these studies can be used as a template for studying citizenship and deviance as configural team properties.

Personality

Certainly, one of the first logical steps in creating successful teams is the selection of the most advantageous combinations of people (Kichuk & Wiesner, 1998). Recent evidence in the individual selection literature has shown that certain personality variables are related to individual job performance. These findings, along with an increased level of interaction required in teams, and the requirement that team members must be able to work well together, suggest that team member personality might be useful in selecting for team membership (Jackson, 1992; Moreland & Levine, 1992; Kichuk & Wiesner, 1998).

The potential of personality as a selection measure has experienced a resurgence in popularity with the introduction of high quality tests designed to measure personality in the normal population, and by the emergence of a widely accepted personality classification referred to as the “Big Five” (Kichuk & Wiesner, 1998). In the past 10 years, the views of many personality psychologists have converged regarding the structure and concept of personality (Barrick & Mount, 1991). Generally, researchers agree that there are five robust factors of personality which can serve as a meaningful taxonomy for classifying personality attributes (Digman, 1990). The dimensions of the Big Five are Conscientiousness, Extraversion, Emotional Stability (Neuroticism), Agreeableness, and Openness to Experience. Extraversion contrasts such traits as talkativeness, assertiveness, and activity level with traits such as silence, passivity, and reserve. Agreeableness contrasts kindness, trust, and warmth with hostility, selfishness, and distrust. Conscientiousness contrasts such traits as organization, thoroughness, and reliability with traits such as carelessness, negligence, and unreliability. Neuroticism includes nervousness,

moodiness, and temperamentality. Openness to Experience contrasts imagination, curiosity, and creativity with shallowness and imperceptiveness (Goldberg, 1993).

Personality has frequently been used to predict individual performance (Barrick & Mount, 1991; Motowidlo, Borman & Schmit, 1997) as well as group performance in recent years (e.g., Barrick, Stewart, Neubert and Mount, 1998; Barry and Stewart, 1997; Neuman & Wright, 1999). Conscientiousness is thought to relate to job performance because it assesses personal characteristics such as being persistent, planful, careful, responsible, and hardworking, which are important attributes for accomplishing work tasks in all jobs (Barrick & Mount, 1991). Neuroticism is related to performance because people who display neurotic characteristics such as worry, nervousness, and self-pity, will tend to be less successful than more emotionally stable individuals because these traits tend to inhibit rather than facilitate the accomplishment of work tasks (Barrick & Mount, 1991). Extraversion and agreeableness are related to performance when frequent interaction or cooperation with others is involved. Openness to experience relates to performance because it assesses personal characteristics such as curious, broadminded, cultured, and intelligent (Barrick & Mount, 1991).

Many studies have been conducted examining the relationship between the “Big Five” personality traits and team performance. Conscientiousness (Neuman, Wagner & Christiansen, 1999; Barrick & Mount, 1991; Neuman & Wright, 1999; Barrick et al., 1998), Openness to Experience (Neuman et al., 1999), Agreeableness (Neuman & Wright, 1999; Barrick et al., 1998), Extraversion (Barry & Stewart, 1997; Barrick & Mount, 1991) and Emotional Stability (Barrick et al., 1998) have all been found to relate to team performance in various studies. Extraversion and Emotional Stability have also been found to predict team viability (Barrick et al., 1998).

Team Outcomes

In order to determine what effect citizenship behaviors and deviance have on the outcomes of a team, it is important to capture both current team effectiveness (i.e., present performance) and future team effectiveness (i.e., capability to continue working together) (Hackman, 1987). Clearly, an important measure of team effectiveness is the team's current performance, which is usually based on either supervisor ratings of team productivity or objective indicators of team quantity and quality of productivity. A second critical measure of team effectiveness is team viability, or the team's ability to work together interdependently in the future (Barrick et al., 1998; Hackman, 1990). Some groups operate in ways that make it impossible for members to work together again; for example, mutual antagonism could become so high that members would choose to accept collective failure rather than to share knowledge and information with one another. In other groups, members become highly skilled at working together, resulting in a performing unit that becomes increasingly capable over time. For example, members of athletic teams sometimes become able to anticipate one another's next moves and to initiate appropriate responses to those moves even as they occur (Hackman, 1990). According to Hackman (1987), teams without long-term viability experience burn out because of unresolved conflict, as well as increased divisiveness and decreased willingness to work cooperatively. Although team viability is often used as an outcome variable, along with team performance, there is no widely used, published instrument for measuring team viability.

Most models of overall team effectiveness include task effectiveness (i.e. task work), team viability, and member satisfaction (LePine et al., 2000; Hackman, 1987). Some conceptual work has been devoted to the idea that the use of groups can influence the satisfaction levels of group members (Campion et al., 1993; Campion et al., 1996; Gladstein, 1984; Keyton, 1991) and

that the satisfaction of individual group members is an important measure of success (Hackman, 1987). The evidence from the collective body of research supports a modest overall relationship between job satisfaction and various measures of citizenship behavior (Organ & Ryan, 1995; Organ, 1988, 1990; Bettencourt, Gwinner, and Meuter, 2001). It has been suggested that satisfaction has more bearing on the discretionary contributions of individuals than on task-based performance (Organ & Lingl, 1995). Therefore, satisfaction is a useful outcome variable to be used in the study of teams.

Development of Hypotheses

Personality

Empirical studies of the relationship between personality and citizenship behavior at the individual level have found that conscientiousness (Organ & Ryan, 1995; Miller, Griffin, & Hart, 1999), extraversion (Van Scotter & Motowidlo, 1996) and agreeableness (Van Scotter & Motowidlo, 1996; McManus & Kelly, 1999) are all predictors of Organizational Citizenship behavior. Similar work has been done examining the relationship between personality and deviance at the individual level. For example, Lee, Ashton, and Shin (2005) examined the relationship between the “Big Five” and deviance and found that Extraversion and Agreeableness predicted Interpersonal deviance and Extraversion and Conscientiousness predicted Organizational deviance. Colbert, Mount, Harter, Witt and Barrick (2004) found that conscientiousness, emotional stability and agreeableness were moderators of the relationship between perceptions of the work environment and workplace deviance. Although personality has been found to predict both citizenship (Organ & Ryan, 1995; Van Scotter & Motowidlo, 1996) and deviance (Lee, Ashton & Shin, 2005) at the individual level, it cannot be assumed that the same relationships exist at the team level. It is necessary to empirically examine how various

personality characteristics operate in the context of a team because it cannot be assumed that the relationships are isomorphic.

At the team level, very few studies have looked at the effects of personality on citizenship behavior or deviance with Mohammed et al. (2002) and Liao et al. (2004) being two notable exceptions. Mohammed et al. (2002) found that agreeableness and neuroticism predicted team citizenship behavior. Liao et al. (2004) examined the dissimilarity of personality characteristics in teams and their effect on organizational and interpersonal deviance. They found that a dissimilarity in conscientiousness and extraversion predicted team interpersonal deviance and dissimilarity in agreeableness, openness to experience and neuroticism predicted team organizational deviance. LePine, Hanson, Borman, and Motowidlo (2000) suggested that although it is difficult to think of a reason why personality characteristics will not be equally important in a team environment, research is still needed to assess the extent to which these same factors will predict citizenship in team settings.

Agreeable team members are helpful, friendly, tolerant and tend to cooperate with others and possess the social skills necessary for effective team interaction (Barrick et al., 1998). In team work situations, agreeable individuals are likely to be more effective in group efforts aimed at coordination activities, and to be better at avoiding work disruptions associated with disagreeable social interactions, such as conflict. Based on the description of what an agreeable team member is, it is logical to suggest that members high on agreeableness are likely to engage in more citizenship behaviors and members that are low on agreeableness are more likely to engage in deviance.

1a) Teams with members higher on Agreeableness will be less likely to engage in team level deviance. As the mean level of Agreeableness increases, the maximum deviance score decreases.

1b) Teams with members higher on Agreeableness will be more likely to engage in team level citizenship. As the mean level of Agreeableness increases, the minimum citizenship score increases.

The inclusion of conscientious members should be associated with a greater tendency for the group to stay committed to task accomplishment and avoid digressions and other impulses to stray off task (Barry & Stewart, 1997). Previous research has shown that group members who are relatively high in conscientiousness show more concern about group success and groups composed of members with higher conscientiousness scores solve complex problems more efficiently (Schneider & Delaney, 1972). This leads to the proposition that conscientiousness has a negative relationship with deviance and a positive relationship with citizenship.

2a) Teams with members higher on Conscientiousness will be less likely to engage in deviance. As the mean level of Conscientiousness increases, the maximum deviance score decreases.

2b) Teams with members higher on Conscientiousness will be more likely to engage in citizenship. As the mean level of Conscientiousness increases, the minimum citizenship score increases.

Extraverts are predisposed to view the prospect of working in teams favorably and feel confident about their ability to perform well in a team environment (Barry & Stewart, 1997). Extraverts have a desire to work with others and should, therefore, be motivated to behave in ways that ensure that the team will remain viable (Barrick et al., 1998). Based on the characteristics of extraverts, it is proposed that extraversion will have a negative relationship with deviance and a positive relationship with citizenship.

3a) Teams with members higher on Extraversion will be less likely to engage in deviance. As the mean level of Extraversion increases, the maximum deviance score decreases.

3b) Teams with members higher on Extraversion will be more likely to engage in citizenship. As the mean level of Extraversion increases, the minimum citizenship score increases.

Neuroticism should have a negative effect in a team setting because employees exhibiting neurotic characteristics, such as worry, nervousness and negative affectivity, tend to inhibit rather than facilitate the accomplishment of team tasks. Having members that are high in neuroticism may create a negative affective tone that makes it difficult for the team to work together (Barrick et al., 1998). It is proposed that deviance will have a negative relationship with deviance and a positive relationship with citizenship.

4a) Teams with members higher on Neuroticism will be more likely to engage in deviance. As the mean level of Neuroticism increases, the maximum deviance score increases.

4b) Teams with members higher on Neuroticism will be less likely to engage in citizenship. As the mean level of Neuroticism increases, the minimum citizenship score decreases.

Explicit relationships for Openness to Experience, citizenship behavior, and deviance are not hypothesized in this section. Past research on the Big Five do not suggest strong or reliable relationships for Openness to Experience, therefore specific hypotheses are not made in the present study.

Configural Citizenship

Although much of the early research on citizenship behavior focused on antecedents, there is some more recent research that focuses on citizenship behavior as a predictor of performance at both the individual level and the team level. Individual level research has shown that citizenship can affect overall performance evaluation (e.g., Avila et al., 1988; Motowidlo & Van Scotter, 1994) as well as promotability ratings (Van Scotter et al., 2000) and informal rewards (Van Scotter et al., 2000). At the team level, citizenship behaviors support the social and psychological environment in which the team's task work is accomplished, allowing the team to perform effectively (LePine et al., 2000). Empirically, citizenship behavior has been found to

affect the quantity of output (Podsakoff et al., 1997) and group sales performance (George & Bettenhausen, 1992). These findings suggest that citizenship within a team can affect the performance of the team.

The team level studies that have assessed the effects of citizenship behavior on performance have used mean level citizenship to aggregate the member responses to the team level. This is not unusual considering that the most frequently used method of aggregation is the group mean (LePine et al., 2000). Research using the group mean is generally based on the assumption that the aggregated characteristic operates the same way at the team-level as it does at the individual level (LePine et al., 2000). It is tempting to conclude, for example, that because individual differences in citizenship behavior are positively related to individual differences in performance (e.g., Avila et al., 1988; MacKenzie et al., 1993; Motowidlo & Van Scotter, 1994), team differences in mean citizenship behavior should be positively related to team differences in performance. However, making this assumption about equivalence of similar concepts across different levels can lead to erroneous conclusions (Chan, 1998). It is possible that team performance depends more on all members possessing a minimum level of citizenship. If this is the case, team performance might depend more on the member displaying the lowest level of citizenship than the average of the team as a whole. It is also plausible that there are some members that engage in citizenship behaviors and some that do not, resulting in high scores balancing the low scores, which would not give a true picture of what is truly going on in the team, if only the mean is calculated.

In this section, an argument for examining citizenship as a configural property will be presented in order to capture the array, pattern, or variability of individual characteristics within a team (Klein & Kozlowski, 2000). Citizenship as a configural property allows for the possibility

that members of the team each engage in differing levels of citizenship. By examining citizenship as a configural variable, it is possible to look at what proportion of the team actually engages in citizenship behavior. In order for citizenship behavior to significantly affect team performance, it may require each group member to perform at a minimally acceptable level for the team to succeed. Each member of a team may need to display a relatively high minimum level of citizenship to improve performance. Team viability and team satisfaction are also being assessed as team outcome variables, but these variables focus on the social and psychological aspects of the team. Citizenship involves activities that contribute to organizational or team effectiveness, not directly through the technical core, but by enhancing or maintaining the organization's or the team's social and psychological context (Borman & Motowidlo, 1993; LePine et al., 2000), therefore, it is predicted that citizenship will have a positive relationship with team satisfaction and team viability. Since citizenship is predicted to contribute more directly to the social and psychological context of the team, than to the technical core, it is proposed that minimum citizenship will have a stronger positive effect on team satisfaction and team viability than on team performance.

5a) Teams with higher scores for the lowest citizenship behavior rating will receive higher ratings for team performance.

5b) Teams with higher scores for the lowest citizenship behavior rating will receive higher ratings for team satisfaction.

5c) Teams with higher scores for the lowest citizenship behavior rating will receive higher ratings for team viability.

5d) The relationships between lowest citizenship behavior and team satisfaction and lowest citizenship behavior and viability will be stronger than the relationship between lowest citizenship behavior and performance.

Configural Deviance

In the deviance research, as in the citizenship research, emphasis has been given to the antecedents and correlates of deviance, with little research addressing the outcomes associated with workplace deviance. Only two studies address the effects of deviance on performance. At the individual level, Rotundo and Sackett (2002) found that deviance explained a significant amount of variance in overall performance evaluations. At the team level, Dunlop and Lee (2004) found that workplace deviance was negatively associated with business unit performance. The research in this area suggests that there is a relationship between deviance and performance outcomes, but because the research is so sparse, more work needs to be done to understand the relationship.

The team level studies examining deviance have aggregated deviance to the team level, only considering mean scores for the team. This method of examining deviance at the team level can mask what is really going on in the team. One or two very high or very low scores may be driving the average, disguising the varying levels of deviance that each member displays. Team level deviance will be examined in this section as a configural property because it is suggested that there is an array of individual deviance characteristics within a team (Klein & Kozlowski, 2000). Examining team level deviance as a configural property suggests that there is not necessarily agreement within the team about a consistent display of deviance by each member of the team (Klein & Kozlowski, 2000), allowing for the possibility that members of the team each engage in differing levels of deviance. By examining deviance as a configural variable, it is possible to look at what combinations of deviant team members have the most effect on the outcomes of the team.

Although Dunlop and Lee (2004) used the mean deviance score (including individual and organizational deviance) to aggregate to the team level, in their limitations section, they did address the possibility that the effects of extremely deviant employees on performance may be stifled to a degree in the aggregation process. Aggregating deviance within a team can conceal the disproportionate impact that a small number of extremely deviant employees may have on business unit performance. Although Dunlop and Lee (2004) did not find a difference in the results when removing extreme deviant employees, it still raises the question of whether the mean is not the best measure of deviance.

In the current study, it is proposed that one or two deviant team members may drive the relationship between deviance and team outcomes such as performance, viability and satisfaction. It may be that one team member needs to engage in deviance in order for the team to perform poorly. It may also only require one or two highly deviant team members to influence the affective responses of team members. This leads to the hypotheses that the maximum deviance score for each team will be a significant negative predictor of team performance, team satisfaction and team viability.

6a) There will be a negative relationship between maximum workplace deviance in teams and team performance. As the maximum level of deviance in a team increases, the team performance level decreases.

6b) There will be a negative relationship between maximum workplace deviance in teams and team satisfaction. As the maximum level of deviance in a team increases, the team satisfaction level decreases.

6c) There will be a negative relationship between maximum workplace deviance in teams and team viability. As the maximum level of deviance in a team increases, the team viability level decreases.

Team viability and team satisfaction are more perceptual variables, so may be strongly

influenced by social and psychological evaluations. For team viability and team satisfaction, variance may also be an appropriate operationalization of deviance because if the team includes some members that are high on deviance and some members that are low on deviance, feelings of ill will can arise as a result of the dichotomy.

6d) There will be a negative relationship between variance in deviance and team satisfaction and team viability.

Dimensions of Deviance.

Previous research has suggested that there are multiple dimensions of deviance. Deviance has been divided into property versus production deviance (Hollinger & Clark, 1982), Counterproductive behavior versus doing little (Mangione & Quinn, 1974), defiance, complaining, avoiding the job, and avoiding work (Pearce & Giacalone, 2003), and property deviance, production deviance, political deviance and personal aggression (Robinson & Bennett, 1995). Although these different dimensions have been discussed in the literature, only one of these typologies (Pearce & Giacalone, 2003) specifically addresses deviance in a team setting. The other typologies employ either the individual or the organization as the target. In a team setting, team member deviance is directed at the team and the members of the team, so a scale of team member deviance should use the team as the target for behaviors. In order to address this issue, a scale was formed to capture items that were directed at and specifically affect a team. Based on a thorough review of the literature and the multiple deviance scales that have been developed (e.g. Ball, Trevino & Sims, 1994; Bennett & Robinson, 2000; Fox & Spector, 1999; Grasmik & Kobayashi, 2002; Kelloway et al., 2002; Pearce & Giacalone, 2003; Raelin, 1994; Robinson & Bennett, 1995; Warren, 2003; Watson, Johnson, Kumer & Critelli, 1998), three dimensions that encompassed similar team behaviors were created: lack of effort, interference and incivility. Lack of effort ascertains the level of participation team members demonstrate in

the activities of the team. It assesses whether team members shirk their duties on team projects and withhold time and energy from the team. Interference measures whether team members intentionally hinder other team members from completing their tasks successfully. The incivility dimension evaluates how team members interact on a social level. It assesses whether members of the team treat each other with disregard and/or disdain and whether they mistreat each other on an interpersonal level.

Because these three dimensions assess different deviance characteristics, they are expected to be differentially related to team performance, team satisfaction and team viability. The effort dimension and the interference dimension should have a stronger relationship with team performance because these two dimensions can directly affect the task performance of the team.

7a) The correlation between effort and task performance and between interference and task performance will be higher than the correlation between incivility and task performance.

The incivility dimension should have a stronger effect on team viability and team satisfaction than on team performance because it is focused less on the task performance of the team and more on the affective evaluation of the team.

7b) The correlation between incivility and team satisfaction and incivility and team viability will be higher than the correlation between incivility and task performance.

It is also proposed that the incivility dimension will have a stronger effect on team viability and team satisfaction than will the effort dimension because the incivility dimension focuses on the affective evaluation of the team than on task performance.

7c) The correlation between incivility and team satisfaction and incivility and team viability will be higher than the correlations for effort and team satisfaction and effort and team viability.

Citizenship and Deviance Norms

Although citizenship and deviance will be examined as configural properties, it is also important to address the likelihood that there is a shared element to citizenship and deviance. This concern will be addressed through the examination of team citizenship and team deviance norms.

In teams, the distinction between task performance and citizenship behavior is complex because individual task performance in teams requires cooperation among team members. Therefore, in teams, acts of helpfulness could well be required aspects of task performance (LePine et al., 2000). It may be argued that if groups develop norms that prescribe citizenship behavior, then the behavior is not citizenship because it is not voluntary (Ehrhart & Naumann, 2004). However, helpful actions in teams will still have contextual implications. The same helpful act can directly facilitate the performance of a team task and also help build or maintain the kind of trusting and cooperative relationships between team members that are likely to encourage helpful acts in the future. Thus, actions that contribute only to contextual performance in many organizational settings can contribute to both task performance and contextual performance in team settings (LePine et al., 2000). A couple of studies have demonstrated that team-level citizenship behavior is related to team performance (e.g. Koys, 2001, Podsakoff et al., 1997). In most of the studies, participants were asked to describe the overall level of citizenship in their teams, which, according to Ehrhart and Naumann (2004), is the equivalent of measuring descriptive citizenship norms. Therefore, the team citizenship literature establishes the relationship between descriptive citizenship norms and team performance.

8a) Citizenship norms will be positively related to team performance, team viability, and team satisfaction.

There are also problematic issues for norms of deviance when considered at the team level, aside from the issues for citizenship norms. In particular, if the norms for deviance are examined and if it is found that a team agrees that a particular behavior is engaged in by the team, the behavior would not be considered deviant. For example, although taking extended work breaks may be seen as a negative behavior in an organizational context, if a particular team sees this behavior as acceptable, then it would not be considered deviant for that team. Therefore, it is important to assess each team's norms for deviance to determine if particular behaviors are actually considered deviant. If it is found that norms for deviance do exist in the team, it is important to examine how these deviance norms affect the outcomes of the team. As with team-level citizenship research, team-level deviance research has generally assessed deviance through the overall level of deviant behavior for a team. For example, Dunlop and Lee (2004), used the shared group means to determine the effects of deviance on team performance and found that team deviance negatively affected team performance. Since the effects of team deviance norms have rarely been addressed in the literature, it is important to extend this area of research, drawing on the work done by Dunlop and Lee (2004).

8b) Deviance norms will be negatively related to team performance, team viability, and team satisfaction.

Strength of Citizenship vs. Deviance Relationship with Performance

The previous sections have discussed the relationship between citizenship behavior and team performance, team satisfaction and team viability as well as the relationship between deviance and team performance, team satisfaction and team viability. However the relationships comparing citizenship and deviance with team outcomes have not been discussed. A few studies have compared deviance to citizenship at the individual (e.g., Rotundo & Sackett, 2002) and team level (Dunlop & Lee, 2004).

Rotundo and Sackett (2002) also explored the relationship between citizenship and deviance, but focused on the relative importance of task performance, citizenship behavior, and deviant behavior for ratings of overall performance. The researchers found that, on average, raters gave the most weight to task performance and deviant behavior, and less but significant weight to citizenship behavior. Some managers placed more importance on task performance and some placed more importance on deviant behavior, but none of the clusters of managers placed the most importance on citizenship behavior for overall performance. This study suggests that deviant behavior may have more impact on overall performance than citizenship behavior.

Dunlop and Lee (2004) took the citizenship behavior versus workplace deviance comparison one step further by examining the relationship at the team level. They examined deviance and citizenship in relation to business unit performance. The results showed that both deviance and citizenship predicted performance, but citizenship failed to predict performance beyond deviance. Based on these results, the researchers concluded that the presence of deviant employees in a business unit has negative effects on the performance of the business unit as a whole, whereas citizenship behaviors had comparatively little effect on the performance of the business unit as a whole. Their results suggest that deviance has a more powerful effect on team performance than does citizenship. However, since this study was one of the first to look at the relationship between citizenship, deviance and performance at the team level, additional research should be conducted to further support this finding.

In the two studies described above that examine citizenship, deviance and performance (e.g. Rotundo & Sackett, 2002; Dunlop & Lee, 2004), it appears that deviance has a stronger relationship with performance than does citizenship. In part, this finding is supported by Borman and Motowidlo's (1993) statement that 'OCB primarily influences organizational effectiveness

indirectly by improving the broader organizational, social, and psychological environment' (p. 73) in which the organization must function. While citizenship and deviance can both disrupt the broader environment, deviance does not only influence the broader, social, and psychological environments within a business unit but also influences the task-related performance of the business unit (Dunlop & Lee, 2004). Therefore, deviance may more strongly affect the performance of a team because task performance is disrupted. Although this relationship exists for the outcome variable of performance, it may not exist for more perceptual outcome variables such as team satisfaction and team viability because these variables are much less task focused. A disruption of task performance may not affect satisfaction and viability as strongly as it affects team performance because the perceptual variables are based more on social and psychological evaluations. Because citizenship behavior is based more on social interaction, its affects may have a stronger affect on team satisfaction and team viability than it does on performance.

Another reason to suggest that workplace deviance will have a stronger effect on performance is work based on the negativity bias. Studies on the negativity bias have consistently shown that impression judgments are exceedingly influenced by a person's more negative and more extreme attributes, traits, and behaviors (Fiske, 1980; Van der Plight & Eiser, 1980; Skowronski & Carlston, 1989). This research has suggested that negative aspects of an object, event, or choices are weighted more heavily than positive aspects in judgments (Kahneman & Tversky, 1984; Taylor, 1991) and that negative information is weighted more heavily in the attribution of evaluations to others (Abelson & Kanouse, 1966). The greater power of bad events over good ones is found in everyday events, major life events (e.g., trauma), close relationship outcomes, social network patterns, interpersonal interactions, and learning processes (Baumeister, Bratslavsky, Finkenauer & Vohs, 2001). Events that are negatively valenced (e.g.,

losing money, being abandoned by friends, and receiving criticism) will have a greater impact on the individual than positively valenced events of the same type (e.g., winning money, gaining friends, and receiving praise) (Baumeister, Bratslavsky, Finkenauer & Vohs, 2001; pg. 323). Research on social support has repeatedly found that negative, conflictual behaviors in one's social network or team have stronger effects than positive, supportive behaviors and bad things receive more attention and more thorough cognitive processing than good things (Baumeister, Bratslavsky, Finkenauer & Vohs, 2001). Since deviance is a negative behavior and citizenship is a positive behavior, the research on the negativity bias suggests that deviance will have a stronger influence in the team than citizenship. Negative events tax individual resources, a response that appears to be mirrored at every level of responding. Since negative behaviors are so powerful, it stands to reason that a deviant team member can outweigh the presence of other members that engage in citizenship. Based on negativity bias, there is one possibility for citizenship to have a stronger affect on performance than deviance. Baumeister, Bratslavsky, Finkenauer and Vohs (2001) propose that good may prevail over bad by superior force of numbers meaning that many good events can overcome the psychological effects of a single bad one. If the minimum level of citizenship behavior in a team is very high, and the maximum level of deviance is relatively low, then citizenship should have a stronger affect on performance than deviance.

The relationship between citizenship, deviance and the perceptual outcomes of team satisfaction and team viability are less clear. Based on negativity bias, negative behavior should have a stronger affect on all outcome variables (performance, satisfaction & viability). However, the work by Borman and Motowidlo (1993) suggests that citizenship should affect team viability and team satisfaction differently than it affects performance, leading to the possibility that the

relationship between citizenship behavior and satisfaction and viability have the possibility of being as strong as the relationship between deviance, satisfaction and viability.

9) The maximum deviance score of each team will have a stronger effect on team performance than the maximum citizenship score for each team.

Interdependence as a Moderator

Work can be designed to be highly interdependent, requiring the input of several people to complete it or it can be designed to be highly independent and to be performed by individuals. Interdependence, whether based on task inputs and processes or shared goals and rewards, establishes connections and increases the need for cooperation between team members (Saavedra, Earley & VanDyne, 1993). Teams can be interdependent in several ways: task interdependent, goal interdependent, or outcome interdependent. If a team is task interdependent, each member must take action for other members to do any part of their work (Wageman, 1995). Goal interdependence is the degree to which group members are assigned joint group goals and receive group feedback (Van der Vegt, Emans, & Van de Vliert, 2001). Outcome interdependence is the manner in which team members believe their personal goals and rewards are related (Van der Vegt, Emans, & Van de Vliert, 1999). Although all of these types of interdependence are important in a team context, the focus in this study is on the importance of task interdependence. Task interdependence is important to consider when studying teams because the level that team members are dependent on each other can make a difference in team outcomes. Task interdependence is “the degree of task-driven interaction among work group members” (Shea & Guzzo, 1987; pg 331). Team members are task interdependent when they must share materials, information, or expertise in order to achieve the desired performance or output (Cummings, 1978; Van der Vegt, Emans & Van de Vliert, 1999). Interdependent work-

group members are expected to facilitate others' task performances by providing each other with information, advice, help, and resources. Interdependence exists when "the outcomes of individuals are affected by each other's actions" (Johnson & Johnson, 1989, p. 23). In this study, task interdependence is the focus because citizenship and deviance within the team may not affect team performance if the team members aren't required to interact and if their work does not depend on the work of other members. Therefore, task interdependence will be examined as a moderator of the citizenship and performance and deviance and performance relationship.

10a) Task interdependence moderates the relationship between deviance and team outcomes, such that the higher the level of task interdependence, the stronger the relationship between deviance and team performance.

10b) Task interdependence moderates the relationship between citizenship and team outcomes, such that the higher the level of task interdependence, the stronger the relationship between citizenship and team performance.

Chapter 2 METHODS

Participants

Data in this study were obtained from ten undergraduate classes at a large university. Five classes were from the management department and five classes were from the communications department. Each class contained a team component in which students worked in groups of 3-6 people to complete at least one project during the semester. Two hundred sixty-five individuals completed both survey 1 and survey 2 during the semester. Of the two 265 individuals, 233 were included in the final analyses. Information from 32 participants could not be included because they were not part of a team that had at least 60% participation in the study. This left 56 viable teams to be used in the analyses. The usable team data included teams ranging in size from three to six people with an average of 5.03 people per team. The respondent sample was 57.8% male and 42.2% were female. Participants ranged in age from 18 to 28 with an average age of 20.76, with the majority of the participants being either sophomores (30.3%) or seniors (49.4%). Fifty-four percent of the participants were from communications classes and the rest were from management classes.

Team Information

Because teams were not all within the same class or the same department, there were several situational and informational differences. The five communications classes completed group speeches on different topics. The five management classes completed projects on business cases. Whereas the management classes were able to choose their teams, the communications classes were assigned to teams by the instructor. In addition, the majority of the management classes were required for management majors, but the team-based communication classes were offered as an alternative to individually-based public speaking classes. Thus, communication

students in the sample may have been more open to working in teams because it was their specific choice. The management students were older, on average, than the communications students. Furthermore, although the same number of management students and communications students completed the surveys, the percentage of communications students that responded was higher than that for the management students. This could have been the result of communications students being offered extra credit for completing the surveys and management students completing the surveys on a voluntary basis. Both communications and management students were given time in class to fill out the surveys.

Procedure

Data were collected at two points in time. Time 1 was mid-semester (late October, early November) and Time 2 was at the end of the semester (early to mid- December). At Time 1, the researcher introduced the study to the students and asked them to complete a four page survey about team behaviors, including team norms, team deviance, team citizenship behavior, apathy, and conflict. Participants were be provided with consent forms and asked to complete the form before returning the survey to the researcher. Students in all five communications classes were offered extra credit for completing the surveys. Students in the five management classes were not offered extra credit, but were given time in class to complete the surveys. At Time 2, the researcher returned to each of the ten classes and again explained the purpose of the study. The same procedure that was followed for the distribution of the first survey was followed for the second. Time 2 surveys contained questions concerning team norms, personality, satisfaction, viability, and interdependence. Students were asked to record the last five digits of their student number on each survey in order to link the two surveys to each other and to team grades. Only teams in which at least 60% of the team members returned both surveys were utilized in the final analysis.

At the end of the semester the professor of each class was asked to send the team project grades to the researcher. Professors were asked to provide the last five digits of student numbers for each class member and to identify which students were in which team.

Measures

Personality. A scale developed by Goldberg (1999) was used to measure the Big 5 personality dimensions: neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. Each sub-scale consisted of 10 items. Respondents used a 5-point scale, ranging from 1= very inaccurate to 5= very accurate. The alpha values, as provided by the International Personality Item Pool website (<http://ipip.ori.org>), are as follows: Neuroticism, $\alpha = .86$, Extraversion, $\alpha = .86$, Openness to Experience, $\alpha = .82$, Agreeableness, $\alpha = .77$, and Conscientiousness, $\alpha = .81$. The alpha values found in the study were comparable: Neuroticism, $\alpha = .84$, Extraversion, $\alpha = .91$, Openness to Experience, $\alpha = .80$, Agreeableness, $\alpha = .83$, and Conscientiousness, $\alpha = .84$.

Configural Team Citizenship. LePine et al. (2002) suggested that the five dimensions (altruism, conscientiousness, sportsmanship, courtesy, civic virtue) of Organ's (1988) typology are essentially interchangeable when it comes to their predictors. More specifically, they assert that the relationship between the predictors and citizenship does not depend on how citizenship is behaviorally defined. Since the behavioral dimensions of citizenship do not appear to be nomologically distinct, the dimensions can be averaged to assess the general construct of citizenship. Therefore, in this study a general scale was used to assess citizenship as a general construct. The scale items were drawn from Podsakoff et al. (1997), Motowidlo and Van Scotter (1994) and Smith et al. (1983). The scale consisted of 20 items, rated on a scale ranging from 1=

never to 7=*always*. After a factor analysis was done, 16 of the original 20 items were used in the final citizenship behavior scale. The alpha value for the revised scale was .81.

Configural Team Deviance. The method that has generally been used to measure team level deviance involves collecting survey data from individual team members and aggregating these data to the team level of analysis. In the team deviance literature, there has only been one scale developed for use in the study of deviance within a team. Pearce and Giacalone divided deviance into four dimensions: defiance, complaining, avoiding the job, and avoiding work. The rest of the team deviance studies used a variation of Bennett and Robinson's individual level deviance scale.

Therefore, in the attempt to accurately measure team member deviance at the team level, a scale using deviance questions that apply directly to the team was developed. In the current study, items were drawn from multiple sources (e.g. Ball, Trevino & Sims, 1994; Bennett & Robinson, 2000; Fox & Spector, 1999; Grasmik & Kobayashi, 2002; Kelloway et al., 2002; Pearce & Giacalone, 2003; Raelin, 1994; Robinson & Bennett, 1995; Warren, 2003; Watson, Johnson, Kumer & Critelli, 1998) in order to create a team level deviance scale that focused on activities specifically relevant to teams. The scale contained 32 items: 14 Lack of Effort items, 6 Interference items, and 12 Incivility items. In order to establish content validity for the three dimensions, four graduate students individually coded the dimensions. Only items that exhibited 75% agreement or higher by coders were included in the dimensions. The ratings range from 1=*never*, to 7=*always*. After a factor analysis was run for the deviance behaviors, a 26 item, 2 factor scale (lack of effort and interpersonal deviance) was discovered and will be further discussed in the results section. The alphas for the overall deviance dimension and the two sub-dimensions were as follows: Overall =.92, Lack of Effort= .87, and Interpersonal Deviance= .91.

Team Performance. Team performance was assessed using the team project grade assigned by the professor. For three of the management classes, the team grades were assigned through the same system because all three sections participated in the same group assessment controlled by an outside provider (the Cornell Management game). The other two management classes both graded teams on a project that was worked on throughout the semester, with a final project presentation at the end of the semester. The communications classes were all sections of the same group communication class. The same group assignments were completed by each section and assigned the same point values. All grades were provided to the researcher as points out of a total. The researcher then converted all points to percentages of the total.

Team Satisfaction. Team satisfaction was assessed using a 3-item scale with items assessing an overall evaluation of satisfaction within the team. Items were rated on a scale ranging from 1= *strongly disagree* to 5= *strongly agree*. The reliability for the satisfaction scale was $\alpha=.92$

Team Viability. Team viability was assessed with a three question scale used by Bayazit and Mannix (2003). The scale was a 5-point Likert-type scale with 1= strongly disagree and 5=strongly agree as anchors. Bayazit and Mannix (2003) documented an alpha of .83 for this team viability scale. The reliability for the present study was $\alpha = .832$.

Task Interdependence. The task interdependence scale was a 5-item scale taken from Van der Vegt, Emans, and Van de Vliert (1999). These items were based on Kiggundu (1983) and Pearce and Gregersen (1991) task interdependence scales. The reliability for this scale was .84 and was scored on a 5-point Likert-type scale. The scale ranged from 1= strongly disagree to 5=strongly disagree.

Additional Variables. Often times, team members interact outside of their set team meetings. In order to assess team members' interaction beyond their task interdependence, several additional questions were included. These items focused on the overall level of the team members' social interaction outside of team tasks. Questions focusing on the apathy of the members and on the conflict that occurs within a team were also included in the survey. These variables are discussed in more detail in the results section.

Norms. Norms were assessed using items addressing the feelings of the team as a whole and using the team as the referent. The items were drawn from the citizenship behavior and deviance scales utilized in the study, but questions were more general to determine the beliefs of the team. Norm items were written based on Ehrhart and Naumann's (2004) article suggesting that survey questions should ask about the individual's perceptions of the overall group's performance of a behavior. The items should be written with the team as the referent to determine norms of the team (Ehrhart & Naumann, 2004). The deviance norms scale contained 8 items with responses ranging from 1= *strongly disagree* to 7= *strongly agree*. The citizenship behavior norms scale contained 8 items with responses ranging from 1= *strongly disagree* to 7= *strongly agree*. Based on a factor analysis the deviance norm scale was based on six of the original eight items and the citizenship norm scale consisted of all eight of the original items. The reliabilities for the deviance norm scales were $\alpha=.78$ at time 1 and $\alpha=.81$ at time 1. The reliabilities for the citizenship norm scales were $\alpha=.89$ at time 1 and $\alpha=.89$ at time 2.

Control Variables. Team size and class affiliation were used as control variables for all hypotheses. The size of the team could have an important impact upon the level of citizenship behavior and deviance exhibited by its members and the relative exposure to others' behavior. Class affiliation was controlled for because all students were exposed to varied course

experiences. Two types of classes were surveyed (Business and Communications) and five classes of each type were surveyed. Based on this variation, it was important to control for the effects that different professors and different classes can have on the processes of the team. Students' GPA scores were used as control variables for analyses involving performance as a dependent variable to control for individual ability level.

Chapter 3

RESULTS

Preliminary Analyses

Exploratory Factor Analysis. Team member deviance, team citizenship behavior, deviance norm and citizenship norm items were factor-analyzed to clarify and refine the measures. Team member deviance was assessed with 32 items drawn from previous studies of team member deviance and antisocial behavior (e.g., Ball, Trevino & Sims, 1994; Bennett & Robinson, 2000; Fox & Spector, 1999; Grasmik & Kobayashi, 2002; Kelloway et al., 2002; Pearce & Giacalone, 2003; Raelin, 1994; Robinson & Bennett, 1995; Warren, 2003; Watson, Johnson, Kumer & Critellie, 1998). The items were hypothesized to measure three dimensions of team member deviance: lack of effort, interference and incivility.

The underlying factor structure of the team member deviance items was evaluated using Principal Axis Factoring because the deviance data were not normally distributed (e.g., Costello & Osborn, 2004; Fabrigar et al., 1999). An oblique rotation (Promax) was used because the factors were expected to be correlated. Inspection of eigenvalues, a scree plot, and simple structure indicated that a two-factor solution defined by 27 of the 32 items best explained the data. The loadings can be seen in Table 3. Five items (1, 5, 15, 23, 29) were removed as they either cross-loaded heavily on multiple factors or did not load heavily on either factor. Items were included in the final scale if the factor loading was greater than .40 for the selected factor and the selected factor was at least double the unintended factor. The first factor was composed of 15 items, a combination of items from the hypothesized Interference and Incivility dimensions. As this factor describes interpersonal behaviors within a group, it was labeled

Interpersonal deviance. Consisting of 12 items, the second factor measured lack of effort, as proposed. The two sub-scales were correlated at .72.

Citizenship behavior was measured with 20 items compiled from previous studies (e.g. Podsakoff, Ahearne, & MacKenzie, 1997; Motowidlo & VanScotter, 1994; Smith et al., 1983). The underlying factor structure was examined using a maximum likelihood factor analysis with oblique rotation. Five items (2, 6, 8, 10, 17) were removed from the citizenship behavior scale because the items cross loaded equally on at least two factors or did not load strongly on any of the dimensions. Four factors were extracted through examination of the scree plot as well as looking for simple structure. The four factors reflect the previously researched dimensions of Helping Behavior, Sportsmanship, Compliance and Voice (Podsakoff et al., 1997; DeDreu & VanVainen, 2001). Factor loadings for the items of the citizenship behavior scale are depicted in Table 4. Since the citizenship behavior scale did divide into four dimensions, the relationships were examined. However, large differences did not appear between the sub-dimensions. The correlations were all in the same direction (positive vs. negative) and similar in magnitude. There were slight variations in relationships, but the scales were averaged as a general construct based on work done by LePine et al. (2002), who suggested that the five dimensions of Organ's (1988) typology are basically interchangeable when it comes to their predictors. More specifically, they asserted that the relationship between the predictors and citizenship behavior does not depend on how citizenship behavior is behaviorally defined. Since the behavioral dimensions of citizenship behavior do not appear to be nomologically distinct, the dimensions can be averaged to assess citizenship behavior as a general construct.

Maximum Likelihood factor analyses were also run for the deviance norm and citizenship norm scales at times 1 and 2. Because items 2 and 4 of the deviance norm scale had low inter-

item correlations and communalities less than .40 (Velicer & Fava, 1998), they were deleted. The remaining 6 items loaded on one factor. A maximum likelihood analysis was also run for the citizenship norm items, and all 8 items loaded on one factor. Factor loadings for deviance norms and citizenship norms can be found in Tables 5, 6, 7, and 8.

Scale reliabilities were calculated for revised overall team member deviance, team citizenship behavior, deviance norms time 1 and 2, and citizenship norms time 1 and 2 scales as well as the remaining scales (satisfaction, viability, neuroticism, conscientiousness, agreeableness, extraversion, openness to experience, task interdependence, and apathy). All reliabilities were above .77 and are reported in Table 10.

Justification for Aggregation. Prior to aggregating individual-level scores to the group level by mean, it was necessary to assess whether each group exhibited adequate within-group agreement for variables conceptualized at the team level of analysis (Kozlowski & Klein, 2000). A test of the statistical justification of this aggregation was conducted by performing a one-way analysis of variance on the independent variables to determine whether there was significantly greater variance between groups than within groups. With the exception of interdependence, all deviance, citizenship, and perceived outcome scales were significant at the $p < .001$ level, supporting the use of the average scores as team measures. ICC(1) and ICC(2) were calculated based on the results from the ANOVAs. ICC(1) reflects the extent of within- versus between-group variability, and ICC(2) provides an estimate of the reliability of the group means (Bliese, 2000). Interdependence displayed more within group variance than between group variance, so could not be aggregated to the team level. Upon further examination, there was no difference across business and communication classes in the lack of justification for aggregation for interdependence. ICC(1) and ICC(2) values for all group-level measures are shown in Table 10.

Control Variables. Group size was examined as a control variable because larger teams have the potential for more heterogeneity (e.g., Jackson et al., 1991) and size may influence group outcomes (e.g., Steiner, 1972). Class was also controlled for because ten different classes were included in the study sample. Because cognitive ability has been shown to predict team performance (e.g., Devine & Philips, 2001), GPA was entered as a control variable when team performance was the dependent variable.

Correlation Analysis

In order to examine the basic relationships between variables, correlations were examined. The correlation analysis revealed significant relationships between mean overall deviance and mean citizenship ($r = -.373, p < .001$), citizenship norms and deviance norms at time 1 ($r = -.806, p < .001$), citizenship norms and deviance norms at time 2 ($r = -.866, p < .001$), citizenship norms time 1 and citizenship norms time 2 ($r = .706, p < .001$), and deviance norms at time 1 and time 2 ($r = .603, p < .01$). Minimum citizenship behavior was correlated with team satisfaction, ($r = .471, p < .001$) and team viability ($r = .508, p < .001$). In addition, Neuroticism was related to citizenship norms time 2 ($r = -.283, p < .05$) and deviance norms time 2 ($r = .316, p < .05$), as well as satisfaction ($r = -.363, p < .01$) and viability ($r = -.324, p < .05$). Extraversion was related to citizenship norms at time 1 ($r = .443, p < .001$) and time 2 ($r = .482, p < .001$), deviance norms at time 1 ($r = -.430, p < .001$) and time 2 ($r = -.554, p < .001$), mean citizenship behavior ($r = .483, p < .001$), minimum citizenship ($r = .502, p < .001$), citizenship variance ($r = -.312, p < .05$), satisfaction ($r = .362, p < .01$) and viability ($r = .395, p < .01$). Agreeableness was related to citizenship norms time 2 ($r = .269, p < .05$), deviance norms time 2 ($r = -.305, p < .05$), mean citizenship ($r = .27, p < .05$), and maximum citizenship ($r = .334, p < .05$) and Conscientiousness was related to citizenship norms at time 2 ($r = .389, p < .01$), deviance norms at time 2 ($r = -.453, p < .001$), mean citizenship

($r=.315$, $p<.05$) and maximum citizenship ($r=.363$, $p<.01$). Interestingly, age was found to have a significant, positive relationship with lack of effort, interpersonal deviance and overall deviance. Age was also positively correlated with minimum, maximum and mean deviance. Additional correlations can be seen in the correlation matrix, Table 11.

Test of Hypotheses

In order to test hypotheses 1 through 4, hierarchical regression analyses were performed to evaluate the impact of Big Five personality traits on team member deviance and team citizenship behavior (Table 12). Team size and class were entered in step one of the regression and Agreeableness, Conscientiousness, Extraversion, Neuroticism and Openness to Experience were entered in the second step. Hypothesis 1a proposed that teams with members high in agreeableness would be less likely to engage in maximum team level deviance. Agreeableness and maximum deviance were not significantly related ($\beta = -.138$, $p > .05$); therefore, Hypothesis 1a was not supported. Hypothesis 2a, which stated that teams with members higher on conscientiousness would be less likely to engage in maximum deviance, was not supported by the regression analysis ($\beta=.089$, $p > .05$). A negative relationship between extraversion in teams and maximum team deviance was proposed in Hypothesis 3a; however, the hypothesis was not supported by the regression analysis ($\beta= .008$, $p >.05$). Hypothesis 4a proposed that teams with members higher on Neuroticism are more likely to engage in maximum deviance. This hypothesis was not supported by the results of the regression analysis ($\beta=-.024$, $p >.05$).

Hierarchical regression was also used to test the relationship between team citizenship behavior and the Big Five personality variables, controlling for team size and class. Hypothesis 1b stated that team agreeableness is positively related to minimum team citizenship behavior, but was not supported by the regression analysis ($\beta = .184$, $p >.05$). Hypothesis 2b, which stated

that team members higher on conscientiousness would also be higher on minimum team citizenship behavior, was also not supported ($\beta = -.179, p > .05$). A correlation analysis showed a significant relationship between minimum citizenship behavior and extraversion ($r = .502, p < .001$). In addition, the regression analysis found that teams with members higher on extraversion were more likely to engage in team citizenship behavior, supporting hypothesis 3b ($\beta = .652, p < .01$). Support was not found for Hypothesis 4b, which proposed that neuroticism would be negatively related to minimum team citizenship behavior. The correlation between neuroticism and minimum citizenship behavior was negative, but not significant ($r = -.22, p > .05$). The results of the hierarchical regression were also not significant ($\beta = .087, p > .05$).

Hierarchical regression analyses were also performed to evaluate the contributions of deviance and citizenship behavior to team outcomes (team grade, team satisfaction, and team viability), controlling for GPA, team size, and class. Minimum citizenship behavior was shown to be positively related to team grade ($\beta = .277, p < .05$); therefore, Hypothesis 5a was supported. Teams with higher scores for the minimum citizenship behavior also had higher ratings for both team satisfaction ($\beta = .471, p < .001$) and team viability ($\beta = .504, p < .001$), supporting Hypotheses 5b and 5c. Hypothesis 5d proposed that teams with higher scores for minimum citizenship behavior would receive higher ratings for team satisfaction and team viability than for team performance. In order to examine this hypothesis, the formula for the significance of the difference between dependent r 's was used (Cohen & Cohen, 1983). The calculated differences between team grade and team satisfaction ($t = 1.68, n.s.$) and team grade and team viability ($t = 1.78, n.s.$) were not significant. Hypothesis 5d was not supported. Results are shown in Table 13.

Hypotheses 6a-6d addressed the relationship between overall team member deviance and team performance, team satisfaction, and team viability. Hypothesis 6a proposed that maximum

deviance and team performance would be negatively related. As shown in Table 14, the results reveal show a negative, but non-significant relationship between maximum deviance and team performance ($\beta = -.175, p > .05$). Hypothesis 6b stated that there would be a negative relationship between maximum deviance and team satisfaction. The results were in the predicted direction, but were not significant ($\beta = -.134, p > .05$). Hypothesis 6c proposed that maximum deviance and team viability are negatively related. As shown in Table 14, the results of the regression analysis were in the hypothesized direction, but were not significant ($\beta = -.194, p > .05$).

Hypothesis 6d proposed a negative relationship between team member deviance variance and team satisfaction and team viability. Two separate regressions were run with the control variables entered in step one and variance in deviance entered in step two. In the first regression, team satisfaction was the dependent variable, and in the second regression team viability was the dependent variable. As shown in Table 15, although in the hypothesized direction, the results were not significant for either satisfaction or viability ($\beta = -.081, p > .05$; $\beta = -.161, p > .05$, respectively).

Hypotheses 7a-7c predicted relationships among the three proposed sub-scales of deviance (lack of effort, interference, and incivility) and the outcome variables (team performance, team satisfaction, and team viability). Instead of three components of deviance, factor analysis showed support for two dimensions labeled lack of effort and interpersonal deviance. The two factors were tested in relation to the three outcome variables, although they do not coincide directly with the hypothesized relationships. Correlational analyses revealed that maximum lack of effort was negatively associated with team grade ($r = -.323, p < .05$) and team satisfaction ($r = -.268, p < .05$), but only approached significance for team viability ($r = -.258, p = .055$). Maximum interpersonal deviance was not found to correlate significantly with team

grade ($r = -.099, p > .05$), team satisfaction ($r = -.076, p > .05$), or team viability ($r = -.126, p > .05$). Three regression analyses were run for maximum lack of effort, controlling for team size, class, and GPA (when team grade was the dependent variable). As shown in Table 16, regression analyses revealed that maximum lack of effort was significantly related to team grade ($\beta = -.289, p < .05$), team satisfaction ($\beta = -.282, p < .05$), and team viability ($\beta = -.280, p < .05$). In contrast, maximum Interpersonal deviance was not significantly related to any of the outcome variables in the regression analyses (see Table 17).

Hypotheses 8a and 8b concerned the relationship between deviance and citizenship norms and team outcome variables. Hypothesis 8a stated that citizenship norms would be positively related to team performance, team viability, and team satisfaction. For norms at time 1, Table 20 reveals support for satisfaction and viability ($\beta = .653, p < .001$; $\beta = .646, p < .001$; respectively), but no support for team grade ($\beta = .250, p > .05$). For norms at time 2, the relationships were significant for performance ($\beta = .379, p < .01$), satisfaction ($\beta = .851, p < .001$) and viability ($\beta = .826, p < .001$; Table 22). Hypothesis 8b proposed that deviance norms would be negatively related to team performance, team satisfaction, and team viability. For deviance norms at time 1, the hypothesis was supported for satisfaction and viability ($\beta = -.612, p < .001$; $\beta = -.606, p < .001$; respectively), but not team grade ($\beta = -.281, p > .05$; Table 21). For deviance norms at time support was found for team performance ($\beta = -.402, p < .01$), satisfaction ($\beta = -.803, p < .001$) and viability ($\beta = -.737, p < .001$; Table 23). Therefore, Hypotheses 8a and 8b were partially supported for citizenship and deviance norms at time 1 and fully supported for citizenship and deviance norms at time 2. Interestingly, the means for citizenship norms and norms from time 1 to time 2 did not seem to change significantly, but the standard deviations increased over time, so there appears to be more divergence at time 2.

Hypothesis 9 addressed the strength of the relationship between maximum deviance and team performance versus maximum citizenship behavior and team performance. It was hypothesized that the deviance-performance relationship would be stronger than the citizenship-performance relationship. As shown in Table 27, when both maximum team deviance and maximum team citizenship behavior are entered in the same regression equation, neither maximum team deviance ($\beta = -1.37, p > .05$), nor maximum team citizenship behavior were significant predictors of team grade ($\beta = .192, p > .05$). Therefore, Hypothesis 9 was unsupported.

Hypotheses 10a and 10b suggested that task interdependence was a moderator of the deviance-team outcome relationships and the citizenship-team outcome relationships. These hypotheses could not be tested because there was not sufficient within group agreement to aggregate interdependence to the team-level of analysis.

Ancillary Analyses

Although prior research has investigated personality (e.g., Barrick et al., 1998) and cognitive ability (Day, Arthur, Miyashiro, Edwards, Tubre & Tubre, 2004) as configural properties, prior research has not considered team member deviance and citizenship behavior as configural properties. Because of the exploratory nature of the research, all four operationalizations (mean, minimum, maximum, and variance) for team member deviance and citizenship behavior were investigated, based on the study by Barrick and colleagues (1998). Because the following analyses were not predicted a priori the spurious nature of the results should be regarded with caution.

The correlation analyses revealed that maximum lack of effort was not the only significant operationalization of deviance. Mean and variance lack of effort were also significantly related to team performance ($r = -.275, p < .05$; $r = -.270, p < .05$, respectively). Based

on the results of the correlation table, hierarchical analyses were run to further examine the relationships between mean and variance lack of effort and team performance.

Controlling for team size, class and GPA, neither mean lack of effort ($\beta = -.229, p > .05$) nor lack of effort variance ($\beta = -.240, p > .05$) was a significant predictor of team grade. Multiple operationalizations of team citizenship behavior were also considered in the present study. Upon examination of the correlation table, other operationalizations of citizenship were significantly correlated with satisfaction and viability. The correlation matrix exhibits significant relationships between citizenship behavior mean and satisfaction ($r = .489, p < .001$) and viability ($r = .506, p < .001$); maximum citizenship behavior and satisfaction ($r = .491, p < .001$) and viability ($r = .508, p < .001$), and citizenship behavior variance and viability ($r = .371, p < .01$). Hierarchical regressions were run to further explore these relationships. When mean citizenship was regressed on satisfaction (controlling for team size and class), the relationship was significant ($\beta = .514, p < .001$). In addition mean citizenship regressed on viability was also significant ($\beta = .523, p < .001$). Maximum citizenship behavior was also significant when regressed on satisfaction ($\beta = .477, p < .001$) and viability ($\beta = .377, p < .01$). Finally, when citizenship behavior variance was regressed on viability citizenship behavior was significant ($\beta = -.279, p < .05$).

Although not included in the hypotheses, three types of conflict were examined through correlation analyses. It was found that the dimensions of conflict are differentially related to a variety of variables. Specifically, task conflict, an awareness of differences in viewpoints and opinions pertaining to a group task (Amason & Sapienza, 1997), was found to be related mainly to deviance and the dimensions of deviance. Task conflict was significantly related to mean lack of effort ($r = .296, p < .05$), minimum lack of effort ($r = .267, p < .05$), mean interpersonal

deviance ($r = .381, p < .01$), maximum interpersonal deviance ($r = .344, p < .01$), interpersonal deviance variance ($r = .310, p < .05$), and mean deviance ($r = .366, p < .05$). The only non-deviance variable that task conflict was correlated with was citizenship norms at time 1 ($r = -.268, p < .05$). This makes sense because, by definition, task conflicts are void of the intense interpersonal negative emotions that are more commonly associated with relationship conflict (Jehn & Mannix, 2001).

Relationship conflict, which is an awareness of interpersonal compatibilities, includes affective components and involves personal issues such as dislike among group members (Jehn & Mannix, 2001). This type of conflict was found to relate more to citizenship behaviors than deviance behaviors. Relationship conflict was negatively related to citizenship norms at time 1 ($r = -.548, p < .001$) and 2 ($r = -.518, p < .001$) and positively correlated with deviance norms at time 1 ($r = .465, p < .001$) and time 2 ($r = .489, p < .001$). It was also related to mean interpersonal deviance ($r = .279, p < .05$), mean citizenship ($r = -.409, p < .01$), minimum citizenship ($r = -.407, p < .01$), satisfaction ($r = -.537, p < .001$), viability ($r = -.571, p < .001$) and extraversion ($r = -.413, p < .01$).

Process conflict involves controversies about how task accomplishment will proceed, pertaining to the issues of duty and resource delegation (Jehn & Mannix, 2001). The relationships for process conflict were similar to those for relationship conflict with a few exceptions. Process conflict was negatively correlated with citizenship norms at time 1 ($r = -.326, p < .05$) and time 2 ($r = -.391, p < .01$), mean citizenship ($r = -.29, p < .05$), maximum citizenship ($r = -.327, p < .05$), satisfaction ($r = -.409, p < .01$), and viability ($r = -.383, p < .01$). It was positively correlated with deviance norms at time 1 ($r = .263, p < .05$) and time 2 ($r = .422, p < .001$), as well as mean interpersonal deviance ($r = .325, p < .05$). When hierarchical regressions were run controlling

for team size and class, the relationships between the previously mentioned variables and conflict remained significant for all relationships except one. Minimum lack of effort was only marginally significant, but the relationship may have been significant with a slightly higher sample size.

Apathy was another variable that was not included in the hypotheses, but was included in the surveys that were distributed. Apathy was explored in order to determine its similarity to deviance and its importance when measuring deviance in future studies. For the purpose of the present study, apathy was characterized by a person's lack of connection to the team. If someone did not feel tied to the team and did not care about what happened in the team, the apathy score would be high. If a person was personally vested in the team, the apathy score would be low. The factor structure of apathy was evaluated using Principal Axis Factoring with oblique rotation. Inspection of the analysis showed a one factor solution. The item loadings for the 4 items can be seen in Table 9. The scale reliability was .62. Apathy was significantly positively correlated with all of the deviance dimensions and operationalizations except minimum interpersonal deviance (correlations ranged from $r=.32$ to $r=.62$). Apathy was also significantly negatively correlated with all operationalizations of citizenship behavior except citizenship behavior variance, where the relationship was positive. Apathy was significantly related to team performance ($r= -.457$, $p <.001$), team satisfaction ($r= -.374$, $p <.01$) and team viability ($r= -.378$, $p <.01$).

Although Openness to Experience was not included in the hypotheses, further exploration identified a significant relationship with deviance. Openness had a negative relationship with mean overall deviance ($r= -.313$, $p <.05$), minimum overall deviance ($r= -.337$, $p <.05$) and maximum overall deviance ($r= -.268$, $p <.05$). It also displayed a negative correlation with mean interpersonal deviance ($r= -.369$, $p <.01$), minimum interpersonal deviance ($r= -.361$, $p <.01$),

maximum interpersonal deviance ($r = -.312, p < .05$) and variance in interpersonal deviance ($r = -.294, p < .05$). Additionally, it was related to minimum lack of effort ($r = -.335, p < .05$).

Chapter 4

DISCUSSION

Little research has considered team functioning, citizenship behavior, and deviance simultaneously or attempted to integrate these streams of research to better understand how to promote team effectiveness (LePine et al., 2000). Therefore, the purpose of the research was to examine organizational citizenship behavior and deviance in a nomological net of antecedents (personality) and outcomes (performance, satisfaction, and viability) at the team-level. The present study adds to the extant literature by examining personality, deviance, citizenship behavior, norms, satisfaction, viability, and performance at the team level. Existing research on team level deviance and citizenship behavior generally aggregate the variables using the mean value. Although significant relationships have been found with this method of aggregation, other methods of aggregation have not been adequately explored. The present study addressed this gap in the literature by examining deviance and citizenship behavior as configural variables. In addition, very few studies at the team level have explored deviance and citizenship simultaneously, as is done in the present study. Each of these research issues is discussed in more detail below. The main focus of the research was to investigate how team deviance and citizenship behavior are related to personality and team outcomes (satisfaction, viability, and performance).

Deviance

Contrary to the three dimensions that were proposed (lack of effort, incivility & interference), analyses revealed that deviance consists of two dimensions: lack of effort and an interpersonal deviance. The results of the factor analysis mirror what has been found in the

deviance literature at the individual-level (e.g., Bennett & Robinson, 2000) in that lack of effort maps onto organizational deviance and interpersonal deviance maps onto interpersonal deviance.

In contrast, although previous research has found significant relationships between personality and deviance at the individual-level (e.g., Lee, Ashton & Shin, 2005; Salgado, 2002), these findings did not translate to the team level in the present study. Lee, Ashton and Shin (2005) found that extraversion and agreeableness predicted interpersonal deviance and extraversion and conscientiousness predicted organizational deviance. In addition, Salgado (2002) found that conscientiousness and agreeableness predicted deviant behaviors. It was proposed that the same relationships would hold true at the team-level. However, the predicted relationships between maximum team member deviance and the Big 5 personality variables were not supported. Maximum deviance was not significantly related to Neuroticism, Extraversion, Agreeableness or Conscientiousness. So, although at the individual level research has shown that selecting employees on the basis of the personality traits of conscientiousness, emotional stability, and agreeableness is likely to reduce the frequency and severity of deviant behavior that occurs in organizations (Colbert et al., 2004), the results were not replicated at the team level. A possible explanation for these findings is that deviance scores were restricted in range. The maximum deviance score was 5.86 (only one person had a rating this high), and the majority of the individual deviance scores were lower than 3.0. As restriction of range attenuates relationships, this may explain why the predicted relationships were not found.

Another possible explanation for the unexpected findings might have been the choice of maximum deviance as the operational definition of deviance. Mean personality may have a stronger relationship with mean deviance, minimum deviance or variance in deviance as compared to maximum deviance. For example, a significant relationship between deviance and

openness to experience did exist when additional operationalizations of deviance (mean, minimum, maximum, variance) and deviance dimensions (lack of effort, interpersonal deviance) were considered. These findings also suggest that it is important to consider the operationalization of the team variables when examining relationships. Future research should consider the work done by Barrick et al. (1998) that looked at multiple operationalizations of team-level personality and relationships with performance.

Openness to Experience was significantly correlated with interpersonal deviance (mean, minimum, maximum, variance), overall deviance (mean, minimum, maximum) and lack of effort (minimum). Individuals with high openness to experience are characterized as imaginative, sensitive, intellectual, and curious (Neuman, Wagner, & Christiansen, 1999). They also tend to enjoy intellectual problems and are more willing to try new things (Costa & McCrae, 1992; King, Walker, & Broyles, 1996; McCrae, 1987). Because this facet of personality is not task focused, but is somewhat interpersonal in nature, it follows that it would be related to the interpersonal dimension of team member deviance. In addition, the deviance scale is strongly influenced by the interpersonal facet, contributing to the significant relationship between openness to experience and deviance. Minimum lack of effort was negatively related to Openness to Experience, suggesting that the lower the level of lack of effort, the more open the team members were. This suggests that more open team members are also more likely to be team contributors, although causality cannot be determined based on the analyses. Because these relationships were examined in an ad hoc manner, they should be interpreted with caution.

The hypotheses concerning team member deviance and team performance were based on research at both the individual- level and team- level. At the individual level, Rotundo and Sackett (2002) found that supervisors placed heavier weights on task performance or deviance

than on citizenship behavior in determining overall job performance of individuals. In addition, Mount, Johnson, Ilies, and Barrick (2002) found that self-reports of deviance were significantly related to supervisor ratings of job performance. At the team level, Dunlop and Lee (2004) found that team level deviance strongly correlated with supervisor ratings of team performance. The present study attempted to replicate these findings, but also extended the research by examining deviance as a configural variable.

The maximum deviance hypotheses were based on the idea that the effects of extremely deviant employees on performance may be stifled to a degree when aggregating based on mean values. Aggregating deviance within a team can conceal the disproportionate impact that a small number of extremely deviant employees may have on business unit performance (Dunlop & Lee, 2004). However, the hypothesized relationships between maximum team member deviance (overall scale) and team grade, team satisfaction, and team viability were not supported. Although the relationships were in the predicted directions, they were not significant, suggesting a lack of power. A sample size of 56 teams may not have been large enough to detect relationships for deviance, which has a low base rate. When multiple operationalizations of overall team-level deviance were examined, results revealed that minimum, maximum, mean nor variance aggregations were significantly related to team grade, team satisfaction or team viability.

However, when overall deviance was broken down and examined as the two dimensions, significant results were found. Specifically, mean lack of effort, maximum lack of effort and variance in lack of effort were all found to be significantly negatively related to team performance. These three measures of deviance were related to team grade because they all capture the scores of the members highest on deviance, whereas minimum deviance does not

assess whether there is one highly deviant person on the team. By utilizing operationalizations that do not conceal the disproportionate impact that a small number of extremely deviant individuals can have on team performance, a truer picture of how harmful team member deviance can be emerges. In terms of implications for the operation of a team, the results suggest that mechanisms need to be put in place to manage even minor manifestations of lack of effort.

The finding that interpersonal deviance was not related to team grade suggests that only certain deviant behaviors will affect the performance of the team. If team members are rude to each other and try to sabotage each other on a personal level, this may not affect the performance of the team. However, if the deviant behaviors include behaviors such as putting little effort into team work, or avoiding work, team performance is more likely to be affected.

With regard to satisfaction and viability, maximum lack of effort is the only measure of deviance that was related to these outcome variables. The overall deviance scale, the interpersonal deviance dimension and the other configurations of deviance (mean, minimum, variance) were not related to satisfaction or viability. Teams with at least one member rating very high on deviance report more dissatisfaction with their team experience. The more deviant the member, the more unsatisfied the team. The mean does not capture this effect because it may balance out the highs and lows. Several different configurations can result in a team with a mean score at the scale midpoint, including a few very high and very low deviance scores, all members at the mid-range, or a whole range of low, medium and high scores that would average into a moderate mean.

Citizenship Behavior

It was hypothesized that minimum citizenship would be positively related to conscientiousness, extraversion, neuroticism, and agreeableness. The results showed that teams

with members higher on extraversion had higher minimum levels of citizenship behavior than teams with members low on extraversion. This finding corresponds with personality-citizenship behavior research done at the individual level analysis (e.g., VanScotter & Motowidlo, 1996). One possible explanation for this finding is that extroverted people are more likely to share their opinions and feelings and therefore were able to affect the level of citizenship in the team. Because extraverted members are more dominant and more likely to assume a leadership role in the team, they may have been skillful in influencing other team members to engage in more citizenship behaviors. At the group level, early behaviors play an important role in the formation of group norms (Feldman, 1984). Consequently, the presence of extraverts may foster the development of initial norms of free expression and communication; therefore encouraging citizenship in a team.

Although relationships have been found at the individual level between citizenship and conscientiousness (e.g. Organ & Ryan, 1995; Miller, Griffin & Hart, 1999) as well as agreeableness (e.g., VanScotter & Motowidlo, 1996; McManus & Kelly, 1999), these findings were not replicated at the team level in the present study. Conscientious individuals are generally purposeful, hardworking, achievement striving, dependable, and persistent so they are more likely to exert more effort than less conscientious individuals in a team (Barrick et al., 1993; Mount & Barrick, 1995). Although this has been found to be true for conscientious individuals, it did not translate to the team level for the present study. Agreeable individuals tend to be courteous, good-natured, flexible, trusting, and cooperative (Colbert et al., 2004), suggesting that agreeable members should interact well with team members (Mount et al., 1998). However, this relationship did not hold for the team level analysis. Because the expected relationships were not found, additional operationalizations of citizenship behavior were examined. The results for

mean team citizenship behavior corresponded with previous research at the individual level, finding significant positive correlations with extraversion, agreeableness, and conscientiousness. In addition, maximum citizenship behavior correlated positively with agreeableness and conscientiousness; and citizenship behavior variance correlated positively with extraversion. These findings suggest that mean citizenship behavior may be the most representative operationalization of team citizenship behavior.

Based on previous research at the individual- (e.g., Avila, Fern, & Mann, 1988; MacKenzie et al., 1993) and team- (e.g., George & Bettenhausen, 1992; Podsakoff et al., 1997) levels, it was predicted that team citizenship behavior would be negatively related to team performance. However, team performance was only found to relate to minimum team member citizenship behavior. None of the specific dimensions of citizenship behavior, and only one of the different citizenship operationalizations (minimum) was related to team grade. A possible explanation may be related to the differences in the nature of the teams being studied, as previous research has used work or business teams as opposed to the present study which involved student teams. In addition, previous research sampled teams with a longer tenure than those in the present study. Students generally work together for only a semester, whereas teams in a work setting are more likely to work together on a regular basis or have contact again in the future.

It is also possible that the lack of findings may be due to low sample size or task type. Although a sample of 56 teams is comparable to the number of teams used in other team- level studies (e.g. Dunlop & Lee, 2004 had an N of 36; Robinson & O'Leary-Kelly, 1998 had an N of 71), low power to detect effects may have resulted. Regarding task type, the assignments that were engaged in by the teams were task-focused and fairly concrete, with considerable direction

provided by the instructors. This reduced level of ambiguity could have affected the need to rely on other team members for support and information, decreasing the level of citizenship behaviors necessary to make the team function effectively. Because many of the team members worked separately and then combined their efforts at the end of the project (pooled interdependence), citizenship behaviors may not have been as crucial to performance as in other team settings. In addition, as was pointed out by Dunlop and Lee (2004), it may be that team members need to have a certain amount of experience for their good intentions to actually convert to improved performance.

The findings revealed that team member citizenship behavior was related to team satisfaction and team viability. Specifically, mean, minimum, and maximum citizenship behavior were all significantly correlated with team satisfaction as well as viability. The only operationalization of citizenship behavior that was not related to team satisfaction or viability was variance. Citizenship behavior related to satisfaction and viability because team members were helping each other and giving back to the team. This should lead team members to be more satisfied with their team experience and want to remain with the team in the future.

Deviance & Citizenship Behavior

It was hypothesized that there would be a stronger relationship between maximum team member deviance and team performance than between maximum citizenship behavior and team performance. However, neither maximum team member deviance nor maximum citizenship behavior was significantly related to team performance. Interestingly, when other operationalizations and dimensions of deviance and citizenship behavior were considered, a different picture was revealed. Mean interpersonal deviance, maximum lack of effort and variance in lack of effort were significantly related to team performance. None of the citizenship

behavior operationalizations were related to team performance. This suggests that deviance may be more crucial than citizenship behavior in determining team performance.

The results provided evidence that team member deviance and team member citizenship behavior are distinct constructs. Not only were the constructs not highly correlated ($r = -.373$), but they did not have similar relationships with other variables. For example, maximum lack of effort, mean lack of effort and variance in lack of effort was correlated with team grade, but only minimum citizenship behavior was related to team grade. Citizenship was consistently related to satisfaction and viability, but only maximum lack of effort was related to satisfaction. None of the other operationalizations or dimensions of deviance were related to satisfaction. Deviance and citizenship behavior also showed dissimilar relationships with personality variables. Lack of effort, interpersonal deviance and overall deviance were related to openness to experience, while citizenship behavior was related to extraversion.

The team-level findings in the current study support a meta-analysis by Dalal (2005), which showed that the typical relationship between OCB and CWB was modestly negative at the individual-level. Dalal's findings suggest that, at the person level, OCB & CWB are not opposite poles of the same latent factor and do not exhibit very similar patterns of relationships with external variables. It appears that at both the individual level and the team level, deviance and citizenship are moderately negatively related and are not similarly related to antecedents or outcome variables. Because deviance and citizenship are separate constructs, they can occur simultaneously. Just because a person is low on one does not mean the person is high on the other. This allows for the possibility of someone being both high on deviance and high on citizenship at a personal level and within a team. A person may engage in some citizenship behaviors within a team, but may also engage in some deviance behaviors within the same team.

Norms

Much of the deviance literature talks about deviance in relation to norms, but does not actually assess norms empirically (Robinson & Bennett, 1997; Bennett & Robinson, 2000). The present study attempted to address this issue by not only measuring deviance and citizenship behaviors, but also assessing the norms that exist in the team for engaging in the behaviors. It was hypothesized that citizenship and deviance norms would be related to team grade, team satisfaction, and team viability. As expected, citizenship norms and team satisfaction, and citizenship norms and team viability were positively related at time 1. In addition, negative relationships between deviance norms at time 1 and team satisfaction as well as team viability confirmed hypotheses. Neither citizenship norms nor deviance norms were found to relate to team grade at time 1. When examined at time 2, citizenship norms and deviance norms were positively related to team grade, team satisfaction and team viability. Although norm means did not change significantly from time 1 to time 2, the standard deviations did increase, suggesting more divergence on the norms at time 2. It seems that norms formed earlier in the life of the team affect the more interpersonal operations of the team and not necessarily the technical performance as reflected in the team grade. However, when norms were assessed towards the end of the life of the team, there was a significant relationship with team grade. In general, norms for helping behaviors have a positive effect on the team, whereas more negative/hindering behaviors negatively affect the satisfaction and viability of the team.

Interdependence

It was hypothesized that the level of interdependence in the team would moderate the relationship between team member deviance and the outcome variables and team citizenship behavior and team outcomes. However, there was not enough agreement within the teams to

aggregate interdependence to the team- level. Van der Vegt, Emans and Van de Vliert (2001) found that, despite significant between-group differences for task interdependence, there were also substantial within-group differences, raising issues about agreement levels for task interdependence.

The significant variability in the types of team assignments that students were assigned across communication and business classes may have affected interdependence ratings. For the communications classes, team members worked together to deliver class presentations, which occurred throughout the semester, but were not long term. In contrast, the management classes were assigned one large scale project for the entire semester. Upon further examination, ICC ratings did not vary by class for interdependence; therefore, the variability in team assignments does not explain the lack of support for aggregation.

Limitations and Future Research

When interpreting the study's results, it is important to consider the limitations and strengths of the research. As the present study was conducted solely with college students, generalizability of results to an industry setting is unclear. Student teams may be more generalizable to project and ad hoc work teams in organizations than work teams with longer tenures. Future research would benefit from a field study using workplace teams. Another potential limitation of the present study is that the sample size is limited (56 teams), suggesting that statistical power was relatively weak. Although it is not uncommon to find group-level investigations that are based on relatively small sample sizes (e.g. Dunlop & Lee, 2004), it is important to interpret such results with caution. In addition, the variability across classes could be considered a limitation. Classes from two different departments were used, with 5 classes

from each department. Although controlled for in the analyses, the different classes used different grading systems and different projects requiring varying levels of interdependence.

Participants were asked to self-report their level of deviance and citizenship; therefore, it is possible that participants under-reported deviance and over-reported citizenship. Future research should explore alternatives to self-report of deviance and citizenship such as peer ratings or number of complaints reported to the instructor or teaching assistant. However, as no measure is perfect, other limitations may result. For example, peer ratings may be inflated when teams set a norm not to “rat” on each other or when members refuse to rate each other poorly for fear of negative repercussions. Qualitative data could also be collected from instructors to gain a clearer picture of how the team operated.

Missing data was also an issue in the present study, as not every member of a team chose to answer the surveys. It is possible that the most deviant team members may have been the most likely not to complete the survey, either because they were not present when the surveys were distributed or because they just chose not to respond. Thus, the data may not have included the most deviant team members, attenuating study results. In addition, missing data has implications for aggregation based on standard deviation, maximum, and minimum. The aggregation of the configural variables is highly sensitive to missing data in a way that the mean is not. In addition, there was a restriction of range for deviance and citizenship behavior. Only one person rated a 5.86 for deviance and very few people rated below a 3 for citizenship behavior. This has implications for using the maximum, minimum and mean when the entire scale is not being represented in the participants’ responses. There was also some restriction of range in the performance scores as well. In general, class grades were positively skewed, resulting in none of the teams receiving lower than a 71.3% on their team projects.

Although it was implied that workplace behavior caused team performance in the present research, it is important to note that the links between workplace behavior and team performance may well be recursive in that poor team performance may act as a precipitator of deviance. Although the data for the present study were collected over a 4-5 month period, a longer time frame should be considered in future research, as it may increase the chances that deviant behavior may take longer to emerge and affect team performance. Given that interpersonal deviance may be more important in the long-term or it may take longer to become an issue in a team, the short term nature of the student teams may not have provided sufficient time for deviance to become salient.

Since examining team level citizenship behavior and deviant behavior together as configural variables is a relatively new area of research, additional research is necessary to examine additional antecedents and outcome variables. Future studies can build on these results by considering various operationalizations of team behaviors as well as examining both team deviance and team citizenship behavior in the same study. In addition, future research should also consider measuring deviance and citizenship norms when examining the importance of these variables to team performance.

Another interesting avenue for future research would be to examine mediators and moderators of the team member deviance and team performance relationship, as well as the team citizenship behavior and team performance relationship. Task interdependence was proposed as a moderator in the present study, but could not be tested due to the inability to aggregate to the team level. Future research should examine multiple types of interdependence (e.g., task, reward/outcome, goal). Although only explored in an ad hoc manner in the present study, conflict may mediate the relationship between deviance and team outcomes.

Conclusion

Little research has considered team functioning, citizenship behavior, and deviance simultaneously or attempted to integrate these streams of research to better understand how to promote team effectiveness. Therefore, the purpose of the research was to examine organizational citizenship behavior and deviance in a nomological net of antecedents (personality) and outcomes (performance, satisfaction, and viability) at the team-level. Specifically, team member deviance and citizenship behavior were examined as both configural (aggregated via minimum, maximum, variance, mean) and shared (norms demonstrating within group agreement) properties in their relationship to team outcomes. By examining both constructs in the same study, the relative effects of citizenship and deviance could be explored. In addition, deviance was explored as a multidimensional construct at the team-level and found to have two dimensions: lack of effort and interpersonal deviance.

Results from a study of 56 student teams provided evidence that team member deviance and team member citizenship behavior are distinct constructs. Lack of effort (mean, maximum, variance) was negatively related to team grade, but only citizenship behaviors operationalized as the lowest scorer in the team was related to task performance. In contrast, citizenship behaviors (mean, maximum, minimum) demonstrated consistent positive relationships with both team satisfaction and viability, whereas team satisfaction was only found to relate to maximum lack of effort. Citizenship norms were positively related and deviance norms were negatively related to team grade, team satisfaction and team viability. With the exception of a positive relationship between extraversion and minimum citizenship behavior, relationships between hypothesized Big Five personality traits and deviance as well as between citizenship behaviors and Big Five personality traits were not significant.

Does the bad outweigh the good or vice versa? The present study found that the bad outweighs the good when the outcome variable is team performance, when lack of effort is the deviance dimension measured, and when lack of effort is operationalized as mean, maximum, or variance. Because a lack of effort by even one member of a team can have negative effects on the performance of the whole team, it is important to try to mitigate the level of deviance within a team. In the short-term context of this study, citizenship behaviors were not strong enough to overcome the negative effects of deviance on team performance. The good seems to outweigh the bad when the outcome is team satisfaction or team viability. Team member citizenship behavior is consistently related to the satisfaction and the viability of the team. Thus, team member citizenship behavior may be more important when teams will be working together for long periods of time or when they will be required to work together in the future.

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Appendix A: Tables & Figures

Table 1. *Citizenship Definitions*

Term	Definition	Authors
Prosocial Organizational Behavior	Behavior that is directed toward an individual, group, or organization, with the intention of promoting their welfare.	Brief & Motowidlo (1986)
Organizational Citizenship Behavior	Individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization. Performance that supports the social and psychological environment in which task performance takes place	Organ (1988) Organ (1997)
Models of Soldier Effectiveness	Soldier effectiveness is more than just successfully performing assigned tasks. The concepts of organizational socialization, organizational commitment and morale can be combined and integrated into a three-dimension performance model.	Borman, Motowidlo, & Hanser (1983) Campbell, 1990
Contextual Performance	Contextual performance refers to activities that support the social and psychological context in which the organization's technical core is embedded.	Borman and Motowidlo (1993)

Table 2. *Deviance Definitions*

Term	Definition	Authors
Antisocial Behavior	Any behavior that brings harm, or is intended to bring harm to the organization, its employees, or its stakeholders.	Giacalone & Greenberg (1997)
Workplace Deviance	Voluntary behavior of organizational members that violates significant organizational norms and in so doing threatens the well-being of the organization and/or its members	Robinson & Bennett (1995, 1997)
Employee/Organizational vice	An act that betrays the trust of either individuals or the organizational community	Moberg (1998)
Organizational Misbehavior	Any intentional action by members of organizations that violates core organizational and/or societal norms	Vardi & Wiener (1996)
Workplace Aggression	Any form of behavior by individuals that is intended to harm current or previous co-workers or their organization.	Baron & Neuman (1996); Folger & Baron (1996)
Organizational Retaliatory Behavior	Adverse reactions to perceived unfairness by disgruntled employees toward their employer	Skarlicki & Folger (1997)
Non-compliant Behavior	Non-task behaviors that have negative organizational implications	Puffer (1987)
Organization-motivated Aggression	Attempted injurious or destructive behavior initiated by either an organizational insider or outsider that is instigated by some factor in the organizational context.	O'Leary-Kelly, Griffin, & Glew (1996)
Counterproductive Work Behavior	Behavior that is intended to have a detrimental effect on organizations and their members.	Fox, Spector, & Miles (2001)

Table 3. *Team Deviance Factor Loadings*

	Loadings	
	1	2
	Interpersonal Deviance	Lack of Effort
1. I have told other team members that I was sick when I was not sick.	.138	.336
2. I have daydreamed rather than doing my team's work.	-.068	.645
3. I have come to team meetings late or left early without approval.	.171	.443
4. I take additional or longer breaks during team meetings or functions than is acceptable in the team.	.251	.524
5. I make frequent and/or long trips to the water fountain, vending machines, or restroom to avoid work in my team.	.384	.380
6. I have been absent from team functions or meetings without sufficient cause.	.006	.538
7. I have stayed out of sight of other team members to avoid work.	.250	.501
8. I try to look busy doing nothing during team meetings.	.028	.623
9. Even though I am capable of doing better, I perform my work in my team below acceptable standards.	-.142	.794
10. I have intentionally worked slower in my team than I could have worked.	.130	.605
11. I do the exact work that my team requires of me, never more.	-.112	.568
12. I take my team's work too lightly.	-.194	.734
13. I have purposely not worked hard in my team when there were things to be done.	-.050	.670
14. I have put little effort into work for my team.	-.072	.732
15. I have purposely interfered with another team member doing their job.	.348	.281
16. I have withheld work-related information from a team member.	.463	.241
17. I have undermined the work of fellow team members to try to make them look bad.	.647	.130
18. I have treated other team members in a way that puts them at a disadvantage.	.797	.084
19. I have sabotaged the work of fellow team members.	.746	.040
20. I dominate the team's discussion more than I should.	.490	-.128
21. I have started an argument with someone else in my team.	.690	-.048
22. I have acted rudely towards other members of the team.	.777	-.003
23. I have interrupted other team members when they are speaking/working.	.332	.163
24. I can be unreasonably stubborn in my viewpoints during team meetings.	.513	-.008
25. I have blamed members of my team for my mistakes.	.691	.086
26. I have publicly embarrassed another member of my team.	.883	-.127
27. I gossip about other team members.	.594	-.158
28. I have started negative rumors about the team.	.587	-.008
29. I have told people outside the team what a lousy team we have.	.343	.118
30. I have been nasty to fellow team members.	.781	.037
31. I have verbally abused another team member.	.839	-.029
32. I have made negative or obscene gestures toward another member of my team.	.935	-.159
Eigenvalue totals	12.066	2.843

Table 4. *Team Citizenship Behavior Factor Loadings*

	Loadings			
	1	2	3	4
	Helping Behavior	Voice	Sportsmanship	Compliance
1. I help other team members if someone falls behind in his/her work.	.669	-.056	-.018	.067
2. I willingly share my expertise with other members of my team.	.419	.283	.082	.069
3. I try to act like a peacemaker when other team members have disagreements.	.805	-.050	-.068	-.077
4. I take steps to try to prevent problems with other team members.	.768	.082	-.028	-.169
5. I willingly give of my time to help team members who have work-related problems.	.829	-.104	-.073	.080
6. I "touch base" with other team members before initiating actions that might affect them.	.399	.182	.101	-.001
7. I encourage other team members when they are down.	.762	-.039	.142	-.024
8. I provide constructive suggestions about how the team can improve its effectiveness.	.357	.273	-.096	.059
9. I am willing to risk disapproval to express my beliefs about what's best for the team.	.155	.478	-.130	.020
10. I attend and actively participate in team meetings.	.023	.371	.016	.382
11. I focus on what is wrong with our team, rather than the positive side.	.086	-.093	.764	-.043
12. I consume a lot of time in my team complaining about trivial matters.	-.141	.121	.729	.065
13. I find fault with what other team members are doing.	.052	-.076	.745	-.047
14. I rarely miss a team meeting, even if I have a good reason for doing so.	.004	-.045	-.030	.566
15. I am always on time and meet the deadlines for my team	-.141	-.087	-.025	.786
16. I work carefully and with concentration on team tasks.	.096	.171	.062	.512
17. I adapt my schedule to meet other team members' demands.	.209	-.116	-.013	.423
18. I help other team members with their tasks.	.594	.043	.041	.082
19. I give my opinion when it concerns important team issues.	-.046	.926	.023	-.094
20. I express my opinions and ideas during team meetings.	-.043	.984	-.013	-.073
Eigenvalue totals	6.353	2.24	1.727	1.476

Table 5. *Deviance Norms Time 1 Factor Loadings*

	Loadings
	1
1. My team advocates punctuality.	.470
2. My team is unaccepting of unexplained absences	
3. My team feels it is important to stay on task.	.577
4. My team takes a lot of breaks	.662
5. My team places importance on accuracy in our work.	
6. My team works hard to complete projects.	.842
7. My team feels it is important to help each other.	.675
8. My team treats everyone in the team with respect.	.494
Eigenvalue Totals	2.949

Table 6. *Deviance Norms Time 2 Factor Loadings*

	Loadings
	1
1. My team advocates punctuality.	.453
2. My team is unaccepting of unexplained absences	
3. My team feels it is important to stay on task.	.683
4. My team takes a lot of breaks	.759
5. My team places importance on accuracy in our work.	
6. My team works hard to complete projects.	.712
7. My team feels it is important to help each other.	.683
8. My team treats everyone in the team with respect.	.610
Eigenvalue Totals	3.088

Table 7. *Citizenship Norms Time 1 Factor Loadings*

	Loadings
	1
1. My team encourages each other.	.743
2. My team makes decisions together.	.661
3. My team dedicates time to helping each other.	.769
4. My team uses our time effectively.	.587
5. My team expresses opinions and ideas freely during team meetings.	.608
6. My team works hard to resolve problems.	.703
7. My team offers a helping hand to all of our members.	.847
8. My team puts a lot of effort into our projects.	.698
Eigenvalue Totals	4.478

Table 8. *Citizenship Norms Time 2 Factor Loadings*

	Loadings
	1
1. My team encourages each other.	.807
2. My team makes decisions together.	.652
3. My team dedicates time to helping each other.	.781
4. My team uses our time effectively.	.532
5. My team expresses opinions and ideas freely during team meetings.	.652
6. My team works hard to resolve problems.	.775
7. My team offers a helping hand to all of our members.	.855
8. My team puts a lot of effort into our projects.	.676
Eigenvalue Totals	4.644

Table 9. *Apathy Factor Loadings*

	Loadings
	1
1. I am enthusiastic about working with my team.	.498
2. I do not care how well my team performs.	.550
3. My own feelings are generally unaffected by how well this team does.	.501
4. I have lost interest in what goes on in this team.	.668
Eigenvalue Totals	1.921

Table 10. *ICC(1) & ICC(2)*

Scale	Mean	Std. Dev.	Reliabilities	ICC(1)	ICC(2)
Task Interdependence	4.03	.633	.841	.022	.097
Citizenship Norms time I	5.56	.532	.887	.213	.569
Deviance Norms time I	2.38	.493	.777	.236	.601
Citizenship Norms time II	5.48	.635	.892	.297	.673
Deviance Norms time II	2.54	.578	.805	.194	.540
Satisfaction	5.61	.996	.920	.345	.719
Viability	5.55	.994	.832	.234	.599
Overall Deviance			.916		
-minimum	1.21	.159			
-mean	1.53	.363			
-maximum	1.97	.737			
-variance	0.35	.335			
Lack of Effort			.869		
-minimum	1.27	.268			
-mean	1.74	.415			
-maximum	2.39	.792			
-variance	.51	.329			
Interpersonal Deviance			.905		
-minimum	1.06	.086			
-mean	1.35	.371			
-maximum	1.79	.835			
-variance	0.34	.400			
Citizenship Behavior			.807		
-minimum	4.86	.548			
-mean	5.46	.367			
-maximum	6.05	.346			
-variance	0.53	.227			
Neuroticism	2.16	.357	.836		
Extraversion	3.77	.387	.907		
Openness	3.52	.343	.800		
Agreeableness	3.68	.299	.830		
Conscientiousness	3.60	.348	.837		
Team Grade	89.12	5.712			
GPA	3.24	.183			

Table 11. *Correlation Table*

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1.GPA mean														
2.Neuroticism mean	-.143													
3.Extraversion mean	-.061	-.462***												
4.Agreeableness mean	.162	-.462***	.134											
5.Conscientiousness mean	.254	-.265*	.371**	.488***										
6.Openness to Experience mean	.001	.006	.080	.158	.063									
7.Apathy mean	.068	-.017	-.056	-.052	-.003	-.244								
8.OCBNorms time1 mean	-.122	-.241	.443***	.191	.130	.063	-.553***							
9.OCBNorms time2 mean	.041	-.283*	.482***	.269*	.389**	.109	-.454***	-.706***						
10.DevNorms time1 mean	.165	.148	-.430***	-.184	-.158	-.087	.556***	-.806***	-.637***					
11.DevNorms time2 mean	-.067	.316*	-.554***	-.305*	-.453***	-.179	.353**	-.618***	-.866***	.603***				
12.Lack of Effort mean	.020	-.029	.042	-.149	-.133	-.209	.621***	.289*	-.194	.441***	.175			
13.Interpersonal dev mean	.063	.001	.085	-.088	.074	-.369**	.509***	-.174	-.086	.362**	.026	.721***		
14.Overall Deviance mean	.045	-.015	.069	-.127	-.029	-.313*	.608***	-.248	-.150	.432***	.106	.924***	.931***	
15.Lack of Effort min	-.009	.054	.142	-.152	-.074	-.335*	.329*	-.109	-.035	.222	-.022	.724***	.626***	.727***
16.Interpersonal Dev min	.218	.203	-.024	-.114	-.094	-.361**	.122	.000	-.070	.135	.002	.215	.400**	.334*
17.Overall Deviance min	.088	.039	.046	-.153	-.113	-.337*	.322*	-.181	-.133	.335*	.026	.603***	.591***	.643***
18.Lack of Effort max	.008	-.044	.001	-.170	-.135	-.128	.571***	-.254	-.246	.440***	.297*	.849***	.600***	.778***
19.Interpersonal Dev max	.008	-.013	.155	-.108	.126	-.312*	.461***	-.185	-.074	.385**	.043	.651***	.926***	.853***
20.Overall Deviance max	-.002	-.026	.128	-.131	.044	-.268*	.548***	-.197	-.112	.400**	.117	.818***	.867***	.909***
21.Lack of Effort sd	.002	-.098	.006	-.118	-.098	-.018	.534***	-.242	-.240	.418***	.301*	.729***	.484***	.651***
22.Interpersonal dev sd	-.043	-.047	.166	-.093	.136	-.294*	.481***	-.171	-.067	.365**	.040	.663***	.910***	.851***
23.Overall Deviance sd	-.053	-.051	.147	-.094	.082	-.223	.520***	-.150	-.080	.345**	.100	.760***	.817***	.851***
24.Citizenship mean	.001	-.256	.483***	.270*	.315*	.247	-.570***	.696***	.619***	-.716***	-.605***	-.450***	-.248	-.373**
25.Citizenship min	-.071	-.222	.502***	.152	.121	.132	-.530***	.652***	.512***	-.762***	-.488***	-.449***	-.290*	-.396**
26.Citizenship max	.084	-.210	.243	.334*	.363**	.236	-.447***	.451***	.574***	-.399**	-.561***	-.340**	-.163	-.270*
27.Citizenship sd	.055	.096	-.312*	.072	.136	-.026	.276*	-.319*	-.148	.497***	.127	.319*	.250	.306*
28.TeamGrade mean	-.085	-.028	.040	.055	.004	.215	-.385**	.232	.333*	-.289*	-.315*	-.275*	-.141	-.222
29.Satisfaction mean	-.030	-.363**	.362**	.229	.229	.059	-.374**	.659***	.835***	-.591***	-.771***	-.133	-.066	-.107
30.Viability mean	-.108	-.324*	.395**	.220	.175	.057	-.378**	.653***	.819***	-.585***	-.718***	-.203	-.174	-.203

Table 11. *Correlation Table Continued*

	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.
1.GPA mean															
2.Neuroticism mean															
3.Extraversion mean															
4.Agreeableness mean															
5.Conscientiousness mean															
6.Openness to Experience mean															
7.Apathy mean															
8.OCBNorms time1 mean															
9.OCBNorms time2 mean															
10.DevNorms time1 mean															
11.DevNorms time2 mean															
12.Lack of Effort mean															
13.Interpersonal dev mean															
14.Overall Deviance mean															
15.Lack of Effort min															
16.Interpersonal Dev min	.463***														
17.Overall Deviance min	.878***	.627***													
18.Lack of Effort max	.404**	.045	.320*												
19.Interpersonal Dev max	.485***	.274*	.448***	.628***											
20.Overall Deviance max	.507***	.200	.414**	.847***	.921***										
21.Lack of Effort sd	.155	-.099	.090	.952***	.555***	.784***									
22.Interpersonal dev sd	.470***	.186	.402**	.642***	.989***	.929***	.585***								
23.Overall Deviance sd	.392*	.087	.263	.823***	.897***	.981***	.805***	.923***							
24.Citizenship mean	-.283*	-.135	-.317*	-.363**	-.241	-.317*	-.296*	-.228	-.262						
25.Citizenship min	-.245	-.030	-.249	-.475***	-.315*	-.397**	-.418***	-.302*	-.356**	.843***					
26.Citizenship max	-.237	-.185	-.338*	-.268*	-.131	-.183	-.207	-.116	-.122	.717***	.402**				
27.Citizenship sd	.223	-.027	.128	.333*	.259	.325*	.303*	.271*	.330*	-.407**	-.757***	.231			
28.TeamGrade mean	-.225	-.208	-.254	-.323*	-.099	-.228	-.270*	-.091	-.182	.251	.241	.207	-.109		
29.Satisfaction mean	-.038	-.014	-.137	-.268*	-.076	-.099	-.236	-.049	-.050	.489***	.471***	.468***	-.144	.479***	
30.Viability mean	-.042	-.063	-.083	-.258	-.126	-.147	-.248	-.105	-.119	.506***	.508***	.371**	-.268*	.345**	.836***

Table 12. *Hierarchical Regression Analysis: The Effect of Big Five Personality Traits on Maximum Deviance and Minimum Citizenship*

	Maximum Deviance		Minimum Citizenship	
	β	F	β	F
Step 1: Controls				
Team size	-.059		.019	
Class	.233		.135	
Model R ²		.071 2.025		.016 .434
Step 2: Main Effects				
Team size	-.107		.142	
Class	.164		-.054	
Conscientiousness	.089		-.179	
Extraversion	.008		.652**	
Neuroticism	-.024		.087	
Agreeableness	-.138		.184	
Openness	-.252		.068	
Model R ²		.152 1.223		.310 3.080**
Δ in model R ²		.081		.294**

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$

N=56

Table 13. *Hierarchical Regression Table: The Effect of Minimum Citizenship Behavior on Team Grade, Team Satisfaction and Team Viability*

	Team Grade		Team Satisfaction		Team Viability	
	β	F	β	F	β	F
Step 1: Controls						
Team Size	-.007		-.146		-.109	
Class	-.255		.002		.057	
GPA	-.047					
Model R ²		.069 1.282		.022 .586		.021 .577
Step 2: Main Effects						
Team size	-.017		-.155		-.119	
Class	-.298		-.062		-.011	
GPA	-.021					
Minimum Citizenship	.277*		.471***		.504***	
Model R2		.143 2.135		.240 5.472**		.271 6.445***
Δ in Model R2		.075*		.218***		.250*** .250***

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$
N=56

Table 14. *Hierarchical Regression Table: The Effect of Maximum Deviance on Team Grade, Team Satisfaction and Team Viability*

	Team Grade		Team Satisfaction		Team Viability		
	β	F	β	F	β	F	
Step 1: Controls							
Team Size	-.007		-.146		-.109		
Class	-.258		.002		.057		
GPA	-.047						
Model R ²		.069	1.282		.022	.586	
							.021
							.577
Step 2: Main Effects							
Team size	-.017		-.154		-.120		
Class	-.213		.033		.102		
GPA	-.053						
Maximum Deviance	-.175		-.134		-.194		
Model R ²		.097	1.375		.038	.690	
Δ in Model R ²		.028			.017		
							.056
							1.034

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$
N=56

Table 15. *Hierarchical Regression: The Effect of Variance in Deviance on Team Satisfaction and Team Viability*

	Team Satisfaction		Team Viability	
	β	F	β	F
Step 1: Controls				
Team Size	-.146		-.109	
Class	.002		.057	
Model R ²		.022 .586		.021 .577
Step 2: Main Effects				
Team size	-.154		-.124	
Class	.016		.085	
Variance in Deviance	-.081		-.161	
Model R ²		.028 .496		.046 .484
Δ in Model R ²		.006		.024

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$
N=56

Table 16. *Hierarchical Regression: The Effect of Maximum Lack of Effort on Team Grade, Team Satisfaction, and Team Viability*

	Team Grade		Team Satisfaction		Team Viability	
	β	F	β	F	β	F
Step 1: Controls						
Team Size	-.007		-.146		-.109	
Class	-.255		.002		.057	
GPA	-.047					
Model R ²	.069	1.282	.022	.586	.021	.577
Step 2: Main Effects						
Team size	.013		-.127		-.090	
Class	-.194		.059		.114	
GPA	-.054					
Max Lack of Effort	-.289*		-.282*		-.280*	
Model R ²	.150	2.242	.099	1.889	.097	1.870
Δ in Model R ²	.081*		.077*		.076*	

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$
 N=56

Table 17. *Hierarchical Regression: The Effect of Maximum Interpersonal Deviance on Team Grade, Team Satisfaction, and Team Viability*

	Team Grade		Team Satisfaction		Team Viability	
	β	F	β	F	β	F
Step 1: Controls						
Team Size	-.007		-.146		-.109	
Class	-.255		.002		.057	
GPA	-.047					
Model R ²		.069	1.282		.022	.586
						.021
						.577
Step 2: Main Effects						
Team size	-.013		-.159		-.129	
Class	-.247		.021		.087	
GPA	-.047					
Max Interpersonal Dev.	-.045		-.113		-.172	
Model R ²		.071	.971		.034	.601
Δ in Model R ²		.002			.012	
						.049
						.892

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$
N=56

Table 18. *Hierarchical Regression Table: The Effect of Mean Lack of Effort on Team Grade*

	Team Grade	
Step 1: Controls	β	F
Team size	-.007	
Class	-.255	
GPA	-.047	
Model R2	.069	1.282
Step 2: Main Effects		
Team size	-.057	
Class	-.213	
GPA	-.046	
Lack of Effort	-.229	
Model R2	.115	1.661
Δ in Model R2	.046	

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$
 N=56

Table 19. *Regression Table: The Effect of Lack of Effort Variance on Team Grade*

	Team Grade	
Step 1: Controls	β	F
Team size	-.007	
Class	-.255	
GPA	-.047	
Model R2	.069	1.282
Step 2: Main Effects		
Team size	.011	
Class	-.211	
GPA	-.054	
Lack of Effort	-.240	
Model R2	.125	2.823
Δ in Model R2	.056	

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$
 N=56

Table 20. *Hierarchical Regression Table: The Effect of Citizenship Norms Time 1 on Team Grade, Team Satisfaction, and Team Viability*

	Team Grade		Team Satisfaction		Team Viability	
	β	F	β	F	β	F
Step 1: Controls						
Team size	-.007		-.146		-.109	
Class	-.255		.002		.057	
GPA	-.047					
Model R2	.069	1.282	.022	.586	.021	.577
Step 2: Main Effects						
Team size	-.003		-.121		-.084	
Class	-.276		-.033		.023	
GPA	-.013					
Citizenship norms	.250		.653***		.646***	
Model R2	.130	1.905	.446	13.929***	.436	13.392***
Δ in Model R2	.061		.424***		.415***	

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$
N=56

Table 21. *Hierarchical Regression Table: The Effect of Deviance Norms Time 1 on Team Grade, Team Satisfaction, and Team Viability*

	Team Grade		Team Satisfaction		Team Viability	
	β	F	β	F	β	F
Step 1: Controls						
Team Size	-.007		-.146		-.109	
Class	-.255		.002		.057	
GPA	-.047					
Model R ²		.069 1.282		.022 .586		.021 .577
Step 2: Main Effects						
Team size	-.045		-.211		-.173	
Class	-.267		-.001		-.055	
GPA	.003					
Deviance Norms	-.281		-.612***		-.606***	
Model R2		.145 2.160		.393 11.204***		.384 10.825***
Δ in Model R2		.076*		.371***		.363***

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$
 N=56

Table 22. *Hierarchical Regression Table: The Effect of Citizenship Norms Time 2 on Team Grade, Team Satisfaction, and Team Viability*

	Team Grade		Team Satisfaction		Team Viability	
	β	F	β	F	β	F
Step 1: Controls						
Team size	-.007		-.146		-.109	
Class	-.255		.002		.057	
GPA	-.047					
Model R ²	.069	1.282	.022	.586	.021	.577
Step 2: Main Effects						
Team size	-.029		-.197*		-.159	
Class	-.317*		-.141		-.081	
GPA	-.052					
Citizenship norms	.379**		.851***		.826***	
Model R ²	.209	3.373*	.729	46.692***	.689	13.392***
Δ in Model R ²	.140**		.708***		.668***	

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$

N=56

Table 23. *Hierarchical Regression Table: The Effect of Deviance Norms Time 2 on Team Grade, Team Satisfaction, and Team Viability*

	Team Grade		Team Satisfaction		Team Viability				
	β	F	β	F	β	F			
Step 1: Controls									
Team Size	-.007		-.146		-.109				
Class	-.255		.002		.057				
GPA	-.047								
Model R ²		.069	1.282		.022	.586			
							.021	.577	
Step 2: Main Effects									
Team size	-.015		-.164		-.126				
Class	-.354*		-.201*		-.129				
GPA	-.059								
Deviance Norms	-.402**		-.803***		-.737***				
Model R2		.221	5.621*		.629***	29.360***		.532	19.713***
Δ in Model R2		.152**			.607***			.511***	

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$

N=56

Table 24. *Hierarchical Regression: The Effect of Mean Team Member Citizenship Behavior on Team Satisfaction and Team Viability*

	Team Satisfaction		Team Viability	
	β	F	β	F
Step 1: Controls				
Team Size	-.146		-.109	
Class	.002		.057	
Model R ²		.022		.577
Step 2: Main Effects				
Team size	-.227		-.191	
Class	-.093		-.039	
Mean Citizenship	.514***		.523***	
Model R ²		.278		6.947***
Δ in Model R ²		.256***		.265***

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$

N=56

Table 25. *Hierarchical Regression: The Effect of Maximum Team Member Citizenship Behavior on Team Satisfaction and Team Viability*

	Team Satisfaction		Team Viability	
Step 1: Controls	β	F	β	F
Team Size	-.146		-.109	
Class	.002		.057	
Model R ²		.022		.586
				.021
				.577
Step 2: Main Effects				
Team size	-.182		-.137	
Class	-.023		.038	
Max Citizenship	.477***		.377**	
Model R ²		.248		5.730**
Δ in Model R ²		.227***		.163
				3.373*

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$

N=56

Table 26. *Hierarchical Regression: The Effect of Variance Team Member Citizenship Behavior on Team Viability*

		Team Viability	
Step 1: Controls	β	F	
Team Size	-.109		
Class	.057		
Model R ²		.021	.577
Step 2: Main Effects			
Team size	-.145		
Class	.033		
Variance Citizenship	-.279*		
Model R ²		.098	1.891
Δ in Model R ²		.077*	

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$
 N=56

Table 27. *Hierarchical Regression: The Effect of Maximum Deviance and Maximum Citizenship Behavior on Team Grade*

	Team Grade	
Step 1: Controls	β	F
Team Size	-.092	
Class	-.533	
Model R ²		.067 1.896
Step 2: Main Effects		
Team size	-.218	
Class	-.477	
Max Deviance	-1.084	
Max Citizenship	2.818	
Model R ²		.122
Δ in Model R ²		.055 1.767

Note: All β values are standardized, * $p < .05$, ** $p < .01$, *** $p < .001$
N=56

Table 28. *Table of Hypotheses*

Hypotheses	Results
1a) Teams with members higher on Agreeableness will be less likely to engage in team level deviance. As the mean level of Agreeableness increases, the maximum deviance score decreases.	Not Supported
1b) Teams with members higher on Agreeableness will be more likely to engage in team level citizenship. As the mean level of Agreeableness increases, the minimum citizenship score increases.	Not Supported
2a) Teams with members higher on Conscientiousness will be less likely to engage in deviance. As the mean level of Conscientiousness increases, the maximum deviance score decreases.	Not Supported
2b) Teams with members higher on Conscientiousness will be more likely to engage in citizenship. As the mean level of Conscientiousness increases, the minimum citizenship score increases.	Not Supported
3a) Teams with members higher on Extraversion will be less likely to engage in deviance. As the mean level of Extraversion increases, the maximum deviance score decreases.	Not Supported
3b) Teams with members higher on Extraversion will be more likely to engage in citizenship. As the mean level of Extraversion increases, the minimum citizenship score increases.	Supported: teams with members higher on extraversion were more likely to engage in team citizenship behavior.
4a) Teams with members higher on Neuroticism will be more likely to engage in deviance. As the mean level of Neuroticism increases, the maximum deviance score increases.	Not Supported
4b) Teams with members higher on Neuroticism will be less likely to engage in citizenship. As the mean level of Neuroticism increases, the minimum citizenship score decreases.	Not Supported
5a) Teams with higher scores for the lowest citizenship behavior rating will receive higher ratings for team performance.	Supported: Minimum Citizenship behavior was positively related to team grade.
5b) Teams with higher scores for the lowest citizenship behavior rating will receive higher ratings for team satisfaction.	Supported: Minimum Citizenship Behavior was positively related to team satisfaction.
5c) Teams with higher scores for the lowest citizenship behavior rating will receive higher ratings for team viability.	Supported: Minimum Citizenship Behavior was positively related to team viability.
5d) The relationships between lowest citizenship behavior and team satisfaction and lowest citizenship behavior and viability will be stronger than the relationship between lowest citizenship behavior and performance.	Not supported
6a) There will be a negative relationship between maximum workplace deviance in teams and team performance. As the maximum level of deviance in a team increases, the team performance level decreases.	Not supported
6b) There will be a negative relationship between maximum workplace deviance in teams and team satisfaction. As the maximum level of deviance in a team increases, the team satisfaction level decreases.	Not supported

Table 28 continued. *Table of Hypotheses*

6c) There will be a negative relationship between maximum workplace deviance in teams and team viability. As the maximum level of deviance in a team increases, the team viability level decreases.	Not Supported
6d) There will be a negative relationship between variance in deviance and team satisfaction and team viability.	Not Supported
7a) The correlation between effort and task performance and between interference and task performance will be higher than the correlation between incivility and task performance.	Could not be tested: Incivility was not an independent dimension of deviance
7b) The correlation between incivility and team satisfaction and incivility and team viability will be higher than the correlation between incivility and task performance.	Could not be tested: Incivility was not an independent dimension of deviance
7c) The correlation between incivility and team satisfaction and incivility and team viability will be higher than the correlations for effort and team satisfaction and effort and team viability.	Could not be tested: Incivility was not an independent dimension of deviance
8a) Citizenship norms will be positively related to team performance, team viability, and team satisfaction.	OCB Norms at time 1 were positively related to team satisfaction and team viability. OCB Norms at time 2 were positively related to team grade, team satisfaction & team viability.
8b) Deviance norms will be negatively related to team performance, team viability, and team satisfaction.	Deviance Norms at time 1 were negatively related to team satisfaction and team viability. Deviance Norms at time 2 were negatively related to team grade, team satisfaction & team viability.
9) The maximum deviance score of each team will have a stronger effect on team performance than the maximum citizenship score for each team.	Not supported
10a) Task interdependence moderates the relationship between deviance and team outcomes, such that the higher the level of task interdependence, the stronger the relationship between deviance and team performance.	Could not be tested: Task interdependence could not be aggregated to the team level.
10b) Task interdependence moderates the relationship between citizenship and team outcomes, such that the higher the level of task interdependence, the stronger the relationship between citizenship and team performance.	Could not be tested: Task interdependence could not be aggregated to the team level.

Figure Captions

Figure 1. Hypothesized Model

Figure 2. Model of Results

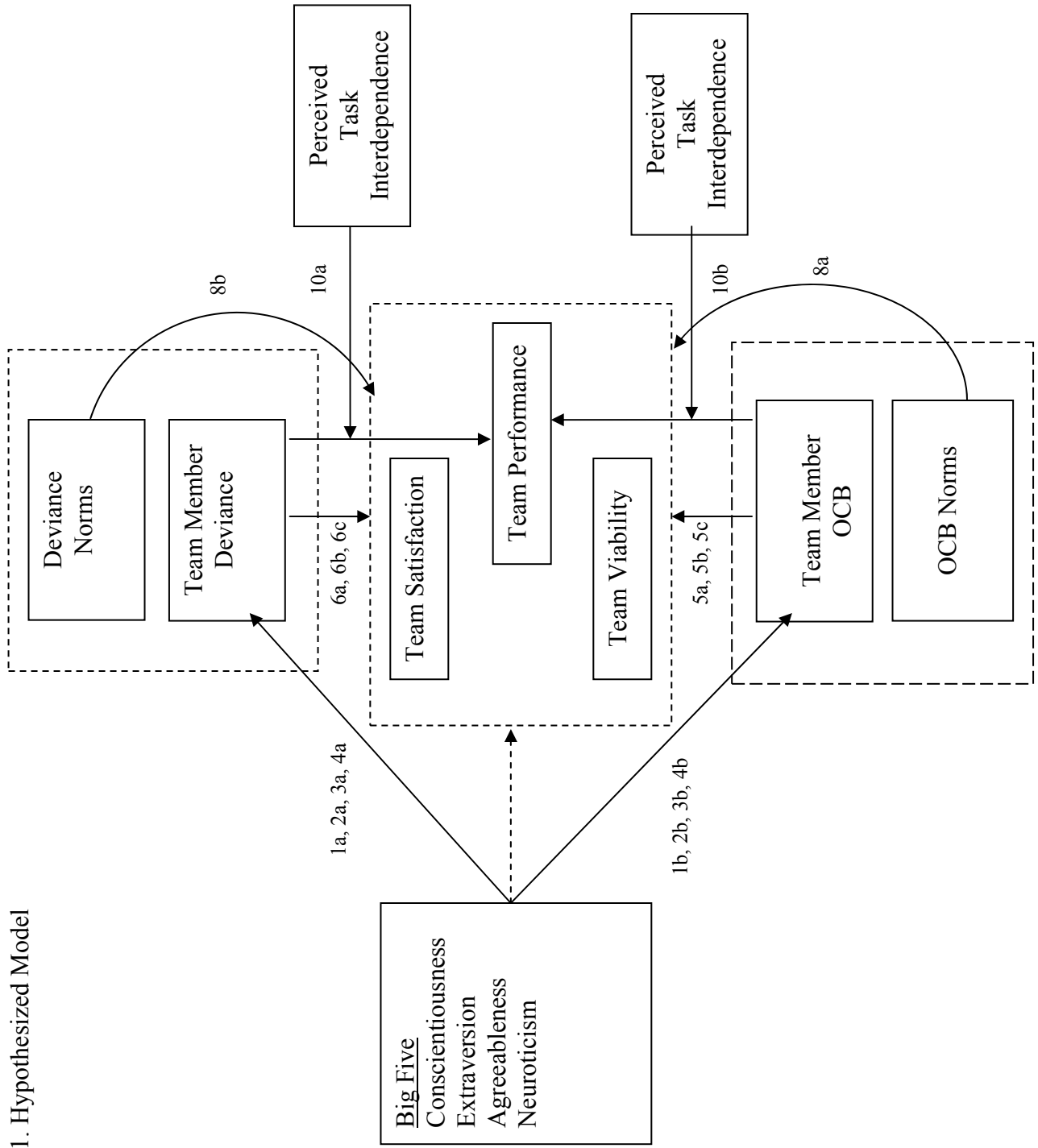
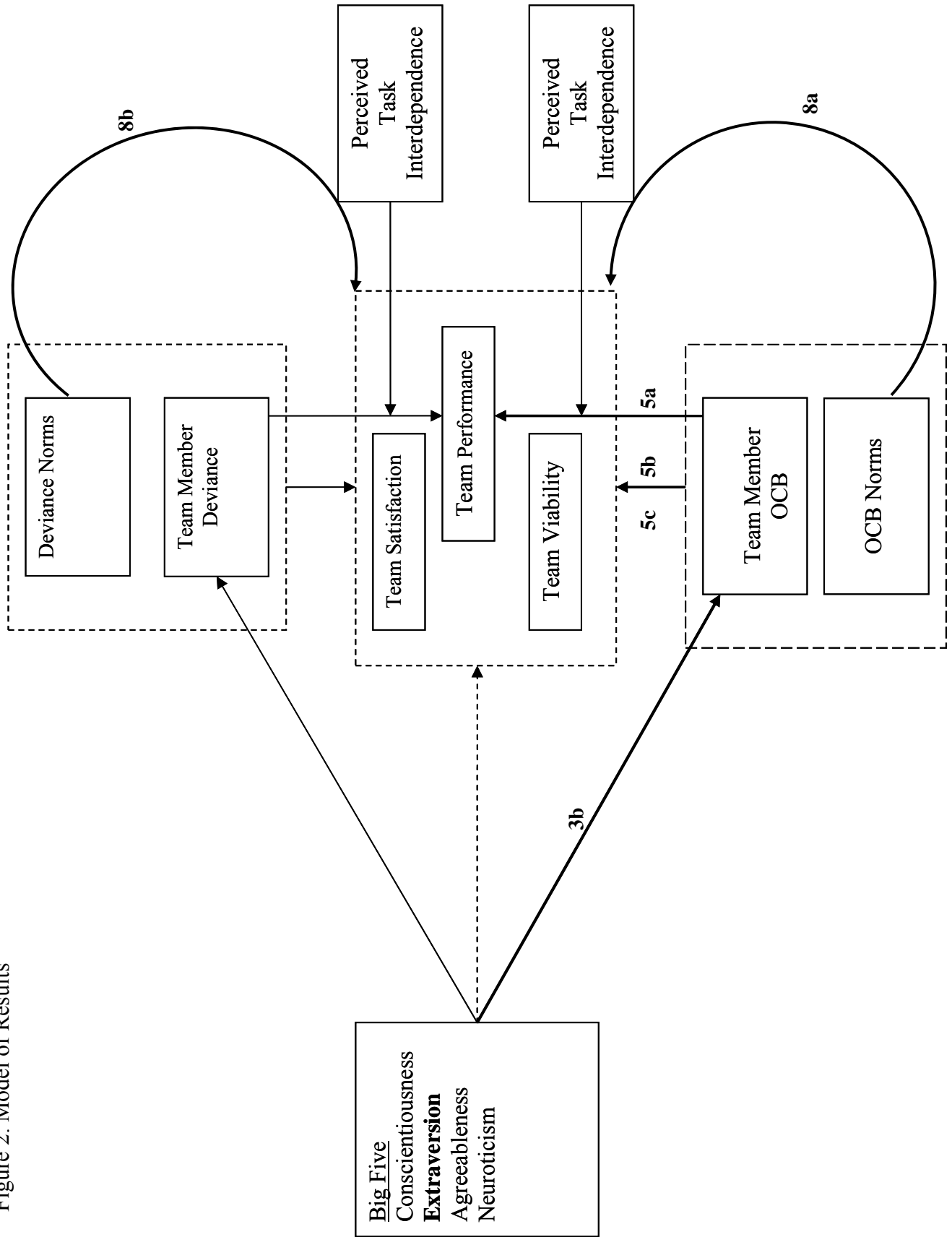


Figure 1. Hypothesized Model

Figure 2. Model of Results



Appendix B: Surveys Used in Present Study

Team Behavior Survey 1

Directions:

- Please rate the items based on the rating scale provided for each section
- When answering the items think of the team that you are currently working in. Please respond to the items based on your experience with your **current team** for the last several months. I ask you to please be as **honest** as possible in your responses. I assure you that your answers are **completely confidential** and will not affect your grades or class work in any way.
- Please read each statement carefully, and then **circle** the number that corresponds to the description on the scale.

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Neutral	5 Somewhat Agree	6 Agree	7 Strongly Agree
---------------------------	---------------	---------------------------	--------------	------------------------	------------	------------------------

1. My team advocates punctuality.	1	2	3	4	5	6	7
2. My team is unaccepting of unexplained absences.	1	2	3	4	5	6	7
3. My team feels it is important to stay on task.	1	2	3	4	5	6	7
4. My team takes a lot of breaks.	1	2	3	4	5	6	7
5. My team places importance on accuracy in our work.	1	2	3	4	5	6	7
6. My team works hard to complete projects.	1	2	3	4	5	6	7
7. My team feels it is important to help each other.	1	2	3	4	5	6	7
8. My team treats everyone in the team with respect.	1	2	3	4	5	6	7
9. My team encourages each other.	1	2	3	4	5	6	7
10. My team makes decisions together.	1	2	3	4	5	6	7
11. My team dedicates time to helping each other.	1	2	3	4	5	6	7
12. My team uses our time effectively.	1	2	3	4	5	6	7
13. My team expresses opinions and ideas freely during team meetings.	1	2	3	4	5	6	7
14. My team works hard to resolve problems.	1	2	3	4	5	6	7
15. My team offers a helping hand to all of our members.	1	2	3	4	5	6	7
16. My team puts a lot of effort into our projects.	1	2	3	4	5	6	7

- Please read each statement carefully, and then **fill in** the number that corresponds to the description on the scale.

1 Never	2 Almost Never	3 Not Very Often	4 Sometimes	5 Often	6 Almost Always	7 Always
-------------------	------------------------------	--------------------------------	-----------------------	-------------------	-------------------------------	--------------------

- _____ 1. I have told other team members that I was sick when I was not sick.
- _____ 2. I have daydreamed rather than doing my team's work.
- _____ 3. I have come to team meetings late or left early without approval.
- _____ 4. I take additional or longer breaks during team meetings or functions than is acceptable in the team.
- _____ 5. I make frequent and/or long trips to the water fountain, vending machines, or restroom to avoid work in my team.
- _____ 6. I have been absent from team functions or meetings without sufficient cause.
- _____ 7. I have stayed out of sight of other team members to avoid work.
- _____ 8. I try to look busy doing nothing during team meetings.
- _____ 9. Even though I am capable of doing better, I perform my work in my team below acceptable standards.
- _____ 10. I have intentionally worked slower in my team than I could have worked.
- _____ 11. I do the exact work that my team requires of me, never more.
- _____ 12. I take my team's work too lightly.
- _____ 13. I have purposely not worked hard in my team when there were things to be done.
- _____ 14. I have put little effort into work for my team.
- _____ 15. I have purposely interfered with another team member doing their job.
- _____ 16. I have withheld work-related information from a team member.
- _____ 17. I have undermined the work of fellow team members to try to make them look bad.
- _____ 18. I have treated other team members in a way that puts them at a disadvantage.
- _____ 19. I have sabotaged the work of fellow team members.
- _____ 20. I dominate the team's discussion more than I should.
- _____ 21. I have started an argument with someone else in my team.
- _____ 22. I have acted rudely towards other members of the team.
- _____ 23. I have interrupted other team members when they are speaking/working.
- _____ 24. I can be unreasonably stubborn in my viewpoints during team meetings.
- _____ 25. I have blamed members of my team for my mistakes.
- _____ 26. I have publicly embarrassed another member of my team.
- _____ 27. I gossip about other team members.
- _____ 28. I have started negative rumors about the team.
- _____ 29. I have told people outside the team what a lousy team we have.
- _____ 30. I have been nasty to fellow team members.
- _____ 31. I have verbally abused another team member.
- _____ 32. I have made negative or obscene gestures toward another member of my team.

1 Never	2 Almost Never	3 Not Very Often	4 Sometimes	5 Often	6 Almost Always	7 Always
------------	----------------------	------------------------	----------------	------------	-----------------------	-------------

- 1. I help other team members if someone falls behind in his/her work. 1 2 3 4 5 6 7

- 2. I willingly share my expertise with other members of my team. 1 2 3 4 5 6 7

- 3. I try to act like a peacemaker when other team members have disagreements. 1 2 3 4 5 6 7

- 4. I take steps to try to prevent problems with other team members. 1 2 3 4 5 6 7

- 5. I willingly give of my time to help team members who have work-related problems. 1 2 3 4 5 6 7

- 6. I “touch base” with other team members before initiating actions that might affect them. 1 2 3 4 5 6 7

- 7. I encourage other team members when they are down. 1 2 3 4 5 6 7

- 8. I provide constructive suggestions about how the team can improve its effectiveness. 1 2 3 4 5 6 7

- 9. I am willing to risk disapproval to express my beliefs about what’s best for the team. 1 2 3 4 5 6 7

- 10. I attend and actively participate in team meetings. 1 2 3 4 5 6 7

- 11. I focus on what is wrong with our team, rather than the positive side. 1 2 3 4 5 6 7

- 12. I consume a lot of time in my team complaining about trivial matters. 1 2 3 4 5 6 7

- 13. I find fault with what other team members are doing. 1 2 3 4 5 6 7

- 14. I rarely miss a team meeting, even if I have a good reason for doing so. 1 2 3 4 5 6 7

- 15. I am always on time and meet the deadlines for my team. 1 2 3 4 5 6 7

- 16. I work carefully and with concentration on team tasks. 1 2 3 4 5 6 7

- 17. I adapt my schedule to meet other team members’ demands. 1 2 3 4 5 6 7

- 18. I help other team members with their tasks. 1 2 3 4 5 6 7

- 19. I give my opinion when it concerns important team issues. 1 2 3 4 5 6 7

- 20. I express my opinions and ideas during team meetings. 1 2 3 4 5 6 7

1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Neutral	5 Somewhat Agree	6 Agree	7 Strongly Agree
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- _____ 1. I am enthusiastic about working with my team.
- _____ 2. I do not care how well my team performs.
- _____ 3. My own feelings are generally unaffected by how well this team does.
- _____ 4. I have lost interest in what goes on in this team.

Directions:

Thinking about the interactions that you have had with your **team members**, please answer the following questions using the following scale:

1 Not at all	2	3 Moderate Amount	4	5 A great deal
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1. How often do people in your group disagree about the work being done? 1 2 3 4 5 6 7
2. How frequently are there conflicts about ideas in your group? 1 2 3 4 5 6 7
3. How much conflict about the work you do is there in your group? 1 2 3 4 5 6 7
4. To what extent are there differences of opinion in your group? 1 2 3 4 5 6 7
5. How much tension is there among members in your group? 1 2 3 4 5 6 7
6. How much are personality conflicts evident in your group? 1 2 3 4 5 6 7
7. How much friction is there among members in your group? 1 2 3 4 5 6 7
8. How much emotional conflict (anger, jealousy, rivalry, etc.)
is there among members in your group? 1 2 3 4 5 6 7
9. How often are there disagreements about who should do
what in your group? 1 2 3 4 5 6 7
10. How often do you disagree about resource allocation in your
work group (e.g., how much time to spend on a particular task)? 1 2 3 4 5 6 7
11. How much conflict is there about task responsibilities
(the way to do things) in your group? 1 2 3 4 5 6 7
12. Overall, the level of conflict in my group best resembles a(n): **(check one)**
 ___ friendly discussion ___ disagreement ___ argument ___ annoyance ___ fight

Team Behavior Survey 2

Directions:

On the following pages, there are phrases describing people's behaviors.

- Please use the rating scale below to describe how accurately each statement describes *you*.
- Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you **honestly** see yourself, in relation to other people you know of the same sex as you are, and roughly your same age.
- So that you can describe yourself in an **honest** manner, your responses will be kept in **absolute confidence**. Please read each statement carefully, and then circle the number that corresponds to the description on the scale.

1 Very Inaccurate	2 Moderately Inaccurate	3 Neither Inaccurate or Accurate	4 Moderately Accurate	5 Very Accurate
-------------------------	-------------------------------	--	-----------------------------	-----------------------

1. I often feel blue.	1	2	3	4	5
2. I dislike myself.	1	2	3	4	5
3. I am often down in the dumps.	1	2	3	4	5
4. I have frequent mood swings.	1	2	3	4	5
5. I panic easily.	1	2	3	4	5
6. I rarely get irritated.	1	2	3	4	5
7. I seldom feel blue.	1	2	3	4	5
8. I feel comfortable with myself.	1	2	3	4	5
9. I am not easily bothered by things.	1	2	3	4	5
10. I am very pleased with myself.	1	2	3	4	5
11. I feel comfortable around people.	1	2	3	4	5
12. I make friends easily.	1	2	3	4	5
13. I am skilled in handling social situations.	1	2	3	4	5
14. I am the life of the party.	1	2	3	4	5
15. I know how to captivate people.	1	2	3	4	5
16. I have little to say.	1	2	3	4	5
17. I keep in the background.	1	2	3	4	5
18. I would describe my experiences as somewhat dull.	1	2	3	4	5
19. I don't like to draw attention to myself.	1	2	3	4	5
20. I don't talk a lot.	1	2	3	4	5
21. I believe in the importance of art.	1	2	3	4	5
22. I have a vivid imagination.	1	2	3	4	5
23. I tend to vote for liberal political candidates.	1	2	3	4	5
24. I carry the conversation to a higher level.	1	2	3	4	5
25. I enjoy hearing new ideas.	1	2	3	4	5
26. I am not interested in abstract ideas.	1	2	3	4	5
27. I do not like art.	1	2	3	4	5
28. I avoid philosophical discussions.	1	2	3	4	5

29. I do not enjoy going to art museums.	1	2	3	4	5
30. I tend to vote for conservative political candidates.	1	2	3	4	5
31. I have a good word for everyone.	1	2	3	4	5
32. I believe that others have good intentions.	1	2	3	4	5
33. I respect others.	1	2	3	4	5
34. I accept people as they are.	1	2	3	4	5
35. I make people feel at ease.	1	2	3	4	5
36. I have a sharp tongue.	1	2	3	4	5
37. I cut others to pieces.	1	2	3	4	5
38. I suspect hidden motives in others.	1	2	3	4	5
39. I get back at others.	1	2	3	4	5
40. I insult people.	1	2	3	4	5
41. I am always prepared.	1	2	3	4	5
42. I pay attention to details.	1	2	3	4	5
43. I get chores done right away.	1	2	3	4	5
44. I carry out my plans.	1	2	3	4	5
45. I make plans and stick to them.	1	2	3	4	5
46. I waste my time.	1	2	3	4	5
47. I find it difficult to get down to work.	1	2	3	4	5
48. I do just enough work to get by.	1	2	3	4	5
49. I don't see things through.	1	2	3	4	5
50. I shirk my duties.	1	2	3	4	5

Directions:

- Please use the rating scales below to describe how accurately each statement describes *your team*.
- When answering the items think of the team that you are currently working in. Please respond to the items based on your experience with your **current team** for the last several months. I ask you to please be as **honest** as possible in your responses. I assure you that your answers are **completely confidential** and will not affect your grades or class work in any way.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree

- ___ 1. My team advocates punctuality.
- ___ 2. My team is unaccepting of unexplained absences.
- ___ 3. My team feels it is important to stay on task.
- ___ 4. My team takes a lot of breaks.
- ___ 5. My team places importance on accuracy in our work.
- ___ 6. My team works hard to complete projects.
- ___ 7. My team feels it is important to help each other.
- ___ 8. My team treats everyone in the team with respect.
- ___ 9. My team encourages each other.
- ___ 10. My team makes decisions together.
- ___ 11. My team dedicates time to helping each other.

- ___ 12. My team uses our time effectively.
- ___ 13. My team expresses opinions and ideas freely during team meetings.
- ___ 14. My team works hard to resolve problems.
- ___ 15. My team offers a helping hand to all of our members.
- ___ 16. My team puts a lot of effort into our projects.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree

- ___ 1. My own performance depends on receiving information and advice from my team members.
- ___ 2. I depend on my team members' work for materials and/or requisites that I need to do my work.
- ___ 3. I depend on my team members' work for help and support that I need to do my work.
- ___ 4. I depend on my team members in order to be able to do my work well.
- ___ 5. My team performance is strongly affected by my team members' performance.
- ___ 6. Overall, I am satisfied with my team's performance on projects.
- ___ 7. I am satisfied with this team compared to teams I have been on in the past.
- ___ 8. I am satisfied with the way this team works together.
- ___ 9. If I could have left this team and worked with another team, I would have.
- ___ 10. I wouldn't hesitate to participate on another project with the same team members.
- ___ 11. If given the choice, I would prefer to work with another team rather than this one.

• **Please fill in the blanks or circle the appropriate answer below:**

1. What grade do you think that **you (individually)** will earn in this course? Please circle **one grade**:
 A A- B+ B B- C+ C C- D F

2. From 0-100%, please indicate how certain you are that you will be able to earn that grade?

3. How frequently did the members of your team get together for meetings this semester?

4. On average, how many hours per week did your team spend together this semester?

5. On average, how long were your meetings? _____

• **Using the following scale, please rate how your group worked together:**

(1)	(2)	(3)	(4)	(5)	(6)
0% of the time	20% -30% of the time	40% -50% of the time	60% -70% of the time	80% -90% of the time	100% of the time

- _____ 1. We worked as a full group. (Our meetings were all together).
 _____ 2. We worked as two sub-groups about half of the members in each sub-group.
 _____ 3. We worked as individuals (We divided tasks up individually, worked on our own, and then pooled efforts together).
 _____ 4. Other (Please describe: _____)

• **For the following questions, the answers to item 1 and 2 must equal 100%**

1. When your team met together, what percentage of time, on average, was devoted to social activities (e.g., chatting, joking, small talk, working out conflicts between team members)? Check one of the following:

_____ 10% _____ 20% _____ 30% _____ 40% _____ 50% _____ 60% _____ 70% _____ 80% _____ 90%
 _____ 100%

2. When your team met together, approximately how much time on average was devoted to task activities (e.g., working on class projects, preparing reports, discussing course material)? Check one of the following:

_____ 10% _____ 20% _____ 30% _____ 40% _____ 50% _____ 60% _____ 70% _____ 80% _____ 90%
 _____ 100%

• **For each of the following questions, please circle or fill in the appropriate information.**

Sex: 1. Male 2. Female

Age: _____

Ethnicity: 1. Caucasian/White

4. Asian American

2. African American / Black

5. American Indian

3. Hispanic

6. Other _____
 (Please specify)

Education:

1. Undergraduate major _____

2. Overall G.P.A. _____

3. Academic year (circle): 1. Freshman 2. Sophomore 3. Junior 4. Senior

4. To the best of your recollection, what were your **SAT and/or ACT** scores?

_____ English _____ Math _____ Overall _____ ACT Total

Vita

Jesse B. Hohenstein

Education

The Pennsylvania State University, University Park, PA
Ph.D. in Psychology, emphasis in Industrial/Organizational Psychology, May 2007
Master of Science, emphasis in Industrial/Organizational Psychology, May 2004

Gustavus Adolphus College, St. Peter, MN
Bachelor of Arts, Psychology, May 2001, *Magna Cum Laude*

Applied Experience

- National Association of Realtors (2005-2006)
- National Institute of Standards and Technology (2004-2005)
- The Pennsylvania State Police (2001-2003)
- Personnel Decisions Research Institute (PDRI) (2000)

Teaching Experience

Graduate Teaching Assistant (2001 – 2004)

- Introduction to Psychology (2 semesters)
- Personnel Selection (2 semesters)
- Industrial Psychology (2 semesters)
- Developmental Psychology (1 semester)
- Motivation and Attitudes in the Workplace (1 semester)

Honors and Affiliations

- Member of Psi Chi, National Psychology Honor Society
- Member of Sigma Xi, The Scientific Research Society
- Awarded the department Psychology Assistantship at Gustavus Adolphus College
- Society for Industrial and Organizational Psychology, Student affiliate

Selected Papers

- *Local Real Estate Market Competition: Evidence and Insight from an Analysis of 12 Local Markets*; report for the National Association of Realtors, 2005 (with S. Sawyer and S. Paul).
- *A Study of Sustainable Collaboration: The Abnormal Situation Management Consortium*; final report for NIST project, 2005 (with Petrick, Echols, and Mohammed).
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